ISSUE 5

INTERIOR LIGHTING CATALOGUE

NVC Lighting

NVC LIGHTING – WORKING WITH YOU, WHEREVER YOU ARE

NVC is a lighting brand working with its customers around the world. Wherever we operate we have products for a wide range of commercial, industrial, residential and exterior applications that are suited to local market conditions. However, wherever we work there is one thing that is always the same – we aim to get as close to our customers as we can.

NVC Retail Store in Doha - Qatar

GOOD VALUE PRODUCTS, IN-STOCK LOCALLY

Very often a customer needs a small number of good value products today, for installation tomorrow. That might be batten fittings, panels, downlights or some low-wattage LED flood-lights for a residential project. We are there to help, with a network of local distributors carrying popular products in stock.

2016 Rio Olympic Games - Brazil

LIGHTING PROJECTS

Around the world we are best known as lighting suppliers for complete projects. Maybe our help is required to create just the right ambience in a new hotel, or a refurbishment project has ambitious targets to achieve for energy savings. Developers, architects and consultants come to NVC for just this sort of in-depth help and advice.

Typically, we will be able to supply lighting design services, advice on energy saving, local installation support – to make sure the contractor knows exactly how to install our products – and after-sales support with spares and repairs, if required.

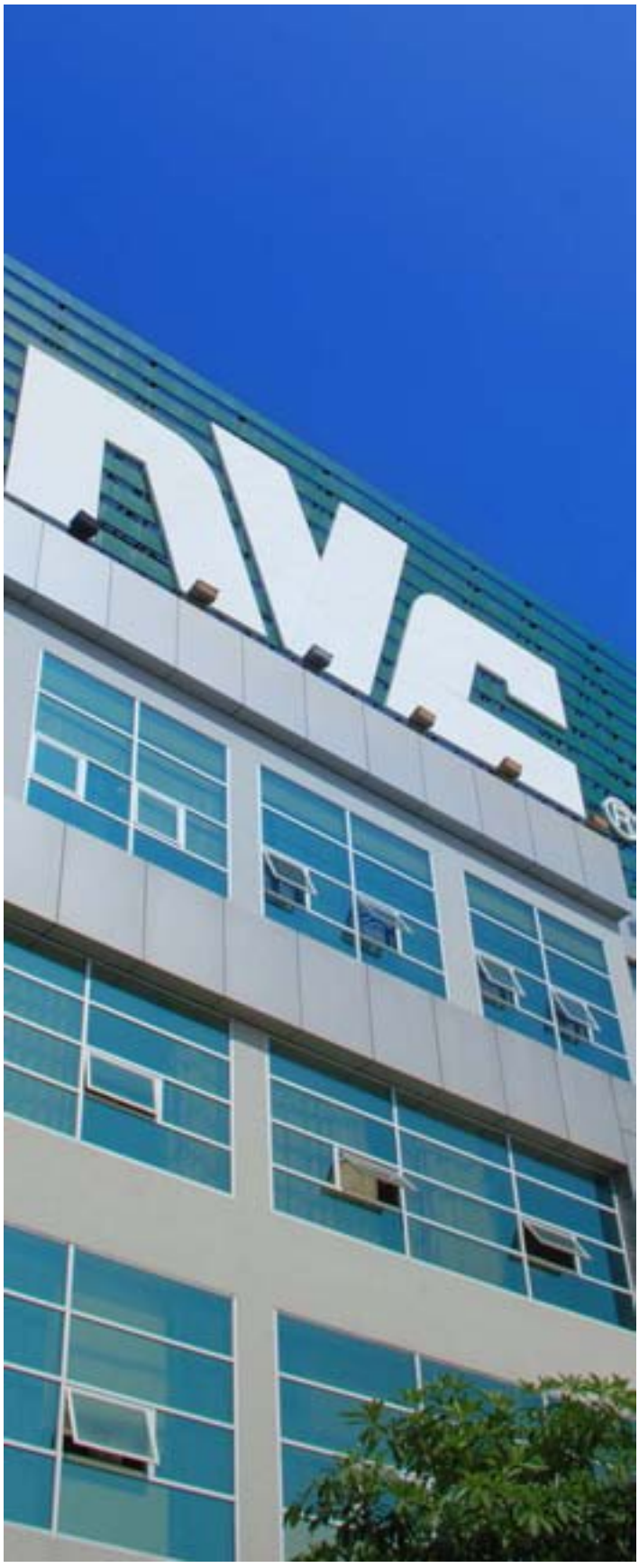
COMPLETE LIGHTING SOLUTIONS

On most projects we can supply all the lighting that is required from our very wide range of standard products, but on some projects something special is required. A large 5-star hotel might require a custom-designed bedside lamp for each guest bedroom, or a special design of wall-bracket to match the theme the interior designers are creating. This is where we use the services of our own BERKELEY Division.

The BERKELEY Division consists of designers, engineers and material specialists all bursting with ideas to help turn a concept sketch from an architect, interior designer or lighting designer into a fully engineered and costed product. Using this approach we have created signature lighting fixtures for bars, restaurants and night-clubs as well as for hotels and shopping malls.

The capability of our BERKELEY Division is available to any client with whom we are already working, and the resulting product design is unique to that client – not replicated and put in a catalogue for general sale.

St. Regis Polo Resort Hotel in Dubai - UAE



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NVC has a policy of continual product improvement. The information in this catalogue is provided for reference only and while every effort was made to ensure it was correct at the time of printing, we reserve the right to make corrections as well as product alterations and improvements at any time without notice. Trademarks are the property of NVC Lighting Technology Corporation or their respective owners.

NVC - a vertically integrated family of companies

Customers

Our sales & support network

NVC Lighting Technology Corporation, Huizhou, China
Our China Headquarters has 37 operation centres and 3,800 NVC-branded retail outlets in China.

NVC Lighting Do Brasil Comercio, Importaçao E Exportaçao Ltda, Sao Paulo, Brazil
Our Brazil regional office has a 3,940m² warehouse and an extensive showroom. We have a staff of 30, offering a wide range of lighting products and services tailored to local market requirements.

NVC Lighting Middle East, Dubai, United Arab Emirates
Our Middle East regional office supports our branch offices in Kuwait, Oman, Qatar, Saudi Arabia and the UAE

NVC Lighting & Electrical Technology (Singapore) Private Limited., Singapore
Our SE Asian regional office supports our branch offices throughout Southeast Asia, East Europe, South America, Africa and CIS

NVC Lighting Ltd, Birmingham, UK
Our UK regional office has over 100 staff and has annual sales of £32 million. The main markets served are the UK, Ireland and Scandinavia.

NVC Lighting

Lighting for commercial, industrial, retail, residential, amenity and exterior applications

ARCATEC
DRIVERS MADE BY NVC

NVC has its own factory in Shanghai dedicated to the design and manufacture of drivers. The Arcatec range of drivers is specifically designed to ENEC standards for European markets, but these drivers can also be specified in other markets if required.

Berkeley™

Berkeley is a specialist division of NVC providing a bespoke manufacturing service, usually for residential or decorative lighting.

ETI

ETI is the largest shareholder in NVC, and the 2nd largest LED chip manufacturer in China, with plants in Zhuhai, Dalian and Wuhan. Wherever it is appropriate we use ETI LEDs in our products.

NVC – a family of companies, united to bring you the best available lighting technology.

NVC was founded in 1998 and is much more than just the largest lighting manufacturer in China, and one of the largest in the world. We are a family of vertically integrated companies that is unique in our field.

THE LARGEST LIGHTING MANUFACTURER IN CHINA

Our factories and R&D centres in China and the UK design and manufacture one of the widest ranges of lighting products of any company today. With such a broad range of commercial, industrial, retail, decorative and exterior lighting we can generally supply almost everything required on a large project.

In China we distribute our products through 37 Regional Operation Centres, supporting a total of some 3,800 NVC-branded retail outlets.

Around the world we have regional office, local offices and distributors supplying and supporting our customers in Europe, the Middle East, Asia and South America.

NVC is listed on the Hong Kong stock exchange and we have a global turnover (2017) of $647 million. Our shareholders include Goldman Sachs (5%), Schneider (10%) and ETI (27%).

Our company has two logos: International logo Domestic logo (China)

A BESPOKE PRODUCT DESIGN AND MANUFACTURING SERVICE

BERKELEY is a division of NVC Lighting providing a bespoke design and manufacturing service. We deploy BERKELEY to support large projects where, for example, a 5-star hotel might require its own signature design of guest-room bedside lights in addition to standard NVC products being used elsewhere. It is the BERKELEY capability that enables us to say with confidence that we really can supply a complete lighting solution.

DRIVERS MADE BY NVC

We design and make our own drivers for many of the fittings in this catalogue. We have a specialist electronics factory in Shanghai manufacturing drivers to European (ENEC) and US (UL) standards for other leading brands – you would recognise their names.

On selected products we use the Arcatec range of drivers. This our own brand of high-performance, high-specification drivers, made in our Shanghai factory and especially suited to industrial applications. Wherever these are used we offer a 5 year warranty.

On most other product we offer NVC branded drivers, These provide excellent value, full compliance with the regulations for the market for which they are designed, and of course, they have the backing of your local NVC office, wherever you are. We make them – so we support them. Unless otherwise stated, products with an NVC-branded driver carry a 3 year warranty.

ONE OF CHINA'S LARGEST LED MANUFACTURERS

ETI is listed on the Shenzhen stock exchange and has factories in Zhuhai, Wuhu and Dalian. ETI designs and manufactures wafers and packaged LEDs in many formats, including SMD and COB. Wherever possible we use ETI LEDs in our products.

Because of our very close relationship with ETI their LEDs are available to us on the shortest possible lead times. Our customers also benefit from having first-use of new products and access to a depth of product technical support and knowledge that few rivals can match.

ETI makes a wide range of LED devices, but when ETI's range does not include the precise product required we use other LED brands, especially Cree. We have a long-standing relationship with Cree stretching back many years, and our head office, with one of our R&D centres, is conveniently located close to one of Cree's factories.

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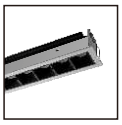
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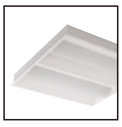
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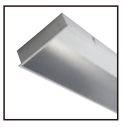
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12 NLED112*ND

13 NLED119*

14 NSPLED181W*

16 NSPLED101*

17 NSPLED123*

18 NLED1180

20 NLED110*

21 NLED19*

22 NLED801*A

23 NLED801*B

24 NLED801*D

25 NLED115*N

26 NLED116*N*

27 NLED62*

28 NLED602

29 NLED604R

LED SPOTLIGHTS RANGE SUMMARY

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WATTAGE	**LUMEN OUTPUTS**												
2	120-150 lm				110 lm								
3						200 lm							
3.5			260 lm										
4		270 lm						260 lm	260 lm				
4.5					200 lm								
5			375 lm			320 lm							
6		400 lm						400 lm	400 lm				
7						550 lm	525 lm						
8		540 lm	600 lm										
9				750 lm		700 lm		600 lm	600 lm				
10			700 lm				750 lm					700 lm	
12				1,000 lm				800 lm	800 lm				
13							950 lm	1,200 lm					
14										1,260 lm			
15							1,125 lm	890 lm		850 lm			
20								1,600 lm				1,500 lm	
25								1,875 lm		3,150 lm			2,150 lm
30											1,900 lm	2,400 lm	
35								2,450 lm		3,450 lm	3,500 lm		3,100 lm
45											4,050 lm		
46										4,140 lm			
50										3,450 lm	3,300 lm		
FEATURES	NLED1171 NLED105*	NLED112*	NLED119*	NSPLED181	NSPLED101*	NSPLED123*	NLED1180	NLED110*	NLED19*	NLED801*	NLED115*	NLED62*	NLED604R
Colour Temp	3000K 4000K 5700K 6500K	3000K 4000K 5700K	3000K 4000K 5700K	2700K 3000K 4000K	3000K 4000K 6500K	3000K 4000K 5700K	2700K 3000K 4000K 6500K	3000K 3500K 4000K 5700K 6500K	3000K 4000K 5700K	2700K 3000K 4000K	3000K 3500K 4000K 5700K	3000K 3500K 4000K 5700K	3000K 4000K 6000K
Visible LED	HP LED	HP LED	COB LED	COB LED	COB LED	COB LED	COB LED	COB LED	COB LED	COB LED	COB LED	COB LED	SMD LED
Protection Class	Class II	Class I	Class I	Class II	Class II	Class II	Class II	Class II	Class II	Class I	Class I	Class II	Class II
IP Rating	IP 20	IP 20	IP 20	IP 65	IP 20	IP 20	IP 20	IP 20	IP 20	IP 20	IP 20	IP 20	IP 20
Finishes	Semi-white Sanded silver	Semi-white Sanded silver Sanded-gold Satin-nickel	Semi-white	Sanded-white	Sanded-white	Semi-white	Sanded silver	Semi-white	Oyster white	Semi-white	Semi-white	Sanded silver	White
Dimmable	No	No	Yes	No	No	No	No	Yes	Yes	Yes	No	No	No
Beam angle	15°/30°	30°	15°/24°	20°/40°	20°/38° /60°	24°	20°/30°	15°/24° /36°	24°	15°/24° /36°	15°/24° /30°/40°	15°/24° /36°	110°
Input Voltage	110-240V/ 220-240V	220-240V											

NLED1171

Ultra-slim LED spotlights

15° 220-240V IP20 30000h

APPLICATIONS

- Retail stores, especially cosmetics, jewellery, watches and fashion accessories
- Bars and restaurants
- Residential area

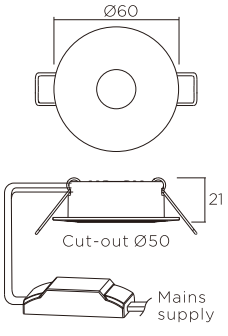
CONSTRUCTION

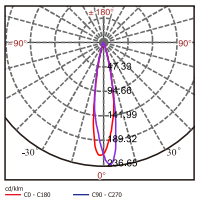
- Aluminium rear cover with semi-white powder coated finish
- 15° beam angle
- Polycarbonate bezel and PMMA lens
- Separate driver included

TECHNICAL DETAILS

- High power LED
- Rated life: 30,000 hours

Model	Colour temp.	Lumens	CRI	PF
NLED1171 2W	3000K/4000K/5700K	120 lm	>80	>0.5





NLED1171 2W 15°

NLED105 series

Small spotlight designed for cabinet use

NLED105
with sanded silver bezel

NLED105D
with sanded silver bezel

30° 110-240V IP20 30000h

APPLICATIONS

- Hotels
- Retail stores
- Residential lighting
- Cabinets
- Residential area

CONSTRUCTION

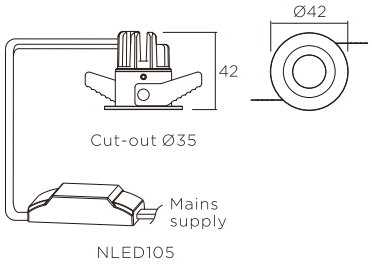
- Die-cast aluminium housing and heat sink
- PMMA lens
- Adjustable angle 15°
- Separate driver included

OPTIONS

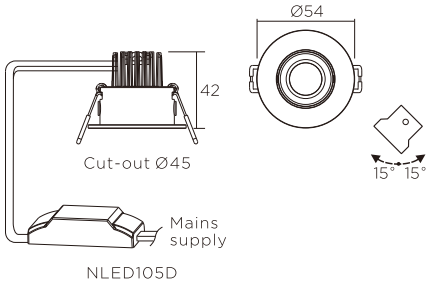
- **Fixed or gimbal:** Choice of fixed (NLED105) or gimbal (NLED105D)
- **Bezel colour:** Choice of sanded gold (SG) or sanded silver (SS)

TECHNICAL DETAILS

- HP LED
- Rated life: 30,000 hours

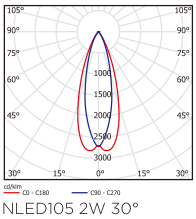


NLED105



NLED105D

Model	Colour temp.	Lumens	CRI	PF
NLED105 2W	3000K/4000K/6500K	150 lm	>80	>0.5
NLED105D 2W	3000K/4000K/6500K	150 lm	>80	>0.5



NLED105 2W 30°

NLED112 series

Adjustable spotlight with various bezels and colours

NLED112*
with steel bezel

NLED113*
with aluminium bezel

NLED114*
with PC bezel

APPLICATIONS

- Retail
- Residential lighting
- Bars
- Residential area

TECHNICAL DETAILS

- HP LEDs
- Rated life: 30,000 hours

CONSTRUCTION

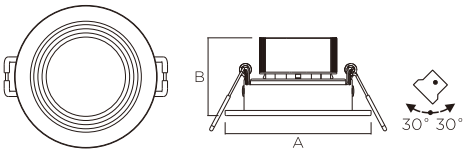
- Polycarbonate housing
- Bezel made of steel, aluminium or PC
- PMMA lens
- Adjustable angle 30°
- Integrated driver

OPTIONS

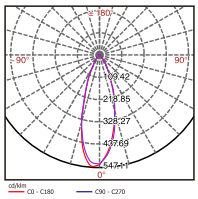
- **Bezel material & colour:** Colours available depend on the bezel material, as listed below
  - NLED112* - Steel bezel available colours are:
    - Semi white, use suffix SW
    - Sanded silver, use suffix SS
  - NLED113* - Aluminium bezel available colours are:
    - Anodised brushed silver, use suffix ABS
    - Semi white, use suffix SW
    - Sanded silver, use suffix SS

  NLED114*- Polycarbonate bezel available colours are:
    - Semi-white, use suffix SW

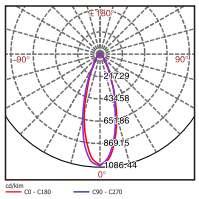
Model	Colour temp.	Lumens	CRI	PF
NLED1124ND 4W	3000K/4000K/5700K	270 lm	>80	>0.5
NLED1126ND 6W	3000K/4000K/5700K	400 lm	>80	>0.8
NLED1128ND 8W	3000K/4000K/5700K	540 lm	>80	>0.8
NLED1134ND 4W	3000K/4000K/5700K	270 lm	>80	>0.5
NLED1136ND 6W	3000K/4000K/5700K	400 lm	>80	>0.8
NLED1138ND 8W	3000K/4000K/5700K	540 lm	>80	>0.8
NLED1144ND 4W	3000K/4000K/5700K	270 lm	>80	>0.5
NLED1146ND 6W	3000K/4000K/5700K	400 lm	>80	>0.8
NLED1148ND 8W	3000K/4000K/5700K	540 lm	>80	>0.8



Watts	A	B	Cut-out
4W	Ø85	45	Ø75
6W/8W	Ø106	46	Ø95



NLED1124ND 30°



NLED1128ND 30°

NLED119 series
Adjustable LED spotlights

NLED119*DL (Aluminium bezel)

NLED119*D (Polycarbonate bezel)

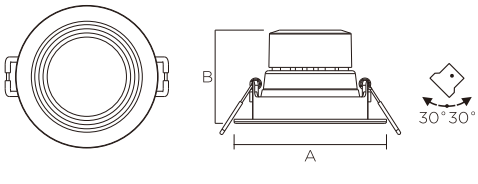
APPLICATIONS
- Hotels
- Retail stores
- Bars and restaurants
- Residential area

TECHNICAL DETAILS
- COB LED
- Dimming: Step-dimming as standard
- Rated life: 30,000 hours
- **Dimming:** Step-dimming as standard, switch on/off quickly to step between 100%, 50% or 20% output

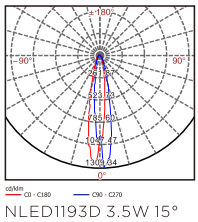
CONSTRUCTION
- Polycarbonate housing and rear cover
- Polycarbonate or aluminium bezel
- Polycarbonate lens
- Adjustable angle 30°
- Integrated driver

OPTIONS
- **Bezel material:** Choice of PC or aluminium (suffix L)
- **Beam angle:** Choice of 15° or 24°
- **Size:** Sizes vary by wattage, as listed below.
  The 3.5W aluminium-bezel version is available in two sizes. The 3.5W PC-bezel version is available in just one size:
  • 3.5W aluminium bezel small, use suffix DLS
  • 3.5W aluminium bezel large, use suffix DL
  • 3.5W PC bezel small, use suffix DS
  (suffix explained: D for adjustable, L for aluminium, S for small)

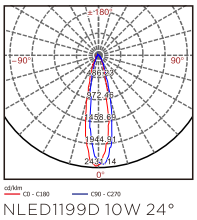
Model	Colour temp.	Lumens	CIR	PF	Beam angle
NLED1193DL 3.5W	3000K/4000K/5700K	260 lm	>90	>0.5	15°/24°
NLED1195DL 5W	3000K/4000K/5700K	375 lm	>90	>0.5	15°/24°
NLED1197DL 8W	3000K/4000K/5700K	600 lm	>90	>0.8	15°/24°
NLED1199DL 10W	3000K/4000K/5700K	700 lm	>90	>0.8	15°/24°
NLED1193DLS 3.5W	3000K/4000K/5700K	260 lm	>90	>0.5	15°/24°
NLED1193D 3.5W	3000K/4000K/5700K	260 lm	>90	>0.5	15°/24°
NLED1195D 5W	3000K/4000K/5700K	375 lm	>90	>0.5	15°/24°
NLED1197D 8W	3000K/4000K/5700K	600 lm	>90	>0.8	15°/24°
NLED1199D 10W	3000K/4000K/5700K	700 lm	>90	>0.8	15°/24°
NLED1193DS 3.5W	3000K/4000K/5700K	260 lm	>90	>0.5	15°/24°



Watts	A	B	Cut-out
3.5W(S)	Ø70	53	Ø55
3.5W/5W	Ø93	56	Ø75
8W/10W	Ø116	66	Ø95



NLED1193D 3.5W 15°



NLED1199D 10W 24°

NSPLED181W series

Surface IP65 waterproof spot lights

APPLICATIONS

- Bathrooms
- Corridors
- Humid areas requiring waterproof fixtures(toilets, washroom and showers)

CONSTRUCTION

- Main material: Die-cast aluminium and glass
- Body colour: White
- Electroplated aluminium reflector
- Separate driver included

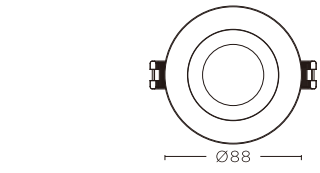
TECHNICAL DETAILS

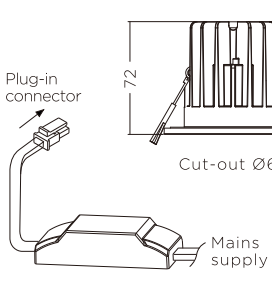
- CREE COB LED
- Rated life: 35,000 hours
- IP65 rated to the front of the fitting

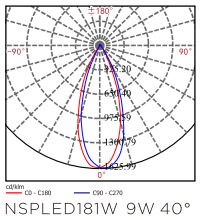
OPTIONS

- **Beam angle:** Choice of 20° or 40°

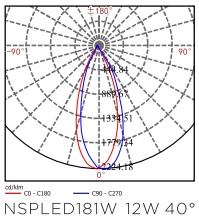
Model	Colour temp.	Lumens	CRI	PF	Beam angle
NSPLED181W 9W	2700K/3000K/4000K	750 lm	>80	>0.5	20°/38°
NSPLED181W 12W	2700K/3000K/4000K	1,000 lm	>80	>0.5	20°/38°







NSPLED181W 9W 40°



NSPLED181W 12W 40°

Structure and details

Heat dissipation & lifespan

Die-cast aluminium housing allows the product to have better heat dissipation and a compact appearance

Suitable for more applications

Separate fixture and bezel structure with the multiple choice of bezel colour allows the customer to choose their preferred style (chrome,stain nickel,black and white), which can make the product suitable for more applications.

Easy installation

Use female/male connector to connect with the fixture and driver, which facilitates easy installation, uninstallation and replacement

Water proof performance

Built in water proof rubber gasket design and its rotational installation IP65 cover allows the bezel fit to the body closely, which makes the product have a strong water proof performance.

NSPLED101 series

Cabinet spotlights with small cut-out size

NSPLED101A 2W

NSPLED101DA 4.5W

NSPLED101B 2W

NSPLED101DB 4.5W

APPLICATIONS

- Museums
- Display cases
- Accent lighting
- Residential area

TECHNICAL DETAILS

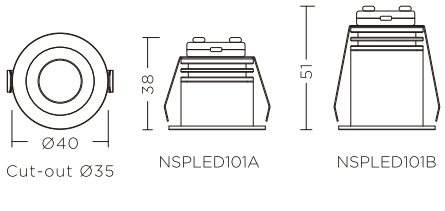
- CREE high power
- Rated life: 30,000 hours

CONSTRUCTION

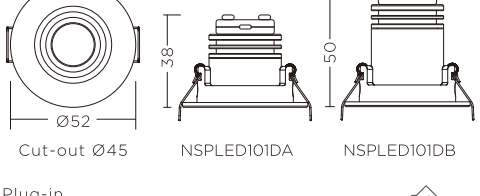
- Body material: Aluminium alloy
- Bezel colour: White
- PMMA lens
- Eaglerise separate driver included

OPTIONS

- **Beam angle:** Choice of 20°, 38° or 60°

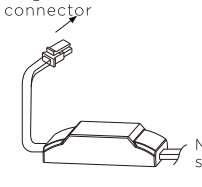


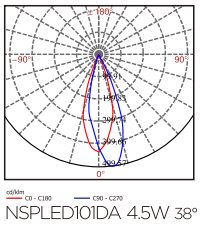
Cut-out Ø35 NSPLED101A NSPLED101B



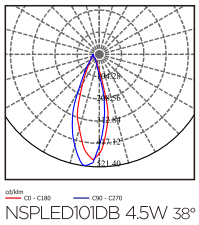
Cut-out Ø45 NSPLED101DA NSPLED101DB

Model	Colour temp.	Lumens	CRI	PF	Beam angle
NSPLED101A 2W	3000K/4000K/6000K	100 lm	>80	>0.4	20°/38°/60°
NSPLED101B 2W	3000K/4000K/6000K	100 lm	>80	>0.4	20°/38°/60°
NSPLED101DA 4.5W	3000K/4000K/6000K	160 lm	>80	>0.4	20°/38°/60°
NSPLED101DB 4.5W	3000K/4000K/6000K	160 lm	>80	>0.4	20°/38°/60°





NSPLED101DA 4.5W 38°



NSPLED101DB 4.5W 38°

NSPLED123 series

Versatile & low glare LED recessed spotlights

NSPLED1233B

NSPLED1233A

NSPLED1233C

NSPLED1233D

CRI 90

24° 220-240V 30000h

APPLICATIONS

- Hotel bedrooms
- Bars & restaurants
- High quality residential developments
- Retail
- Residential area

CONSTRUCTION

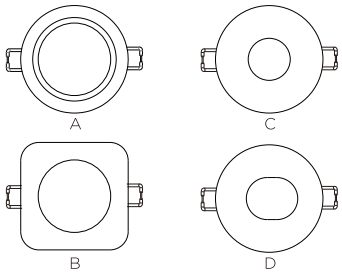
- Polycarbonate body and bezel
- Vacuum metalized reflector
- Adjustable angle 15°
- Integrated driver

OPTIONS

- **Bezel:** Choice of four bezels, as illustrated use suffix A, B, C, D for four different shapes when ordering

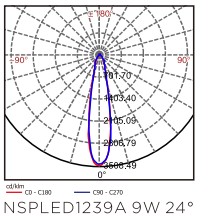
TECHNICAL DETAILS

- COB LED
- Rated life: 30,000 hours

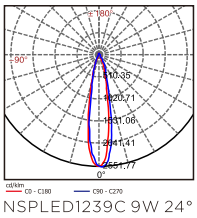


Watts	A	B	Cut-out
3W/5W(A/B)	95	66	Ø75
7W/9W(A/B)	118	82	Ø95
3W/5W(C/D)	Ø95	76	Ø75
7W/9W(C/D)	Ø115	95	Ø95

Model	Colour temp.	Lumens	CRI	PF
NSPLED1233A/B/C/D 3W	3000K/4000K/5700K	200 lm	>90	>0.5
NSPLED1235A/B/C/D 5W	3000K/4000K/5700K	320 lm	>90	>0.5
NSPLED1237A/B/C/D 7W	3000K/4000K/5700K	550 lm	>90	>0.9
NSPLED1239A/B/C/D 9W	3000K/4000K/5700K	700 lm	>90	>0.9



NSPLED1239A 9W 24°



NSPLED1239C 9W 24°

NLED1180

Recessed LED spotlight with a range ofbezel and reflector attachments

APPLICATIONS

- Bars and restaurant
- Hotels
- Meeting rooms and corridors
- High-specification residential projects

OPTIONS

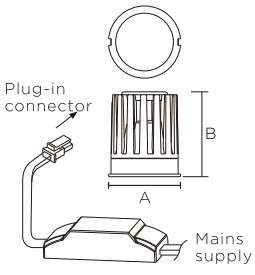
- **Bezels:** A range of bezels, as illustrated above, is available and are to be ordered as separate items. The **waterproof** bezel (NLED802) fits the 7/10W version only
- **Emergency:** 1.5 hours or 3 hours emergency kit (EM001/002) available. Please refer to the driver section

CONSTRUCTION

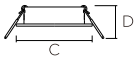
- Die-cast aluminium body and heat sink
- Clear PMMA front cover
- White painted die-cast aluminium bezels
- Adjustable angle 20° (for NLED1180-1/2/4/6 only)
- Separate driver included

TECHNICAL DETAILS

- COB LED
- Rated life: 30,000 hours



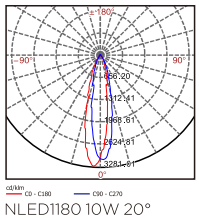
Watts	A	B
7W/10W	Ø50	59
13W/15W	Ø50	86



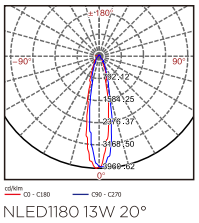
	C	D	Cut-out
NLED1180-1	Ø85	37	Ø75
NLED1180-2	Ø108	33	Ø95
NLED1180-3	Ø84	62	Ø75
NLED1180-4	Ø100	60	Ø90
NLED1180-5	84x84	62	75x75
NLED1180-6	100x100	60	90x90
NLED802	Ø85	52	Ø75

Model	Colour temp.	Lumens	CRI	PF	Beam angle
NLED1180 7W	2700K/3000K/4000K/6500K	525 lm	>80	>0.8	20°/30°
NLED1180 10W	2700K/3000K/4000K/6500K	750 lm	>80	>0.9	20°/30°
NLED1180 13W	2700K/3000K/4000K/6500K	950 lm	>80	>0.9	20°/30°
NLED1180 15W	2700K/3000K/4000K/6500K	1,125 lm	>80	>0.9	20°/30°

Bezels		
NLED1180-1	NLED1180-2	NLED1180-3
NLED1180-4	NLED1180-5	NLED1180-6
NLED802		



NLED1180 10W 20°



NLED1180 13W 20°

Structure and details

COB LED
COB LED with aluminium reflector re-creates the “sparkle” of traditional tungsten lighting.

Low glare bezels
In a 2.8m ceiling with 1.2m spacings, the UGR can be as low as 13.5. The bezels suitable for MR16 and GU10 lamp.

Use plug-in/out connector
Use it to connect the bezel and light engine, more easier to install.

Connector block
Easy to install and uninstall.

Beam angle
20° or 30° beam angle are available, helps ensure an even spread or precise light in most applications.

Supplied with driver
Each light-engine is supplied complete with its own driver. The driver and the light engine are connected with a simple plug/socket mechanism for easy installation and servicing.

Wide choices of attachments

NLED1180-1
Adjustable
double ring small

NLED1180-2
Adjustable
double ring large

NLED1180-3
Fixed round
glare-proof

NLED1180-4
Adjustable
round glare-proof

NLED1180-5
Fixed square
glare-proof

NLED1180-6
Adjustable
square glare-proof

NLED802
Waterproof bezel for 7W and 10W

NLED110 series

Recessed die-cast aluminium COB LED spotlights

Fixed

25W/35W

CRI 90

15° 24° 36° 220-240V CE IP20 DIMMING 0-10V DIMMING Digital DIMMING 30000h

APPLICATIONS

- Hotels
- Shopping malls
- Retail stores
- Corridors

TECHNICAL DETAILS

- COB LED
- Rated life: 30,000 hours

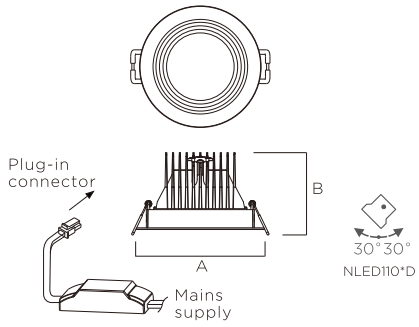
CONSTRUCTION

- Die-cast aluminium housing and heat sink
- Cream white powder coated finish
- Anodized aluminium reflector
- Adjustable angle 30°
- Separate driver included

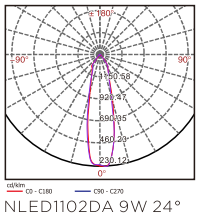
OPTIONS

- **Beam angle:** Choice of 15°, 24°or 36°
- **Dimming:** Fixed output as standard, but 6W, 12W and 20W product are also available for suitable phase-cutting dimmers, analogue dimming and digital dimming. If required, add suffix MD, 0-10V when and DD when ordering
- **Emergency:** 1.5 hours or 3 hours emergency kit (EM001/002) available. Please refer to the driver section

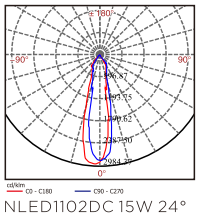
Model	Colour temp.	Lumens	CRI	PF	Beam angle
NLED1101A 4W	3000K/3500K/4000K/5700K	260 lm	>90	>0.5	15°/24°/36°
NLED1101DA 4W	3000K/3500K/4000K/5700K	260 lm	>90	>0.5	15°/24°/36°
NLED1101B 6W	3000K/3500K/4000K/5700K	400 lm	>90	>0.9	15°/24°/36°
NLED1101DB 6W	3000K/3500K/4000K/5700K	400 lm	>90	>0.9	15°/24°/36°
NLED1102A 9W	3000K/3500K/4000K/5700K	600 lm	>90	>0.9	15°/24°/36°
NLED1102DA 9W	3000K/3500K/4000K/5700K	600 lm	>90	>0.9	15°/24°/36°
NLED1102B 12W	3000K/3500K/4000K/5700K	800 lm	>90	>0.9	15°/24°/36°
NLED1102DB 12W	3000K/3500K/4000K/5700K	800 lm	>90	>0.9	15°/24°/36°
NLED1102C 15W	3000K/3500K/4000K/5700K	890 lm	>90	>0.9	15°/24°/36°
NLED1102DC 15W	3000K/3500K/4000K/5700K	890 lm	>90	>0.9	15°/24°/36°
NLED1103D 20W	3000K/3500K/4000K/5700K	1600 lm	>90	>0.9	15°/24°/36°
NLED1104DA 25W	3000K/3500K/4000K/5700K	1,875 lm	>90	>0.9	15°/24°/36°
NLED1104D 35W	3000K/3500K/4000K/5700K	2,450 lm	>90	>0.9	15°/24°/36°
High output					
NLED1103D 13W	3000K/4000K 3000K/4000K/6500K	1,100 lm 1,200 lm	>90 >80	>0.9 >0.9	15°/24°/36°
NLED1103D 27W	3000K/4000K 3000K/4000K/6500K	2,200 lm 2,500 lm	>90 >80	>0.9 >0.9	15°/24°/36°



Watts	A	B	Cut-out
4W/6W	Ø75	48	Ø65
4W/6W(D)	Ø85	48	Ø75
9W/12W/15W	Ø98	63	Ø85
9W/12W/15W(D)	Ø108	63	Ø95
13W/20W/27W	Ø145	87	Ø120
25W/35W	Ø170	101	Ø150



NLED1102DA 9W 24°



NLED1102DC 15W 24°

NLED19 series

Recessed die-cast aluminium COB LED spotlights

NLED19*

NLED19*D

CRI 90

24° 220-240V IP20 30000h

APPLICATIONS

- Hotels
- Shopping malls
- Retail stores
- Residential lighting

TECHNICAL DETAILS

- COB LED
- Rated life: 30,000 hours

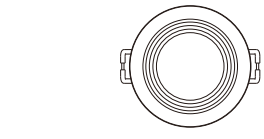
CONSTRUCTION

- Die-cast aluminium housing and heat sink
- Powder coated finish
- Anodized aluminium reflector
- Adjustable angle 30°
- Separate driver included

OPTIONS

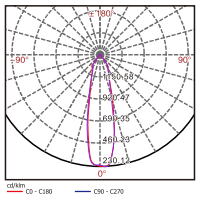
- **Bezel:** Choice fixed or gimbal (use suffix D)
- **Emergency:** 1.5 hours or 3 hours emergency kit (EM001/002) available. Please refer to the driver section

Model	Colour temp.	Lumens	CRI	PF
NLED191 4W	3000K/4000K/5700K	260 lm	>90	>0.5
NLED191D 4W	3000K/4000K/5700K	260 lm	>90	>0.5
NLED191 6W	3000K/4000K/5700K	400 lm	>90	>0.7
NLED191D 6W	3000K/4000K/5700K	400 lm	>90	>0.7
NLED192 9W	3000K/4000K/5700K	600 lm	>90	>0.7
NLED192D 9W	3000K/4000K/5700K	600 lm	>90	>0.7
NLED192 12W	3000K/4000K/5700K	800 lm	>90	>0.9
NLED192D 12W	3000K/4000K/5700K	800 lm	>90	>0.9

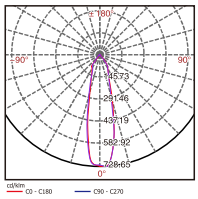


NLED19*D

Model	A	B	Cut-out
NLED191	Ø72	48	Ø62
NLED191D	Ø82	48	Ø75
NLED192	Ø96	63	Ø85
NLED192D	Ø106	63	Ø95



NLED192 9W 24°



NLED192 12W 24°

NLED801A series

LED commercial fixed spotlights

CRI 90

15° 24° 36° 220-240V IP20 DIMMING+ 0-10V DIMMING Digital DIMMING 30000h

APPLICATIONS

- Hotels
- Shopping malls
- Theatres
- Exhibition centres

CONSTRUCTION

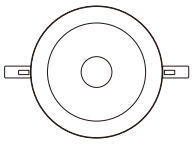
- Die-cast aluminium housing and heat sink
- Semi white powder coated finish
- PC diffuser
- Separate driver included

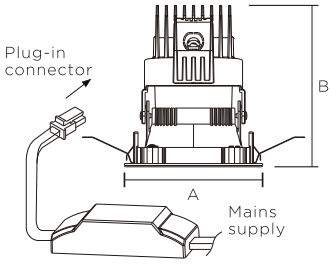
TECHNICAL DETAILS

- COB LED
- Standard version
  - Choice of four wattages:
    15W, 850 lm, PF >0.8
    25W, 1,580 lm, PF >0.95
    35W, 2,450 lm, PF >0.95
    50W, 3,450 lm, PF >0.95
- High efficiency version
  - Choice of four wattages:
    14W, 1,260 lm, PF >0.8
    25W, 2,150 lm, PF >0.95
    35W, 3,450 lm, PF >0.95
    46W, 4,140 lm, PF >0.95
- Rated life: 30,000 hours

OPTIONS

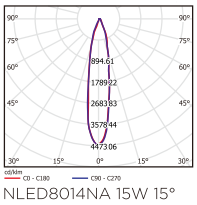
- **Beam angle:** Choice of 15°, 24°or 36°
- **Driver:** Choice of standard driver or DALI driver
- **Dimming:** Fixed output as standard, but for dimming versions add suffix DD
- **Emergency:** 1.5 hours or 3 hours emergency kit (EM001/002) available. Please refer to the driver section



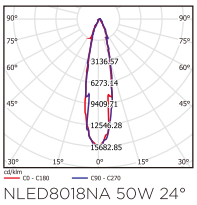


Watts	A	B	Cut-out
15W	Ø107	125	Ø95
25W	Ø133	156	Ø125
35W	Ø158	173	Ø150
50W	Ø212	217	Ø200

Model	Colour temp.	Lumens	CRI	PF	Beam angle
NLED8014NA 15W	2700K/3000K/4000K	850 lm	>90	>0.8	15°/24°/36°
NLED8015NA 25W	2700K/3000K/4000K	1,580 lm	>90	>0.95	15°/24°/36°
NLED8016NA 35W	2700K/3000K/4000K	2,450 lm	>90	>0.95	15°/24°/36°
NLED8018NA 50W	2700K/3000K/4000K	3,450 lm	>90	>0.95	15°/24°/36°
High output					
NLED8014A 14W	2700K/3000K/4000K	1,260 lm	>80	>0.8	15°/24°/36°
NLED8015A 25W	2700K/3000K/4000K	2,150 lm	>80	>0.95	15°/24°/36°
NLED8016A 35W	2700K/3000K/4000K	3,450 lm	>80	>0.95	15°/24°/36°
NLED8018A 46W	2700K/3000K/4000K	4,140 lm	>80	>0.95	15°/24°/36°



NLED8014NA 15W 15°



NLED8018NA 50W 24°

NLED801B series

Glass diffuser fixed wallwasher spotlights

CRI 90

15° 24° 36° 220-240V IP20 DIMMING + 0-10V DIMMING Digital DIMMING 30000h

APPLICATIONS

- Hotels
- Shopping malls
- Theatres
- Exhibition centres

TECHNICAL DETAILS

- COB LED
- Rated life: 30,000 hours

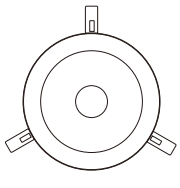
CONSTRUCTION

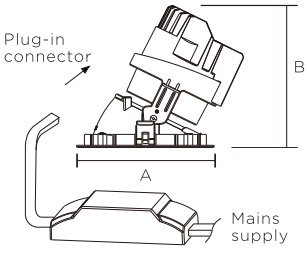
- Die-cast aluminium housing and heat sink
- Semi white powder coated finish
- Polycarbonate diffuser for fixed version
- Glass diffuser for wallwasher version
- Separate driver included

OPTIONS

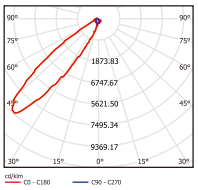
- **Beam angle:** Choice of 15°, 24° or 36°
- **Driver:** Choice of standard driver or DALI driver
- **Dimming:** Fixed output as standard, but for dimming versions add suffix DD

Model	Colour temp.	Lumens	CRI	PF	Beam angle
NLED8016NB 35W	2700K/3000K/4000K	2,450 lm	>90	>0.95	15°/24°/36°
NLED8018NB 50W	2700K/3000K/4000K	3,450 lm	>90	>0.95	15°/24°/36°

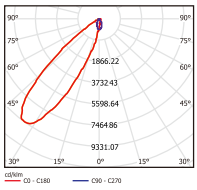




Watts	A	B	Cut-out
35W	Ø158	163	Ø150
50W	Ø212	215	Ø200



NLED8018NB 50W 15°



NLED8018NB 50W 36°

NLED801D series

Adjustable wallwasher spotlights

CRI 90

15° 24° 36° 220-240V CE IP20 DIMMING+ 0-10V DIMMING Digital DIMMING 30000h

APPLICATIONS

- Hotels
- Shopping malls
- Theatres
- Exhibition centres

TECHNICAL DETAILS

- COB LED
- Rated life: 30,000 hours

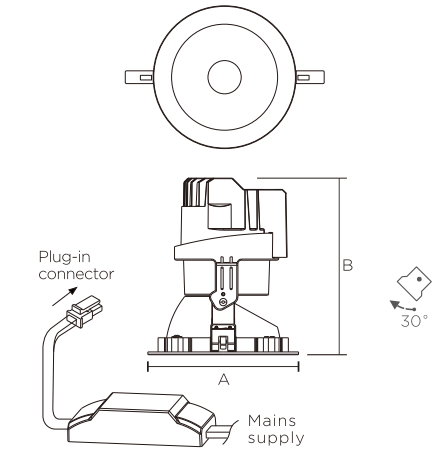
CONSTRUCTION

- Die-cast aluminium housing and heat sink
- Semi white powder coated finish
- Polycarbonate diffuser for fixed version
- Glass diffuser for wallwasher version
- Adjustable angle: vertical 30°
- Separate driver included

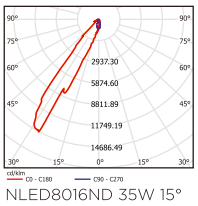
OPTIONS

- **Beam angle:** Choice of 15°, 24° or 36°
- **Driver:** Choice of standard driver or DALI driver
- **Dimming:** Fixed output as standard, but for dimming versions add suffix DD

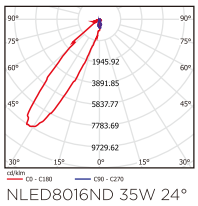
Model	Colour temp.	Lumens	CRI	PF	Beam angle
NLED8014ND 15W	2700K/3000K/4000K	850 lm	>90	>0.8	15°/24°/36°
NLED8015ND 25W	2700K/3000K/4000K	1,580 lm	>90	>0.9	15°/24°/36°
NLED8016ND 35W	2700K/3000K/4000K	2,450 lm	>90	>0.9	15°/24°/36°
NLED8018ND 50W	2700K/3000K/4000K	3,450 lm	>90	>0.9	15°/24°/36°



Watts	A	B	Cut-out
15W	Ø107	126	Ø100
25W	Ø133	156	Ø125
35W	Ø158	173	Ø150
50W	Ø212	218	Ø200



NLED8016ND 35W 15°



NLED8016ND 35W 24°

NLED115 series

High power spotlights

30W (HP LEDs)

35W/45W/50W (COB LED)

CRI 90

APPLICATIONS

- Hotels
- Shopping malls
- Retail stores
- Bars

TECHNICAL DETAILS

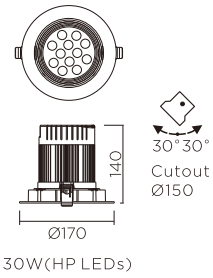
- HP LEDs or COB LED
- Rated life: 30,000 hours

CONSTRUCTION

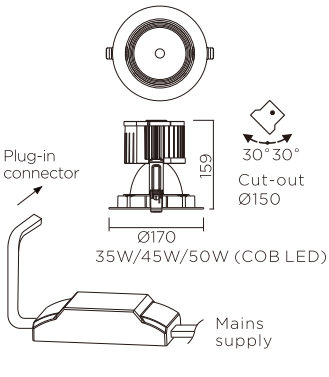
- Die-cast aluminium housing and heat sink
- Semi white powder coated finish
- PC lens or anodized aluminium reflector
- Adjustable angle: vertical 30°, horizontal 355°
- Integrated driver (NLED1151N), separate driver included (NLED1152/NLED1152N/NLED1152NA)

OPTIONS

- **Light source:** Choice of HP LEDs or COB LED
- **Beam angle:** Choice of 15°, 24°, 30° or 40°

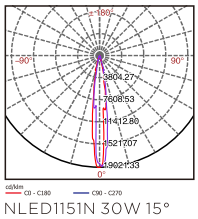


30W(HP LEDs)

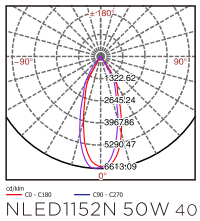


35W/45W/50W (COB LED)

Model	Colour temp.	Lumens	CRI	PF	Beam angle
HP LEDs					
NLED1151N 30W	3000K/4000K/5700K	1,900 lm	>80	>0.95	15°/30°
COB LED					
NLED1152NA 35W	3000K/3500K/4000K	2,450 lm	>90	>0.95	15°/24°/40°
NLED1152N 50W	3000K/3500K/4000K	3,300 lm	>90	>0.95	15°/24°/40°
High output					
NLED1152 35W	3000K/4000K	3,500 lm 2,850 lm	>80 >90	>0.95	15°/24°/40°
NLED1152 45W	3000K/4000K	4,050 lm 3,650 lm	>80 >90	>0.95	15°/24°/40°



NLED1151N 30W 15°



NLED1152N 50W 40°

NLED116 series

Adjustable height and beam direction high power spotlights

NLED1161N 30W

NLED1162NA 35W/50W

APPLICATIONS

- Hotels
- Shopping malls
- Retail stores
- Bars

TECHNICAL DETAILS

- HP LEDs or COB LED
- Rated life: 30,000 hours

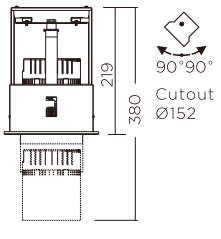
CONSTRUCTION

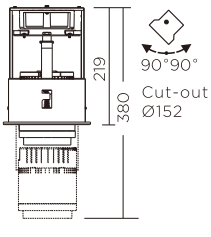
- Die-cast aluminium housing
- Semi white powder coated finish
- PC lens or anodized aluminium reflector
- Adjustable height and beam direction
- Adjustable angle 90°
- Integrated driver

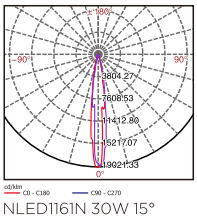
OPTIONS

- **Light source:** Choice of HP LEDs or COB LED
- **Beam angle:** Choice of 15°, 24°, 30° or 40°

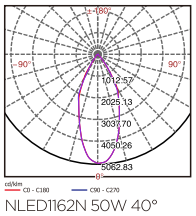
Model	Colour temp.	Lumens	CRI	PF	Beam angle
NLED1161N 30W	3000K/4000K/5700K	1,900 lm	>80	>0.9	15°/30°
NLED1162NA 35W	3000K/4000K	2,200 lm	>80	>0.9	15°/24°/40°
NLED1162N 50W	3000K/4000K	3,200 lm	>80	>0.9	15°/24°/40°







NLED1161N 30W 15°



NLED1162N 50W 40°

NLED62 series
Wallwasher spotlights

NLED623D 10W

NLED622D 20W

NLED621D 30W

CRI 90

15° 24° 36° 220-240V IP20 30000h

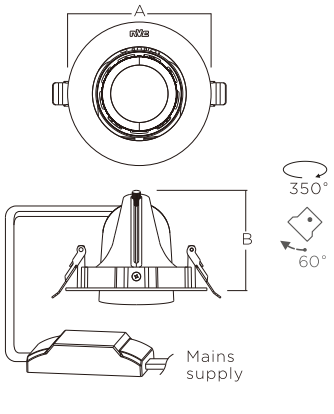
APPLICATIONS
- Showrooms
- Retails
- Fashion shops
- Exhibition centres

TECHNICAL DETAILS
- COB LED
- Rated life: 30,000 hours

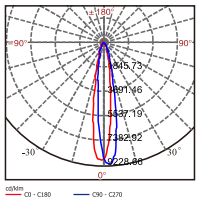
CONSTRUCTION
- Die-cast aluminium housing and heat sink
- Separate LED driver included
- Heavy-duty spring clips
- Sanded white powder coated finish
- Adjustable angle: vertical 60°, horizontal 350°

OPTIONS
- **Beam angle:** Choice of 15°, 24° or 36°

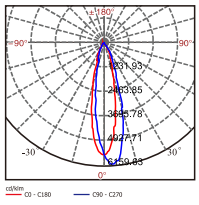
Model	Colour temp.	Lumens	CRI	PF	Beam angle
NLED623D 10W	3000K/3500K/4000K/5700K	700 lm	>90	>0.9	24°/36°
NLED622D 20W	3000K/3500K/4000K/5700K	1,500 lm	>90	>0.9	15°/24°/36°
NLED621D 30W	3000K/3500K/4000K/5700K	2,400 lm	>90	>0.9	15°/24°/36°



Watts	A	B	Cut-out
10W	Ø105	75	Ø95
20W	Ø130	100	Ø120
30W	Ø160	128	Ø150



NLED622D 20W 15°



NLED621D 30W 24°

NLED602

Wallwasher spotlights

APPLICATIONS

- Hotels
- Shopping malls
- Theatres
- Museums

TECHNICAL DETAILS

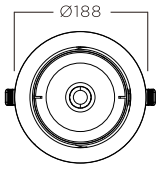
- Bridgelux COB LED
- Rated life: 30,000 hours

CONSTRUCTION

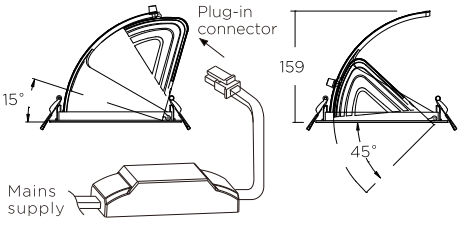
- Die-cast aluminium housing and heat sink
- Semi white or white powder coated finish
- Glass cover
- Adjustable: Horizontal 360°, vertical 60°
- Separate driver included

OPTIONS

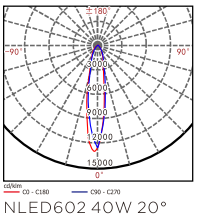
- **Beam angle**: Choice of 20°, 40° or 60°



Cut-out Ø170



Model	Colour temp.	Lumens	CRI	PF	Beam angle
NLED602 40W	2700K/3000K/4000K/5000K	3,325 lm	>80	>0.9	20°/40°/60°



NLED602 40W 20°

NLED604R

Rectangular wallwasher spotlights

SMD LEDs

110° 220-240V IP20 30000h

APPLICATIONS

- Hotels
- Shopping malls
- Theatres
- Museums

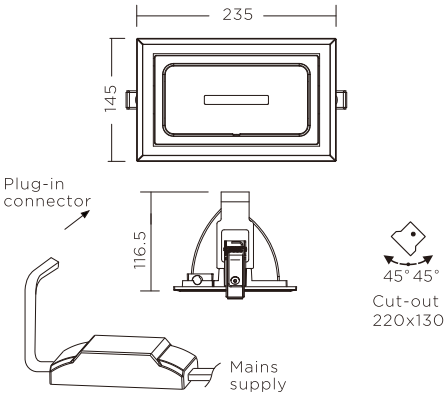
CONSTRUCTION

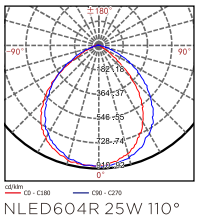
- Die-cast aluminium housing and heat sink
- White powder coated finish
- Glass diffuser
- Adjustable angle 45°
- Separate driver included

TECHNICAL DETAILS

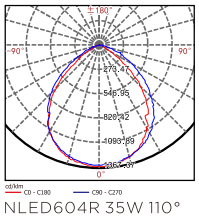
- SMD LEDs
- Rated life: 30,000 hours

Model	Colour temp.	Lumens	CRI	PF
NLED604R 25W	3000K/4000K/6000K	2,150 lm	>80	>0.9
NLED604R 35W	3000K/4000K/6000K	3,100 lm	>80	>0.9





NLED604R 25W 110°



NLED604R 35W 110°

DOWNLIGHTS

32 NLED912*

33 NDLLED915*

34 NLED950*E
NLED951*E

35 NLED950*E-D

37 NLED9508P

38 NLED940*E

39 NLED940*

41 NLED924*

42 NDLLED929*

44 NDLLED928*

46 NLEDM910*

47 NDLLED70*

48 NDLLED9235

49 NDLLED9286AM

52 NDLLED970*

54 NDLLED980*

56-73 NDLLED81*

LED DOWNLIGHTS RANGE SUMMARY

	NLED912* PAGE 32	NDLLED915* PAGE 33	NLED950* PAGE 34	NLED940*E PAGE 38	NLED940* PAGE 39	NLED924* PAGE 41	NDLLED928* PAGE 44	NLEDM910* PAGE 46	NLED81* PAGE 56-73
WATTAGE	**LUMEN OUTPUTS**								
3									170 lm
4	250 lm	240 lm							
4.5									170 lm
5			460 lm						
6	360 lm	360 lm		480 lm	450 lm				
7			650 lm			700 lm			
8	480 lm	480 lm	700 lm		650 lm	760 lm			570 lm
9			840 lm				770 lm		
10	600 lm	650 lm	890 lm					800 lm	
11						1,200 lm			870 lm
12	720 lm		1,150 lm	960 lm	1,050 lm	960 lm			
14			1,300 lm						
15	850 lm					1,275 lm	1,100 lm		1,200 lm
16						1,600 lm			
17			1,550 lm						
18				1,500 lm					
20	1,200 lm		1,950 lm		1,700 lm	1,800 lm		1,600 lm	1,700 lm
22						2,200 lm			
24				1,900 lm			2,200 lm		
25			2,450 lm		2,100 lm				
30					2,700 lm	2,700 lm		2,400 lm	2,500 lm
34						3,250 lm			
35							2,530 lm		2,900 lm
40			3,600 lm						
50									3,900 lm
55									

FEATURES	NLED912*	NDLLED915*	NLED950*	NLED940*E	NLED940*	NLED924*	NDLLED928*	NLEDM910*	NLED81*
Colour Temp	3000K 4000K 5700K	3000K 4000K 5700K	3000K 4000K 5700K	3000K 4000K 6500K	3000K 4000K 6500K	3000K 4000K 5700K	3000K 4000K 5700K	3000K 4000K 6500K	2700K 3000K 4000K
Mounting	Recessed	Recessed	Recessed	Recessed	Recessed	Recessed	Surface	Surface	Recessed
IP Rating	IP 20	IP 20	IP 44	IP 20	IP 20	IP 40	IP 20	IP 20	IP 20/40/44
Finishes	Semi-white	Semi-white Sanded Silver Brass	Sanded-white	white	white	Semi-white	Black/ Semi-white	Black/ Semi-white	white
Dimmable	No	Yes	Yes	No	No	Yes	No	No	Yes
Emerg.	Choice of maintained 1.5 or 3 hours emergency operation, If Emergency function is needed.								

NLED912 series

Downlight with aluminium or polycarbonate bezel

NLED912* (Polycarbonate bezel)

NLED912*L (Aluminium bezel)

90° 220-240V CE IP20 30000h

APPLICATIONS

- Residential lighting
- Retail stores
- Shopping malls

OPTIONS

- **Bezel material**: Choice of semi-white polycarbonate as standard, or sanded silver aluminium (add suffix L)
- **Sizes**:
  - Fittings with polycarbonate bezel are available in seven wattages. Note that the 8W version is available in two sizes as listed below
  - Fittings with aluminium bezel (suffix L) are available in four wattages. The 8W version is available in one size only

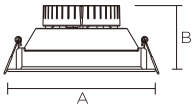
CONSTRUCTION

- Aluminium + polycarbonate housing
- PC heat sink
- Cream white powder coated finish
- Frosted polycarbonate diffuser
- Aluminium or polycarbonate bezel
- Integrated driver

TECHNICAL DETAILS

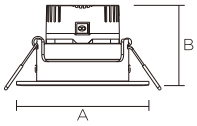
- SMD LEDs
- Rated life: 30,000 hours

Model	Colour temp.	Lumens	CRI	PF
Polycarbonate bezel				
NLED91225 4W	3000K/4000K/5700K	250 lm	>80	>0.5
NLED9123 6W	3000K/4000K/5700K	360 lm	>80	>0.5
NLED91235 8W	3000K/4000K/5700K	480 lm	>80	>0.9
NLED9124 8W	3000K/4000K/5700K	480 lm	>80	>0.9
NLED9124 10W	3000K/4000K/5700K	600 lm	>80	>0.9
NLED9125 12W	3000K/4000K/5700K	720 lm	>80	>0.9
NLED9126 15W	3000K/4000K/5700K	850 lm	>80	>0.9
NLED9128 20W	3000K/4000K/5700K	1,200 lm	>80	>0.9
Aluminium bezel				
NLED91225L 4W	3000K/4000K/5700K	220 lm	>80	>0.5
NLED9123L 6W	3000K/4000K/5700K	330 lm	>80	>0.8
NLED91235L 8W	3000K/4000K/5700K	450 lm	>80	>0.8
NLED9124L 10W	3000K/4000K/5700K	550 lm	>80	>0.9



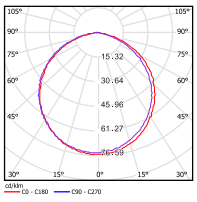
NLED912*

Watts	A	B	Cut-out
4W	Ø94	59	Ø75
6W	Ø104	60	Ø85
8W	Ø107	65	Ø95
8W/10W	Ø132	71	Ø120
12W	Ø180	75	Ø165
15W	Ø188	81	Ø175
20W	Ø220	87	Ø200

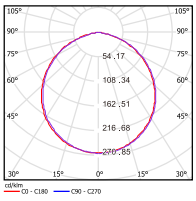


NLED912*L

Watts	A	B	Cut-out
4W	Ø94	57	Ø75
6W	Ø104	57	Ø85
8W	Ø115	67	Ø95
10W	Ø140	72	Ø120



NLED91225 4W 90°



NLED9125 12W 90°

NDLLED915 series

Downlight with step-dimming or colour temperature selection

Semi-white

Sanded Silver

Brass

APPLICATIONS

- Residential lighting
- Bedrooms
- Corridors and living rooms

CONSTRUCTION

- Aluminium body
- Integrated driver

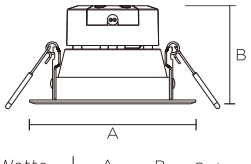
TECHNICAL DETAILS

- SMD LEDs
- Rated life: 30,000 hours

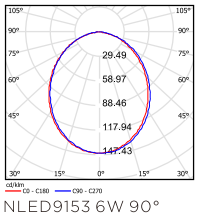
OPTIONS

- **Bezel colours**: Choice of
  - Semi-white (SW)
  - Sanded Silver (SS)
  - Brass (BS)
- **Dimming and CCT selection**
  This downlight can be controlled via the mains switch to deliver either step-dimming or a choice of colour temperatures:
  - Step-dimming (ST). Switching the mains switch on/off quickly causes the light source to step between 100%, 50% and 20% output
  - Colour selection (CCT). Switching the mains switch on/off quickly causes the light to step between 3000K, 4000K and 5700K
- Note that each version offers either step-dimming or colour selection. If ordering step-dimming then a fixed CCT has to be specified; if ordering a CCT selectable version then step-dimming is not available

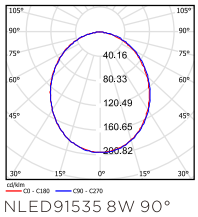
Model	Colour temp.	Lumens	CRI	PF
NDLLED91525 4W	3000K/4000K/5700K	240 lm	>80	>0.5
NDLLED9153 6W	3000K/4000K/5700K	360 lm	>80	>0.5
NDLLED91535 8W	3000K/4000K/5700K	480 lm	>80	>0.95
NDLLED9154 10W	3000K/4000K/5700K	650 lm	>80	>0.95



Watts	A	B	Cut-out
4W	Ø94	56	Ø75
6W	Ø104	54	Ø85
8W	Ø114	59	Ø95
10W	Ø140	66	Ø120



NLED9153 6W 90°



NLED91535 8W 90°

NLED950 E series NLED951 E series

A range of economical IP44 downlights

NLED950*E

NLED951*E
(Recessed glare proof cover)

APPLICATIONS

- Kitchens and washrooms
- Corridors and living areas in homes and small commercial projects

TECHNICAL DETAILS

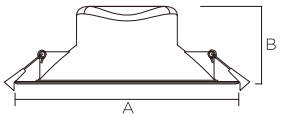
- SMD LEDs
- Rated life: 30,000 hours
- IP44 front face – suitable for most areas in kitchens, toilets and washrooms
- Push-fit (screwless) terminal block for fast installation
- Terminal block cover with built-in strain relief

CONSTRUCTION

- Body made from plastic coated aluminium
- Body colour: White
- Nano-coated internal reflector for maximum efficiency
- Opal diffuser
- Integrated non-dimmable driver
- Available in five sizes and 10 wattages as listed below: 3 inch, 4 inch, 5 inch, 6 inch and 8 inch

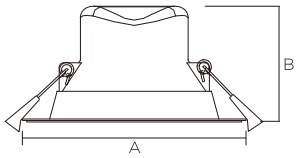
OPTIONS

- Choice of 3000K, 4000K or 5700K colour temperatures



NLED950*E

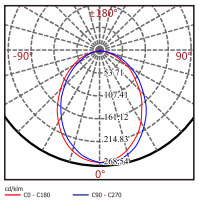
Watts	A	B	Cut-out
5W/7W	Ø95	58	Ø68-80
8W/10W	Ø113	59	Ø90-102
12W/14W	Ø145	66	Ø120-130
14W/17W	Ø174	69	Ø145-155
20W/25W	Ø244	85	Ø195-210



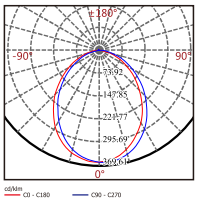
NLED951*E

Watts	A	B	Cut-out
5W/7W	Ø92	64	Ø68-80
8W/10W	Ø113	73	Ø90-102
12W/14W	Ø145	75	Ø120-130
14W/17W	Ø174	79	Ø145-155
20W/25W	Ø244	95	Ø195-210

Model	Colour temp.	Lumens	CRI	PF
NLED9503E/NLED9513E 5W	3000K/4000K/5700K	460 lm	>80	>0.5
NLED9503E/NLED9513E 7W	3000K/4000K/5700K	650 lm	>80	>0.5
NLED9504E/NLED9514E 8W	3000K/4000K/5700K	700 lm	>80	>0.5
NLED9504E/NLED9514E 10W	3000K/4000K/5700K	890 lm	>80	>0.9
NLED9505E/NLED9515E 12W	3000K/4000K/5700K	1,150 lm	>80	>0.9
NLED9505E/NLED9515E 14W	3000K/4000K/5700K	1,300 lm	>80	>0.9
NLED9506E/NLED9516E 14W	3000K/4000K/5700K	1,330 lm	>80	>0.9
NLED9506E/NLED9516E 17W	3000K/4000K/5700K	1,550 lm	>80	>0.9
NLED9508E/NLED9518E 20W	3000K/4000K/5700K	1,950 lm	>80	>0.9
NLED9508E/NLED9518E 25W	3000K/4000K/5700K	2,400 lm	>80	>0.9



NLED9503E 7W



NLED9504E 10W

NLED950 E-D series

A range of dimmable and colour selectable IP44 downlights

90° 220-240V IP44 DIMMING 30000h

APPLICATIONS

- Kitchens and washrooms
- Corridors and living areas in homes and small commercial projects

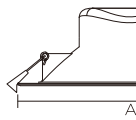
CONSTRUCTION

- Body made from plastic coated aluminium
- Body colour: White
- Nano-coated internal reflector for maximum efficiency
- Opal diffuser
- Integrated dimmable driver
- Available in 5 sizes and wattages as listed below: 3 inch, 4 inch, 5 inch, 6 inch and 8 inch

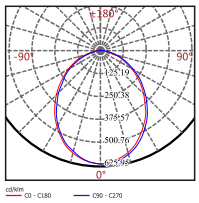
TECHNICAL DETAILS

- SMD LEDs
- Presettable tri-white. With a switch at the back of the fitting, the colour temperature of the light can be adjusted to three kinds of colour temperatures:
  - 3000K – warm white, suitable for bedrooms and living areas
  - 4000K – neutral white, suitable for kitchens, corridors and stairways
  - 5700K – daylight white, suitable for offices and working areas
- Dimmable driver: Designed to be used with triac (leading edge) phase dimmers.
- Rated life: 30,000 hours
- IP44 front face: Suitable for most areas in kitchens, toilets and washrooms
- Push-fit (screwless) terminal block for fast installation
- Terminal block cover with built-in strain relief

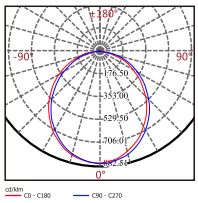
Model	Colour temp.	Lumens	CRI	PF
NLED9503E-D 7W	3000K/4000K/5700K	650 lm	>80	>0.9
NLED9504E-D 9W	3000K/4000K/5700K	840 lm	>80	>0.9
NLED9505E-D 14W	3000K/4000K/5700K	1,330 lm	>80	>0.9
NLED9506E-D 17W	3000K/4000K/5700K	1,650 lm	>80	>0.9
NLED9508E-D 25W	3000K/4000K/5700K	2,450 lm	>80	>0.9



Watts	A	B	Cut-out
7W	Ø95	58	Ø68-80
9W	Ø113	59	Ø90-102
14W	Ø145	66	Ø120-130
17W	Ø174	69	Ø145-155
25W	Ø244	85	Ø195-210



NLED9506E-D 17W

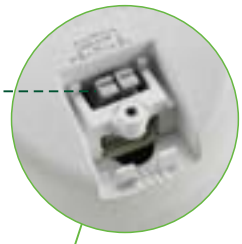


NLED9508E-D 25W

Cost efficient & easy to install

NLED950*E range is the first choice of downlight in any domestic residential project

EASY TO INSTALL
The push-fit, screwless terminal block makes wiring quickly and easily and the built-in strain relief cover just has one screw.



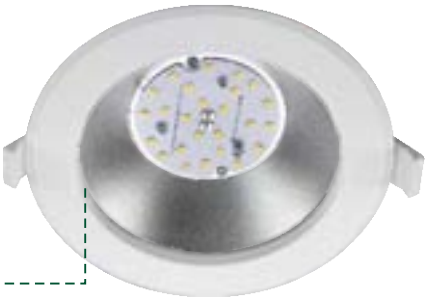
Integrated dimmable driver

ONE DESIGN MEETS ALL REQUIREMENTS
- Five sizes - suitable for all sizes of room.
- Dimmable – ideal for bedrooms and living rooms.
- IP44 front face - suitable for kitchens & bathrooms.
- Colour selectable – choose 3000K for the bedroom, 4000K for the kitchen and 5700K for the study or workroom.

GREAT RETRO-FIT SOLUTION
The strong installation clips, with plastic coated ends, help to hold the fitting securely, even if the hole is a little over-sized or irregular in shape. Replacing old fittings. The wide bezel means that the cut-out can be +/- 10mm, with rough edges, and the new fitting will still fit well and look neat.

QUALITY & RELIABILITY
The aluminium body helps dissipate the heat from the LEDs and driver, so the fitting will not overheat and fail early.

Aluminium LED plate
Helps dissipate the heat from the LEDs.



GREAT FOR KITCHENS & BATHROOMS
Because the body has a thick plastic coating it is completely protected from moisture – so this is a reliable, long-lasting and good looking solution for lighting in these areas.

EFFICIENT & ENERGY SAVING
Inside the fitting there is an aluminium reflector with a nano-coated surface. This helps to make the fitting very efficient – up to 85 lumens per watt.

GLARE-FREE LIGHTING
At the front of the fitting is a polycarbonate diffuser. This has a slight opal effect with a micro-prismatic surface. This gives a very even, well diffused light, but with very little loss, so the high efficiency is maintained.

NLED950P

LED Professional Downlights

90° 220-240V CE IP20 0-10V DIMMING 30000h

APPLICATIONS

-Living rooms
-Stations
-Shopping malls
-Office building

TECHNICAL DETAILS

- SMD LEDs
- Rated life: 30,000 hours

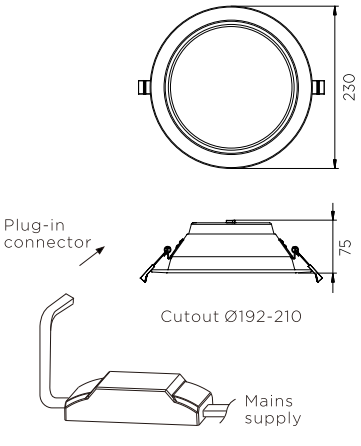
CONSTRUCTION

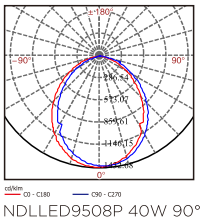
- Aluminium housing, good heat dissipation
- V-O flame rating material, prevent turning yellowish
- With separate driver design, High PF, EMC/EMI compliant, makes long lifespan
- Easy connector for driver & lamp
- Chip deep inside with PC cover, more soft light output

OPTIONS

- **Emergency**: 1.5 hours or 3 hours emergency kit(EM001/002) available. please refer to the driver section
- 0-10V Dimmable

Model	Colour temp.	Lumens	CRI	PF
NDLLED9508P 40W	3000K/4000K/5700K	3,600 lm	>80	>0.9





NDLLED9508P 40W 90°

NLED940 E series

Ultra-slim downlights

100° 110-240V IP20 30000h

APPLICATIONS

- Offices
- Meeting rooms
- Corridors
- Elevators

CONSTRUCTION

- Die-cast aluminium housing and heat sink
- Opal polycarbonate diffuser
- Separate driver included

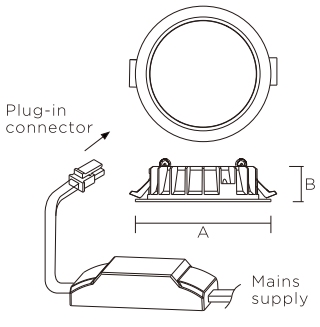
OPTIONS

- **Emergency:** 1.5 hours or 3 hours emergency kit (EM001/002) available please refer to the driver section

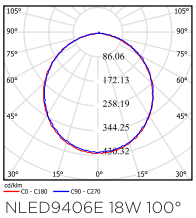
TECHNICAL DETAILS

- SMD LEDs
- Rated life: 30,000 hours

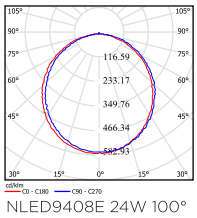
Model	Colour temp.	Lumens	CRI	PF
NLED9403E 6W	3000K/4000K/6500K	480 lm	>80	>0.8
NLED9404E 12W	3000K/4000K/6500K	960 lm	>80	>0.8
NLED9406E 18W	3000K/4000K/6500K	1,500 lm	>80	>0.9
NLED9408E 24W	3000K/4000K/6500K	1,900 lm	>80	>0.9



Watts	A	B	Cut-out
6W	Ø100	26	Ø90
12W	Ø140	26	Ø130
18W	Ø170	26	Ø160
24W	Ø210	26	Ø200



NLED9406E 18W 100°



NLED9408E 24W 100°

NLED940 series

High-output ultra-slim downlights

100° 110-240V IP20 IP44 DIMMING Digital DIMMING 30000h

APPLICATIONS

- Lobbies
- Corridors
- Reception area in hotels
- Shopping malls
- Residential hallways

TECHNICAL DETAILS

- SMD LEDs
- Rated life: 30,000 hours

OPTIONS

- **Driver:** Choice of standard driver or osram driver
- **Dimming:** Fixed output as standard. Dimming options are available with an Osram driver, add suffix MD and DD as required when ordering
- **Emergency:** 1.5 hours or 3 hours emergency kit (EM001/002) available. please refer to the driver section

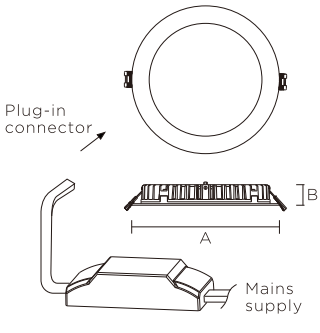
CONSTRUCTION

- Die-cast aluminium housing and heat sink
- Powder coated finish
- UV stable polycarbonate diffuser
- Separate standard driver or Osram driver included

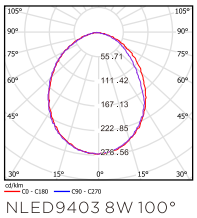
Note

- Choose additional waterproof bezel to achieve waterproof function on the standard product

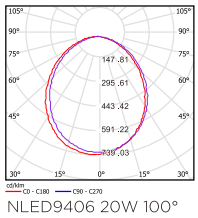
Model	Colour temp.	Lumens	CRI	PF
NLED9403 6W	3000K/4000K/6500K	450 lm	>80	>0.8
NLED9403 8W	3000K/4000K/6500K	650 lm	>80	>0.8
NLED9404 12W	3000K/4000K/6500K	1,050 lm	>80	>0.8
NLED9406 20W	3000K/4000K/6500K	1,700 lm	>80	>0.9
NLED9408 25W	3000K/4000K/6500K	2,100 lm	>80	>0.9
NLED9408 30W	3000K/4000K/6500K	2,700 lm	>80	>0.9



Watts	A	B	Cut-out
6W/8W	Ø110	26	Ø90
12W	Ø140	26	Ø120
20W	Ø190	26	Ø170
25W/30W	Ø230	29	Ø210



NLED9403 8W 100°



NLED9406 20W 100°

NLED924 series

IP40 downlights

NLED924*N / NLED924*NA
PC (polycarbonate) bezel

NLED924*
Die-cast aluminium bezel

90° 220-240V IP40 DIMMING 0-10V DIMMING Digital DIMMING 30000h

APPLICATIONS

- Sitting rooms
- Stations
- Meeting rooms
- Shopping malls

TECHNICAL DETAILS

- SMD LEDs
- Rated life: 30,000 hours

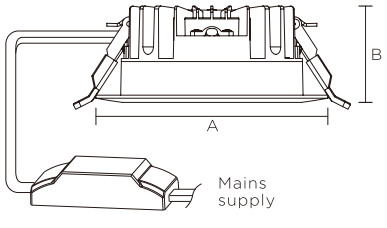
CONSTRUCTION

- Die-cast aluminium housing and heat sink
- Semi-transparent acrylic diffuser
- Protective plastic sleeve on spring clips
- Powder-coated finish
- Separate driver included

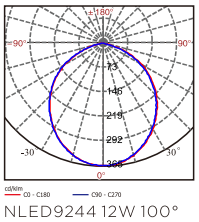
OPTIONS

- **Bezel material:** Choice of die-casting aluminium bezel or polycarbonate bezel
- **Emergency:** 1.5 hours or 3 hours emergency kit (EM001/002) available. please refer to the driver section
- **Dimming:** Fixed output as standard, but NLED9244 10W, NLED9246 20W and NLED9248 30W product are also available for use with suitable phase-cutting dimmers, 1-10V dimming and digital dimming. If required, add suffix MD, 1-10V when and DD ordering

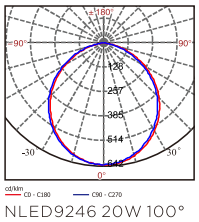
Model	Colour temp.	Lumens	CRI	PF
PC (polycarbonate) bezel				
NLED9244NA 8W	3000K/4000K/5700K	760 lm	>80	>0.8
NLED9244N 12W	3000K/4000K/5700K	960 lm	>80	>0.85
NLED9245N 15W	3000K/4000K/5700K	1,275 lm	>80	>0.85
NLED9246NA 15W	3000K/4000K/5700K	1,275 lm	>80	>0.85
NLED9246N 20W	3000K/4000K/5700K	1,800 lm	>80	>0.95
NLED9248NA 20W	3000K/4000K/5700K	1,800 lm	>80	>0.95
NLED9248N 30W	3000K/4000K/5700K	2,700 lm	>80	>0.95
Die-cast aluminium bezel				
NLED9244 12W	3000K/4000K/5700K	960 lm	>80	>0.85
NLED9245 15W	3000K/4000K/5700K	1,275 lm	>80	>0.85
NLED9246 20W	3000K/4000K/5700K	1,800 lm	>80	>0.95
NLED9248 30W	3000K/4000K/5700K	2,700 lm	>80	>0.95
High output				
NLED9244 7W	3000K/4000K/5700K	700 lm	>80	>0.85
NLED9246 11W	3000K/4000K/5700K	1,200 lm	>80	>0.95
NLED9248 16W	3000K/4000K/5700K	1,600 lm	>80	>0.95
NLED9248 22W	3000K/4000K/5700K	2,200 lm	>80	>0.95
NLED9248 34W	3000K/4000K/5700K	3,250 lm	>80	>0.95



Watts	A	B	Cut-out
7W/8W/12W	Ø114	46	Ø100
15W (NLED9245N)	Ø141	49	Ø125
11W/15W (NLED9246NA) /20W	Ø168	52	Ø150
16W/22W/30W/34W	Ø218	55	Ø200



NLED9244 12W 100°



NLED9246 20W 100°

NDLLED929 series

A range of slim downlights with circular and square versions

NDLLED929*

NDLLED929*R

100° 220-240V IP20 DIMMING 0-10V DIMMING Digital DIMMING 30000h

APPLICATIONS

- Corridors
- Residential lighting
- Offices
- Shopping malls

TECHNICAL DETAILS

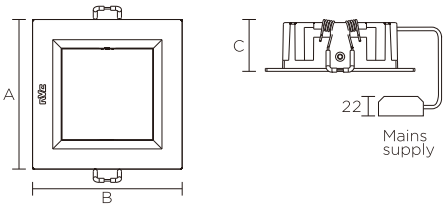
- SMD LEDs
- Available in circular and square formats (suffix R). Each format is available in five sizes. Where there is a choice of wattages in one size, to order the smaller wattage add suffix "A"
  - 92mm, 4W
  - 105mm, 6W
  - 116mm, 6W (suffix A) & 8W
  - 142mm, 12W (suffix A) & 15W
  - 175mm, 15W (suffix A) & 20W
- Rated life: 30,000 hours

CONSTRUCTION

- Housing:
  - White polycarbonate bezel
  - White die-cast aluminium housing
- Supplied complete with separate constant current driver, pre-wired with 150mm of 2 x 0.75mm^2 flex

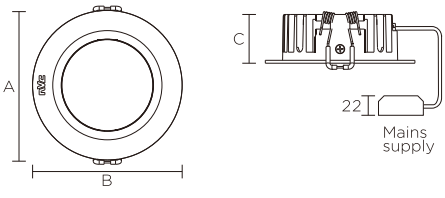
OPTIONS

- **Version**: Choice of square version or circular version
- **Dimming**: Fixed output as standard, but 20W, 25W and 30W product are also available for suitable phase-cutting dimmers, analogue dimming and digital dimming. If required, add suffix MD, 0-10V when and DD when ordering



NDLLED929*R

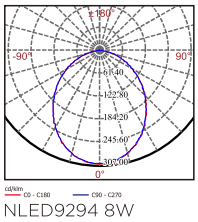
Watts	A	B	C	Cut-out
4W	92	92	30	75x75
6W	105	105	30	90x90
6W/8W	116	116	30	100x100
12W/15W	142	142	30	125x125
15W/20W	175	175	30	150x150
20W/25W30W	218	218	30	200x200



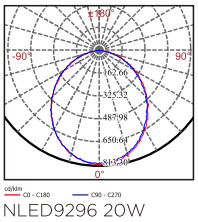
NDLLED929*

Watts	A	C	Cut-out
4W	Ø92	30	Ø75
6W	Ø105	30	Ø90
6W/8W	Ø116	30	Ø100
12W/15W	Ø142	30	Ø125
15W/20W	Ø175	30	Ø150
20W/25W30W	Ø218	30	Ø200

Model	Colour temp.	Lumens	CRI	PF
NDLLED92925/R 4W	3000K/4000K/5700K	310 lm	>80	>0.7
NDLLED9293/R 6W	3000K/4000K/5700K	510 lm	>80	>0.7
NDLLED9294/R 8W	3000K/4000K/5700K	750 lm	>80	>0.8
NDLLED9295/R 15W	3000K/4000K/5700K	1,400 lm	>80	>0.9
NDLLED9296/R 20W	3000K/4000K/5700K	2,050 lm	>80	>0.9
NDLLED9298/R 30W	3000K/4000K/5700K	3,000 lm	>80	>0.9
NDLLED9294A/AR 6W	3000K/4000K/5700K	590 lm	>80	>0.8
NDLLED9295A/AR 12W	3000K/4000K/5700K	1,215 lm	>80	>0.9
NDLLED9296A/AR 15W	3000K/4000K/5700K	1,500 lm	>80	>0.9
NDLLED9298AS/ASR 20W	3000K/4000K/5700K	2,000 lm	>80	>0.9
NDLLED9298A/AR 25W	3000K/4000K/5700K	2,500 lm	>80	>0.9



NLED9294 8W



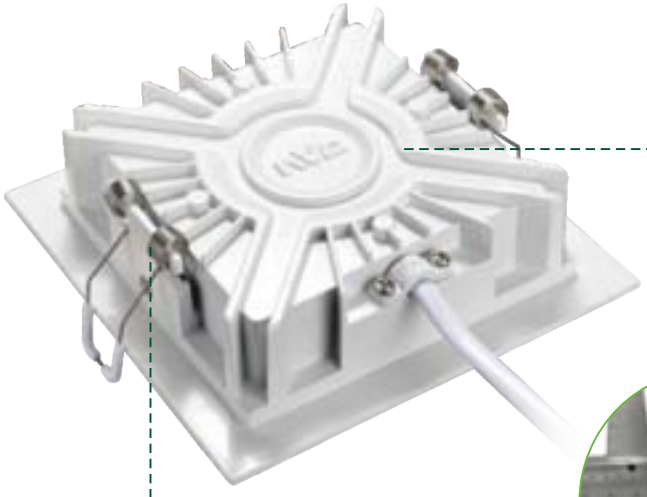
NLED9296 20W

Structure and details

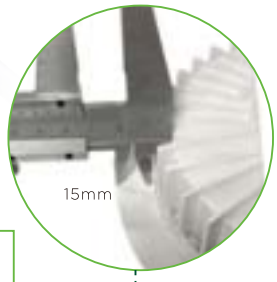
Slim profile
Being just 30mm thick the NDLLED929 can fit in almost any ceiling void.

Low flicker
The ripple (fluctuation of the output) from the driver is less than 3.2%. This means that the flicker of the LEDs is so low that at a distance of more than 20cm no flicker is visible at all. This creates a better lit environment with less risk of sore eyes, tiredness and headaches.

High efficiency
Delivering up to 103 luminaire lumens per circuit watt, this is a highly efficient fixture, delivering more light for less power than many similar competing fittings. Its high efficiency not only lowers electricity bills, it also reduces the total load on the air conditioning system.



High quality design and materials
The heavy-duty die-cast aluminium housing with cooling fins ensures that the LEDs stay cool. That helps ensure a long life for the fitting with low rates of lumen depreciation.



Secure ceiling fixing
The strong spring clips are easy to fit to the housing and they pull the whole fitting firmly up against the ceiling. This ensures the fitting remains in exactly the right position, even if there is vibration, so the installation stays looking good for years. The plastic coating on the clips reduces the risk of damage to the ceiling.

Wide bezel
The wide bezel (15mm) means that the cut-out does not have to be very accurate, and the fitting is more likely to be an easy retro-fit solution when upgrading an existing installation.

Size	929	929A
2.5 inch	4W	/
3 inch	6W	/
4 inch	8W	6W
5 inch	15W	12W
6 inch	20W	15W
8 inch	30W	20W/25W

NDLLED929*R

NDLLED929*

Wide choice of sizes and outputs
With a choice of six wattages, five sizes and two shapes this range can be used in a wide range of applications, for both new-build and retro-fit projects.

NDLLED928 series

surface mounted LED downlight

15° 24° 36° 60° 220-240V IP20 30000h

APPLICATIONS

- Hotels
- Exhibition rooms
- Arts centers
- Office
- Fresh foods
- Retail outlets

CONSTRUCTION

- Die-cast aluminium housing
- Integrated driver included
- Optical distribution
  - Polycarbonate reflector
  - Polycarbonate bezel
  - Acrylic light pipe

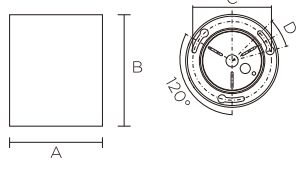
TECHNICAL DETAILS

- COB LED
- Rated life: 30,000 hours

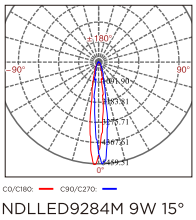
Options

- **Body colour**: Choice of white (WH) or black (BK)
- **Bezel colour**: Choice of gold (G) or silver (S)
- **Beam angle**: State choice of 15°, 24°, 36° or 60° when ordering
- **Fresh food spectrum**: If required, this product can be delivered with a light spectrum specially enriched with a choice of three colours to show different types of fresh food at their best
  - Meat. Enriched with extra red in the spectrum. Use suffix R
  - Bakery. Enriched with extra yellow in the spectrum. Use suffix Y
  - Fruit and vegetables. Enriched with extra green in the spectrum. Use suffix G

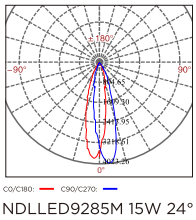
Model	Colour temp.	Lumens	CRI	PF	Beam angle
NDLLED9284M 9W	3000K/3500K/4000K/5700K	770 lm	>80	>0.9	15°/24°/36°
NDLLED9285M 15W	3000K/3500K/4000K/5700K	1,100 lm	>80	>0.9	15°/24°/36°
NDLLED9286AM 24W	3000K/3500K/4000K/5700K	2,000 lm	>80	>0.95	15°/24°/36°/60°
NDLLED9286M 35W	3000K/3500K/4000K/5700K	2,530 lm	>80	>0.95	15°/24°/36°/60°



Watts	A	B	C	D
9W	Ø100	120	78	30°
15W	Ø125	120	100	30°
24W	Ø150	140	124	24°
35W	Ø150	160	124	24°



NDLLED9284M 9W 15°



NDLLED9285M 15W 24°

Structure and details

High-quality housing construction
The housing is made of 5mm thick aluminium to give it strength, durability and excellent heat dissipation properties for a long life.

High-end material
Made from high quality aluminium material, specially designed for high end projects.

PF > 0.9, CRI > 80

Easy to match different styles
Four different color options made to match most of design requirements.

Glare-proof lighting
This fitting will deliver glare-free lighting in almost any installation.

black silver

white gold

black gold

white silver

NLEDM910 series

Surface mounted COB downlight

COB LED

60° 110-240V IP20 30000h

APPLICATIONS

- Residential hallways
- Offices
- Restaurants
- Shopping malls

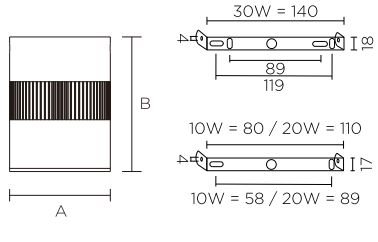
TECHNICAL DETAILS

- COB LEDs
- Rated life: 30,000 hours

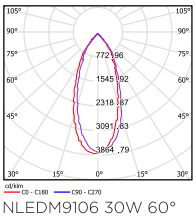
CONSTRUCTION

- Die-cast aluminium housing and heat sink
- Cream white powder coated finish
- Integrated driver
- Aluminium reflector
- Tempered glass diffuser

Model	Colour temp.	Lumens	CRI	PF
NLEDM9104 10W	3000K/4000K/6500K	800 lm	>80	>0.85
NLEDM9105 20W	3000K/4000K/6500K	1,600 lm	>80	>0.85
NLEDM9106 30W	3000K/4000K/6500K	2,400 lm	>80	>0.85



Watts	A	B
10W	Ø90	120
20W	Ø114	109
30W	Ø149	154



NLEDM9106 30W 60°

NDLLED70 series

Fresh food retail area lights

Fresh

70° 220-240V IP20 30000h

APPLICATIONS

- Retail display
- Restaurants & bars

CONSTRUCTION

- Steel body
- 0.3-1.5m adjustable suspension wire
- Integrated driver

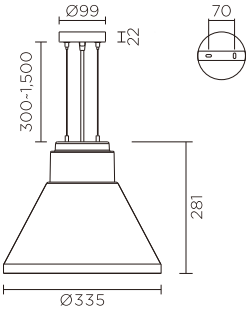
TECHNICAL DETAILS

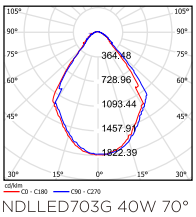
- SMD LEDs
- Rated life: 30,000 hours

OPTIONS

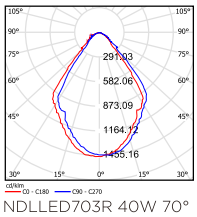
- **Beam angle:** 70°
- Lampshade colour and relevant lighting area:
  - Red-meat area lighting
  - Yellow-bakery area lighting
  - Green-vegetable and fruit area lighting
- **Fresh food spectrum:**
  Light spectrum specially enriched with a choice of three colours to show different types of fresh food at their best
  - Meat: Enriched with extra red in the spectrum. Use suffix R
  - Bakery: Enriched with extra yellow in the spectrum. Use suffix Y
  - Fruit and vegetables: Enriched with extra green in the spectrum. Use suffix G

Model	Colour temp.	Lumens	CRI	PF
NDLLED702Y 30W	2700K	1,400 lm	>95	>0.95
NDLLED702R 30W	3000K	1,500 lm	>85	>0.95
NDLLED702G 30W	3500K	1,650 lm	>95	>0.95
NDLLED703Y 40W	2700K	1,850 lm	>95	>0.95
NDLLED703R 40W	3000K	1,950 lm	>85	>0.95
NDLLED703G 40W	3500K	2,000 lm	>95	>0.95





NDLLED703G 40W 70°



NDLLED703R 40W 70°

NDLLED9235

A range of recessed spotlights for specialist food and jewellery retail projects

NDLLED9235ARS

NDLLED9235AS

NDLLED9235DRS

NDLLED9235DS

Fresh

APPLICATIONS

- Fresh food retailing – meat, bakery and fruit
- Jewellery retailing

TECHNICAL DETAILS

- COB LED
- Available in the following CRI and colour temperatures:
  - CRI >80, 1800K, 2500K
  - CRI >90, 3200K, 3700K, 4200K
- Separate, non-dimmable, NVC-brand driver included
  - PF: 0.95
  - Ta: -20C°~ 40C°
- Rated life: 30,000 hours

CONSTRUCTION

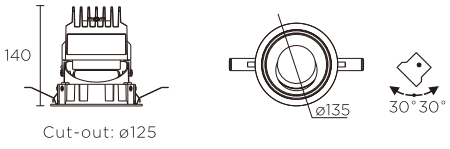
- Die-cast aluminium housing
- Polycarbonate reflector and bezel

OPTIONS

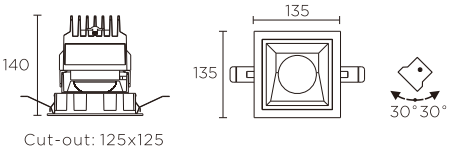
- **Version:** Choice of the fixed circular (suffix AS), fixed square (suffix ARS), adjustable circular (suffix DS) or adjustable square (suffix DRS)

COLOUR SPECTRUM TUNED FOR SPECIALIST RETAILERS

- The NDLLED9235 is engineered with a range of COB LEDs to deliver a choice of colour spectra designed to enhance the appearance of particular categories of merchandise
  - Enriched red (1800K) – suitable for the display of meat in butchery and delicatessen stores
  - Enriched yellow (2500K) – this enhances the appearance of bread, cakes and other bakery items
  - Enriched deep yellow (3200K) – suitable for the display of gold jewellery in particular
  - Enriched green (3700K) – this displays fresh fruit and vegetables at their best
  - Enriched green/blue (4200K) – designed for displays of fish, seafood, diamonds and crystal

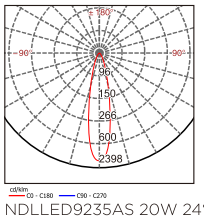


Cut-out: ø125

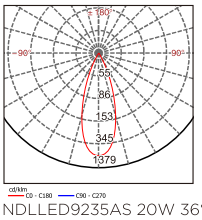


Cut-out: 125x125

Model	Watts	Colour temp.	Lumens	CRI	Beam angle
NDLLED9235AS/DS	20W	1800K	920 lm	>80	24°/36°
NDLLED9235AS/DS	20W	2500K	1580 lm	>80	24°/36°
NDLLED9235AS/DS	20W	3200K	1300 lm	>90	24°/36°
NDLLED9235AS/DS	20W	3700K	1380 lm	>90	24°/36°
NDLLED9235AS/DS	20W	4200K	1380 lm	>90	24°/36°
NDLLED9235ARS/DRS	24W	1800K	870 lm	>80	24°/36°
NDLLED9235ARS/DRS	24W	2500K	1500 lm	>80	24°/36°
NDLLED9235ARS/DRS	24W	3200K	1235 lm	>90	24°/36°
NDLLED9235ARS/DRS	24W	3700K	1300 lm	>90	24°/36°
NDLLED9235ARS/DRS	24W	4200K	1300 lm	>90	24°/36°



NDLLED9235AS 20W 24°



NDLLED9235AS 20W 36°

NDLLED9286

A range of surface mounted spotlights for specialist food and jewellery retail projects

Fresh

24° 36° 220-240V IP20 30000h

APPLICATIONS

- Fresh food retailing – meat, bakery and fruit
- Jewellery retailing

TECHNICAL DETAILS

- COB LED
- Available in the following CRI and colour temperatures:
  - CRI >80, 1800K, 2500K
  - CRI >90, 3200K, 3700K, 4200K
- Separate, non-dimmable, NVC-brand driver included
  - Pf: 0.95
  - Ta: -20C°~ 40C°
- Rated life: 30,000 hours

CONSTRUCTION

- Die-cast aluminium housing
- Polycarbonate reflector and bezel

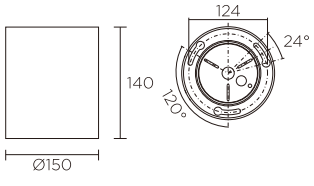
OPTIONS

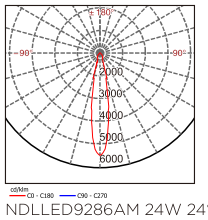
- **Body colour:** Choice of white (WH) or black (BK)
- **Bezel colour:** Choice of gold (G) or silver (S)
- **Beam angle:** Choice of 24° or 36°
- **CCT & CRI:** 1800K Ra>80, 2500K Ra>80, 3200K Ra>90, 3700K Ra>90 and 4200K Ra>90

COLOUR SPECTRUM TUNED FOR SPECIALIST RETAILERS

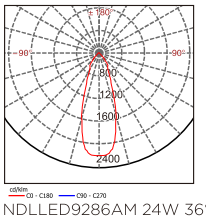
- The NDLLED9235 is engineered with a range of COB LEDs to deliver a choice of colour spectra designed to enhance the appearance of particular categories of merchandise
  - Enriched red (1800K) – suitable for the display of meat in butchery and delicatessen stores
  - Enriched yellow (2500K) – this enhances the appearance of bread, cakes and other bakery items
  - Enriched deep yellow (3200K) – suitable for the display of gold jewellery in particular
  - Enriched green (3700K) – this displays fresh fruit and vegetables at their best
  - Enriched green/blue (4200K) – designed for displays of fish, seafood, diamonds and crystal

Model	Watts	Colour temp.	Lumens	CRI	Beam angle
NDLLED9286AM	24W	1800K	1090 lm	>80	24°/36°
NDLLED9286AM	24W	2500K	1780 lm	>80	24°/36°
NDLLED9286AM	24W	3200K	1580 lm	>90	24°/36°
NDLLED9286AM	24W	3700K	1780 lm	>90	24°/36°
NDLLED9286AM	24W	4200K	1780 lm	>90	24°/36°





NDLLED9286AM 24W 24°



NDLLED9286AM 24W 36°

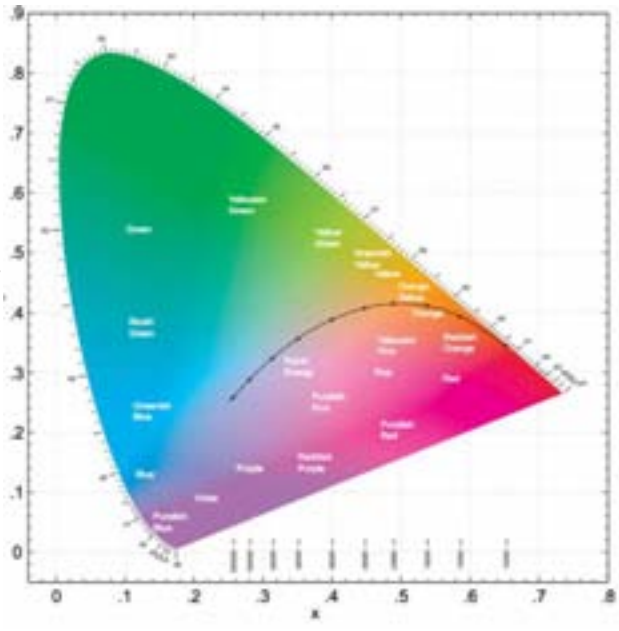
USING THE COLOUR SPECTRUM TO IMPROVE RETAIL PERFORMANCE

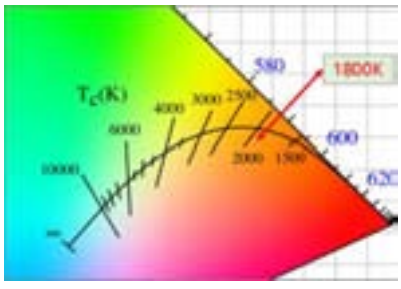
The colour we see in the objects around us is reflected light. White light is a mix of many different colours, and when it falls on an object some of those colours are absorbed and the rest are reflected back to our eyes, creating the impression that meat is red and lettuce is green, for example. By altering the composition of the white light we effect the mix of colours that is reflected back towards us, and hence the appearance of the object we are looking at.

In the NLED9235 range we have adjusted the phosphors in the LEDs to produce five different blends of light, each designed to enhance the appearance of a particular group of merchandise.

In the colour space map here the black line is the "black body locus" (BBL). This marks the position of "white" at different colour temperatures, and most normal light sources are positioned on, or very close to, this line. However, with the NLED9235 the light source is positioned slightly above or below this line, indicating that the light is not a perfectly balanced white light, but is biased towards the part of the spectrum that will be most beneficial when displaying a particular type of merchandise.

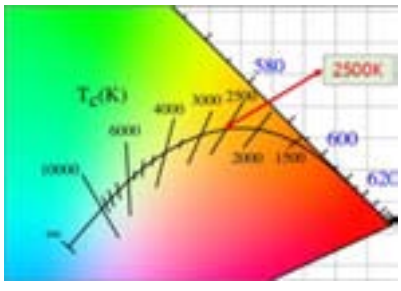
The CCT alone is not sufficient to enhance the appearance of a product. Using 1800K for meat, for example, will not enhance its colour if the light source is on the BBL. To make the meat appear redder, and fresher, it is necessary to nudge the light source to one side of the BBL by increasing the proportion of (in this case) red in the overall colour mix.





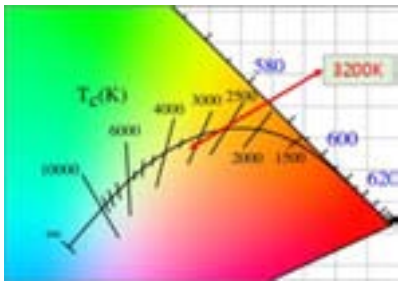
1800K for meat

CCT: 1800K
CRI Ra> 80
Position in the colour space map: Below the BBL
Feature: Increased proportion of red
Application: Butchers and fresh meat counters in supermarkets



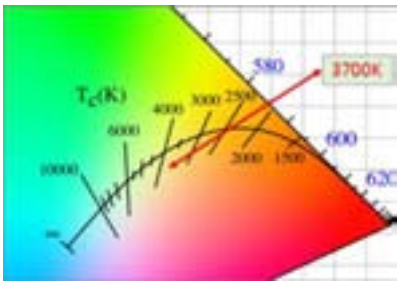
2500K for bakery goods

CCT: 2500K
CRI Ra>80
Position in the colour space map: Close to the BBL
Feature: Slightly increased proportion of yellow
Application: Bakeries and coffee shops

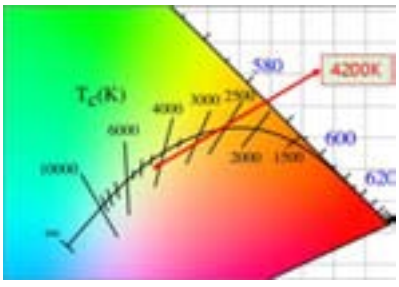


3200K for gold and jewellery

CCT: 3200K
CRI Ra>90
Position in the colour space map: Below the BBL
Feature: Increased proportion of deep yellow
Application: Jewellery shops, especially where gold is displayed



3700K for fresh fruit and vegetables
CCT: 3700K
CRI Ra>90
Position in the colour space map: Below the BBL
Feature: Increased proportion of yellow/green
Application: Fruit and vegetable shops



4200K for seafood and jewellery
CCT: 4200K
CRI: Ra>90
Position in the colour space map: Below the BBL
Feature: Increased proportion of blue/yellow
Application: Shops selling fish, seafood, diamonds and crystal, and also some sports goods

NDLLED970 series

Recessed glare proof downlights

60° 75° 220-240V IP20 30000h 50000h

APPLICATIONS

- Hotels
- Shopping malls
- Offices
- Hospitals
- Schools
- Exhibition halls
- Public areas

CONSTRUCTION

- Main material: Aluminium alloy and glass
- Body colour: White
- Product size: 4 inch, 6 inch and 8 inch
- Aluminium reflector for COB version
- Reflective sheeting for SMD version
- Separate driver included (also available with PHILIPS driver if required)

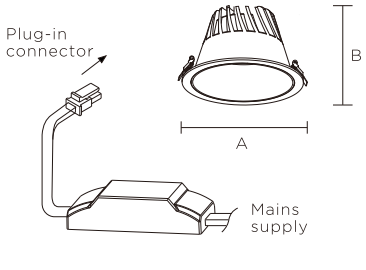
OPTIONS

- **LED**: Choice of COB version or SMD version (for 40W version only), to order the SMD version add suffix "S"
- **Driver**: Choice of the standard driver or PHILIPS driver (for 40W version only)

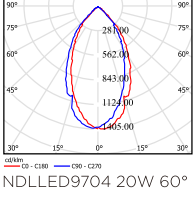
TECHNICAL DETAILS

- Citizen COB/SMD LEDs
- Rated life:
  - 30,000 hours for standard driver
  - 50,000 hours for PHILIPS driver

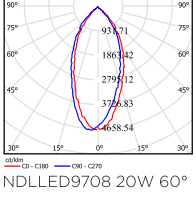
Model	Colour temp.	Lumens	CRI	PF
NDLLED9704 20W	3000K/4000K/6500K	1,450 lm	>80	>0.9
NDLLED9706 30W	3000K/4000K/6500K	2,450 lm	>80	>0.9
NDLLED9708 40W	3000K/4000K/6500K	3,600 lm standard driver	>80	>0.95
NDLLED9708 40W	3000K/4000K/6500K	3,800 lm PHILIPS driver	>80	>0.95
NDLLED9708S 40W	3000K/4000K/6500K	3,300 lm standard driver	>80	>0.95
NDLLED9708S 40W	3000K/4000K/6500K	3,400 lm PHILIPS driver	>80	>0.95



Watts	A	B	Cut-out
20W	Ø137.5	82	Ø120
30W	Ø195	107	Ø170
40W	Ø235	127.5	Ø200



NDLLED9704 20W 60°



NDLLED9708 20W 60°

Structure and details

Body material and dissipation effect
Integrated die-cast aluminium alloy housing allows the product to have a strong heat dissipation effect and compact appearance.

Easy installation
Use female/male connector to connect with the fixture and driver, which facilitates easy installation, uninstallation and replacement.

Protection design
We add a steel wire on the body, so that the fixture can be hung on the crane ceiling. Therefore, it can prevent the accident of falling.

Treatment of the glare proof cover
Surface frosting treatment aluminium glare proof cover gives the fixture a strong texture and upscale effect. Customers can choose the glare proof cover with white spray surface treatment which matches the colour of the fixture and gives a more elegant look.

Optical design
The product uses a recessed optical design so that the shielding angle is more than 35 degrees. This reduces glare.

Quality LED and luminous efficacy
Use Citizen COB LED with aluminium reflector, the luminous efficacy of the 40W COB lamp is more than 90 lm/W; SMD version will use SANAN SMD LEDs with reflective sheeting, the luminous efficacy of the 40W SMD lamp is more than 80 lm/W. Customer can also choose to use PHILIPS driver if required.

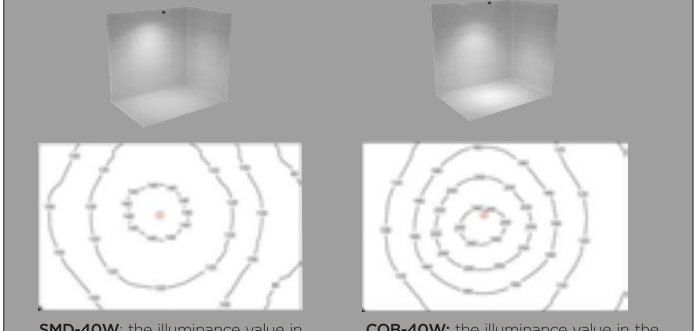
Model and Driver

Standard driver

PHILIPS driver

NDLLED970 has 3 different size and wattages: 4 inch (20W), 6 inch (30W) and 8 inch (40W). Therefore, the customer can choose the SMD LED version and PHILIPS driver for 8 inch (40W) version if required.

This is the simulation light distribution diagram between 40W COB and 40W SMD at a simulated height of five meters



SMD-40W: the illuminance value in the centre of the light spot is 140 lm, and has uniform light distribution, it is more suitable for the place where the fundamental lighting is needed.

COB-40W: the illuminance value in the centre of the light spot is 240 lm, and has uniform light distribution, it is more suitable for the place where has high illuminance requirement places requiring higher illuminance.

NDLLED980 series

Recessed low glare SMD downlights

80° 220-240V IP20 30000h

APPLICATIONS

- Hotels
- Shopping malls
- Offices
- Hospitals
- Schools
- Exhibition halls
- Public areas

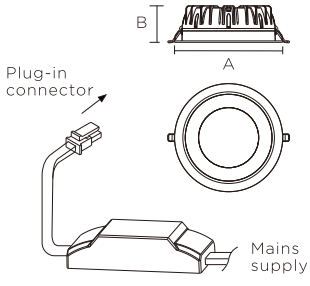
CONSTRUCTION

- Main material: Aluminium alloy and PC (polycarbonate)
- Body colour: White
- Product size: 6 inch and 8 inch
- Electroplated PC (polycarbonate) reflector
- Separate driver included

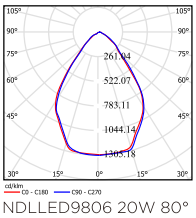
TECHNICAL DETAILS

- SMD LEDs
- Rated life: 30,000 hours

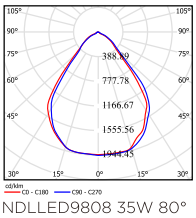
Model	Colour temp.	Lumens	CRI	PF
NDLLED9806P 10W	3000K/4000K/5700K	1,000 lm	>80	>0.9
NDLLED9806P 15W	3000K/4000K/5700K	1,400 lm	>80	>0.9
NDLLED9806P 20W	3000K/4000K/5700K	1,950 lm	>80	>0.9
NDLLED9808P 25W	3000K/4000K/5700K	2,400 lm	>80	>0.9
NDLLED9808P 30W	3000K/4000K/5700K	3,000 lm	>80	>0.9
NDLLED9808P 35W	3000K/4000K/5700K	3,100 lm	>80	>0.9



Watts	A	B	Cut-out
NDLLED9806P	Ø165	62	Ø140
NDLLED9808P	Ø225	76	Ø200



NDLLED9806 20W 80°



NDLLED9808 35W 80°

Structure and details

Body material and dissipation effect
Die-cast aluminium alloy housing allows the product to have a strong heat dissipation effect and compact appearance.

Less thermal resistance
Aluminium substrate with uniform LED distribution structure protects the product from lumen depreciation. This also reduces thermal resistance which makes the LEDs more durable and stable.

Luminous efficacy
Injection molded optical control module provides precise light distribution and its efficiency is up to 95 lm/W.

LED protect design
Transparent polycarbonate(PC) sheet protects the LEDs from dust.

Rubber ring
Lamp cover with water proof rubber ring resists dust, water and insects.

Glare proof and UGR
Recessed glare proof cover design, creates a more comfortable visual environment.

Corrosion and rust proof
Injection molded PC cover resists corrosion and rust and provides a longer life span.

Safety & Convenience
The spring clip makes the product fit in the ceiling neatly and the plastic cover at the end of the clip makes the product easy to install and remove, and it will not harm the ceiling.

NLED81 SERIES RANGE SUMMARY

		NARROW EDGE								RIMLESS					
		FIXED A				ADJUSTABLE D			WALL WASH B	FIXED A			ADJUSTABLE D		
SIZE	WATT			IP40	IP44							IP40			
2″	3W					8112D									
3″	8W	8113A	8113A1	8113A2	8113P	8113D	8113D1	8113D2		8123A	8123A1	8123A2	8123D	8123D1	8123D2
4″	11W	8114AS				8114DS				8124AS				8124DS	
	15W	8114A				8114D				8124A				8124D	
5″	20W	8115AS				8115DS			8115BS						
	30W	8115A				8115D			8115B						
6″	35W	8116AS				8116DS			8116BS						
	50W	8116A				8116D			8116B						
3″	8W	8133A				8133D			8143A				8143D		

*Suffix S: Means same size but lower in wattage

NLED81 2 inch series

High-specification LED commercial and residential downlights

CRI 90

15° 24° 36° 220-240V IP20 50000h

APPLICATIONS

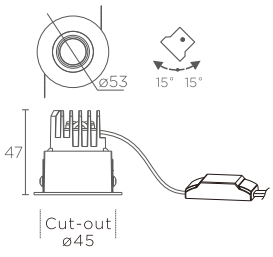
- Hotels
- Shopping malls
- Theatres
- Exhibition centres

TECHNICAL DETAILS

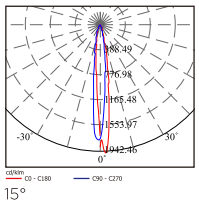
- Separate, non-dimmable, NVC-brand driver included
  - PF>0.9
  - Ta: -20°C ~ 40°C
- Rated life: 50,000 hours

CONSTRUCTION

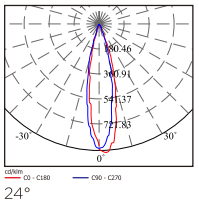
- Die-cast aluminium housing
- PMMA lens
- Beam angle: 15° , 24° or 36°
- Adjustable: vertical 15°
- Remote constant current driver included



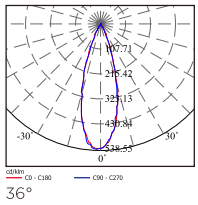
Model	Color temp.	Lumens	CRI	PF	Beam angle
NLED8112D 3W	2700K	160 lm	90	0.5	15°/24°/36°
NLED8112D 3W	3000K	160 lm	90	0.5	15°/24°/36°
NLED8112D 3W	4000K	170 lm	90	0.5	15°/24°/36°



15°



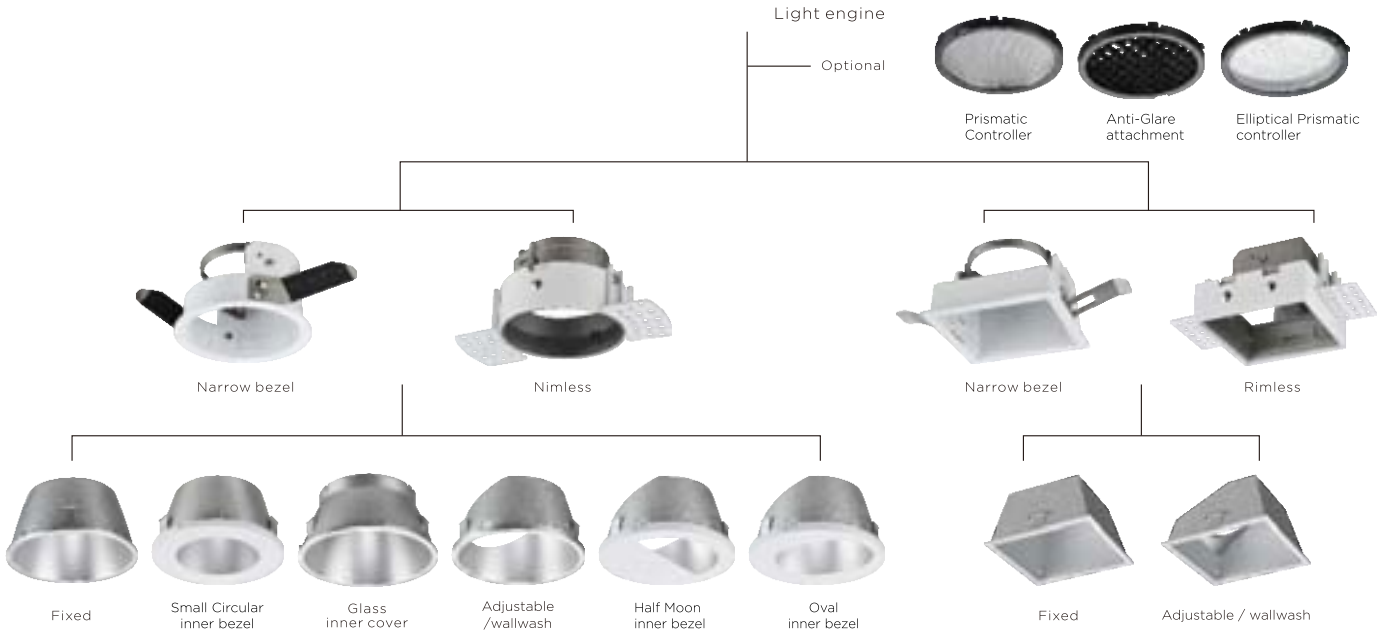
24°



36°

NLED81 3 inch series

High-specification LED commercial and residential downlights



APPLICATIONS

- Hotels
- Shopping malls
- Theatres
- Exhibition centres
- High-specification residential projects

TECHNICAL DETAILS

- Separate, non-dimmable, NVC-brand driver included
  - PF>0.9
  - Ta: -20°C ~ 40°C
- Rated life: 50,000 hours

CONSTRUCTION

- Die-cast aluminium housing
- PMMA lens
- Adjustable angle: vertical 30°
- Vacuum painting reflector with 35°shielding angle
- Remote constant current driver included

OPTIONS

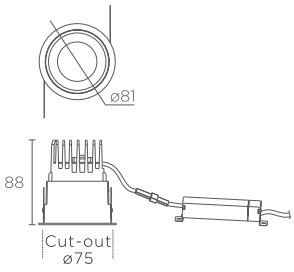
- **Bezel shape**: Choice of the round or square
- **Bezel version**: Choice of the standard bezel or rimless bezel
- **Direction**: Choice of the fixed, adjustable (wall wash) version
- **Beam angle**: Choice of the 15°, 24° or 36°
- **Optical attachment**: End-user comfort. A choice of three different, detachable, optical accessories is available to control glare and the beam direction
  - Honeycomb collimator. This narrows the beam angle and is a useful attachment for eliminating glare especially in display cabinets
  - Prismatic diffuser. This scatters the light so that the boundary of the cut-off and shielding angles is less distinct, giving a softer lighting effect
  - Asymmetric refractor. This is a series of longitudinal prisms that alters the beam from rotosymetric (circular) to bi-symmetric (eliptical). The prisms can be rotated in their holder, so that the orientation of the elipse can be adjusted to suit the application
- **Bezel accessories for round version:** Silver reflector for standard bezel and rimless bezel silver reflector with glass inner cover (IP40) for fixed standard bezel and rimless bezel silver reflector with small circular inner bezel for fixed standard bezel and rimless bezel silver reflector with half moon inner bezel for adjustable standard bezel and rimless bezel silver reflector with oval inner bezel for adjustable standard bezel and rimless bezel
- **Dimming:** The standard product is non-dimmable. for the other dimmable option can be specified by adding the following suffixes: MD (mains dimmable), DD (digital dimmable, includes DALI, switch dim and corridor function in one driver) or 0-10 (analogue) as required
- **Emergency:** Emergency maintained 3 hours and 1.5 hours versions are available, add suffix M3 or M1.5 if required. Please refer to the driver section

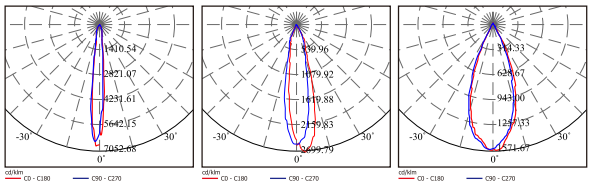
NLED8113A series

15° 24° 36° 220-240V DIMMING 0-10V DIMMING Digital DIMMING CE IP20 50000h

NLED8113A

Model	Color temp.	Lumens	CRI	PF	Beam angle
NLED8113AS 4.5W	2700K	310 lm	90	0.7	15°/24°/36°
NLED8113AS 4.5W	3000K	330 lm	90	0.7	15°/24°/36°
NLED8113AS 4.5W	4000K	360 lm	90	0.7	15°/24°/36°
NLED8113A 8W	2700K	460 lm	90	0.9	15°/24°/36°
NLED8113A 8W	3000K	490 lm	90	0.9	15°/24°/36°
NLED8113A 8W	4000K	570 lm	90	0.9	15°/24°/36°
High output					
NLED8113A 8W	4000K	760 lm	90	0.95	24°

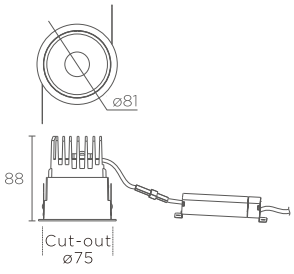


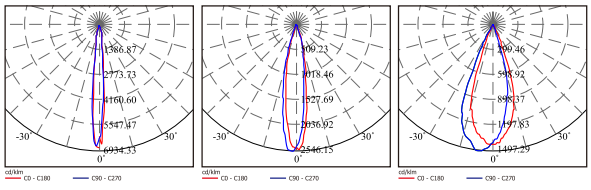


NLED8113A 8W 15° NLED8113A 8W 24° NLED8113A 8W 36°

NLED8113A1
(NLED8113A+small circle)

Model	Color temp.	Lumens	CRI	PF	Beam angle
NLED8113A1 8W	2700K	310 lm	90	0.9	15°/24°/36°
NLED8113A1 8W	3000K	340 lm	90	0.9	15°/24°/36°
NLED8113A1 8W	4000K	390 lm	90	0.9	15°/24°/36°



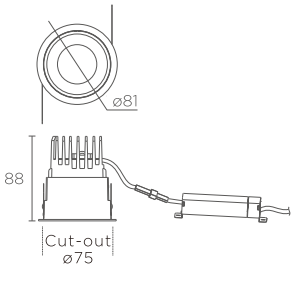


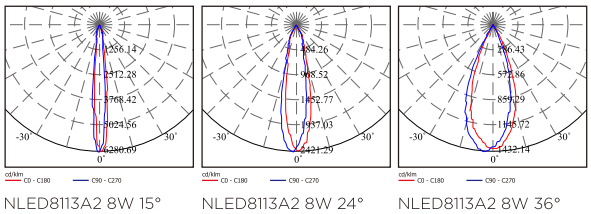
NLED8113A1 8W 15° NLED8113A1 8W 24° NLED8113A1 8W 36°

NLED8113A2
(NLED8113A+clear glass)

15° 24° 36° 220-240V DIMMING 0-10V DIMMING Digital DIMMING CE IP40 50000h

Model	Color temp.	Lumens	CRI	PF	Beam angle
NLED8113A2 8W	2700K	420 lm	90	0.9	15°/24°/36°
NLED8113A2 8W	3000K	450 lm	90	0.9	15°/24°/36°
NLED8113A2 8W	4000K	520 lm	90	0.9	15°/24°/36°





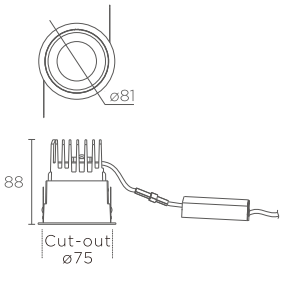
NLED8113A2 8W 15° NLED8113A2 8W 24° NLED8113A2 8W 36°

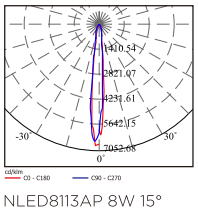
NLED8113P series

15° 24° 36° 220-240V – DIMMING + 0-10V DIMMING Digital DIMMING CE IP44 50000h

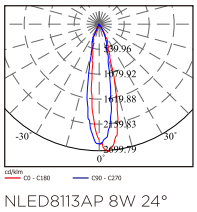
IP44 (driver + lamp)

Model	Color temp.	Lumens	CRI	PF	Beam angle
NLED8113ASP 4.5W	2700K	280 lm	90	0.7	15°/24°/36°
NLED8113ASP 4.5W	3000K	300 lm	90	0.7	15°/24°/36°
NLED8113ASP 4.5W	4000K	340 lm	90	0.7	15°/24°/36°
NLED8113AP 8W	2700K	460 lm	90	0.8	15°/24°/36°
NLED8113AP 8W	3000K	490 lm	90	0.8	15°/24°/36°
NLED8113AP 8W	4000K	570 lm	90	0.8	15°/24°/36°

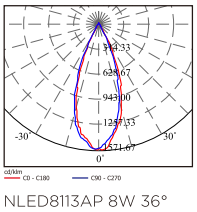




NLED8113AP 8W 15°



NLED8113AP 8W 24°



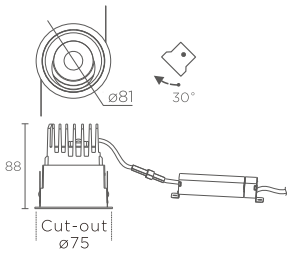
NLED8113AP 8W 36°

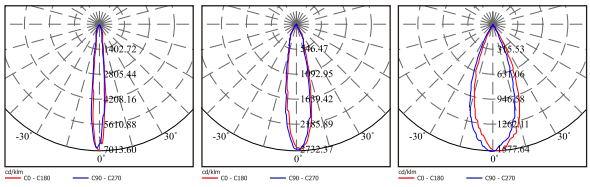
NLED8113D series

15° 24° 36° 220-240V DIMMING + 0-10V DIMMING Digital DIMMING CE IP20 50000h

NLED8113D

Model	Color temp.	Lumens	CRI	PF	Beam angle
NLED8113DS 4.5W	2700K	310 lm	90	0.7	15°/24°/36°
NLED8113DS 4.5W	3000K	330 lm	90	0.7	15°/24°/36°
NLED8113DS 4.5W	4000K	360 lm	90	0.7	15°/24°/36°
NLED8113D 8W	2700K	460 lm	90	0.9	15°/24°/36°
NLED8113D 8W	3000K	490 lm	90	0.9	15°/24°/36°
NLED8113D 8W	4000K	570 lm	90	0.9	15°/24°/36°

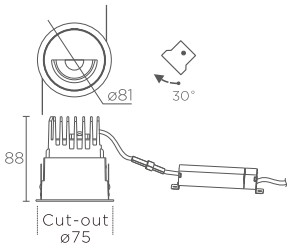


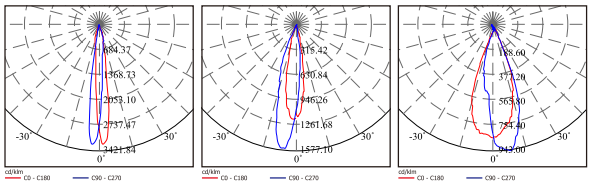


NLED8113D 8W 15° NLED8113D 8W 24° NLED8113D 8W 36°

NLED8113D1
(NLED8113D+semicircle)

Model	Color temp.	Lumens	CRI	PF	Beam angle
NLED8113D1 8W	2700K	230 lm	90	0.9	15°/24°/36°
NLED8113D1 8W	3000K	250 lm	90	0.9	15°/24°/36°
NLED8113D1 8W	4000K	290 lm	90	0.9	15°/24°/36°

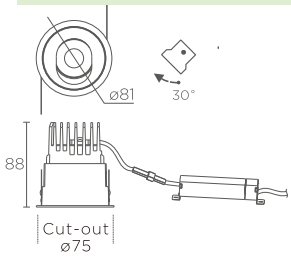


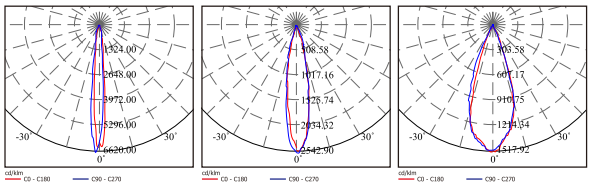


NLED8113D1 8W 15° NLED8113D1 8W 24° NLED8113D1 8W 36°

NLED8113D2
(NLED8113D+oval)

Model	Color temp.	Lumens	CRI	PF	Beam angle
NLED8113D2 8W	2700K	320 lm	90	0.9	15°/24°/36°
NLED8113D2 8W	3000K	350 lm	90	0.9	15°/24°/36°
NLED8113D2 8W	4000K	400 lm	90	0.9	15°/24°/36°





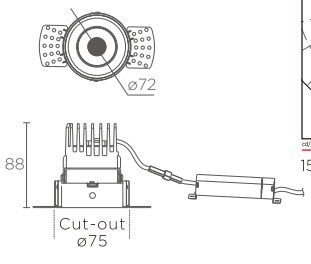
NLED8113D2 8W 15° NLED8113D2 8W 24° NLED8113D2 8W 36°

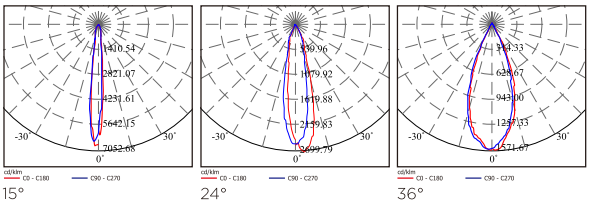
NLED8123A series

15° 24° 36° 220-240V DIMMING + 0-10V DIMMING Digital DIMMING CE IP20 50000h

NLED8123A

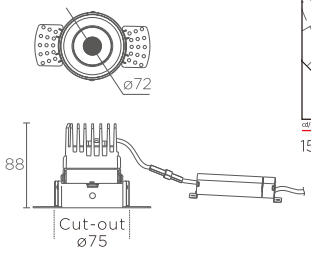
Model	Color temp.	Lumens	CRI	PF	Beam angle
NLED8123A 8W	2700K	460 lm	90	0.9	15°/24°/36°
NLED8123A 8W	3000K	490 lm	90	0.9	15°/24°/36°
NLED8123A 8W	4000K	570 lm	90	0.9	15°/24°/36°

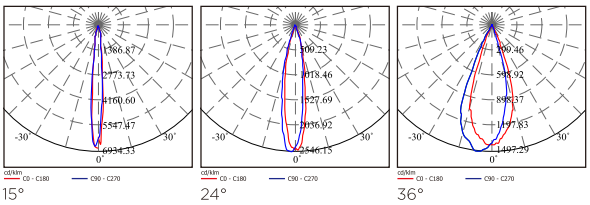




NLED8123A1
(NLED8123A+small circle)

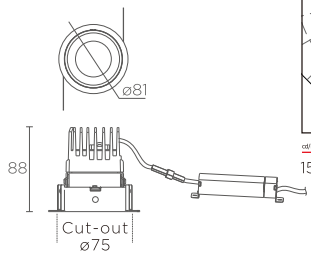
Model	Color temp.	Lumens	CRI	PF	Beam angle
NLED8123A1 8W	2700K	310 lm	90	0.9	15°/24°/36°
NLED8123A1 8W	3000K	340 lm	90	0.9	15°/24°/36°
NLED8123A1 8W	4000K	390 lm	90	0.9	15°/24°/36°

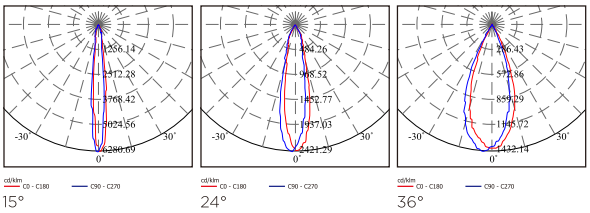




NLED8123A2
(NLED8123A+clear glass)

Model	Color temp.	Lumens	CRI	PF	Beam angle
NLED8123A2 8W	2700K	420 lm	90	0.9	15°/24°/36°
NLED8123A2 8W	3000K	450 lm	90	0.9	15°/24°/36°
NLED8123A2 8W	4000K	520 lm	90	0.9	15°/24°/36°



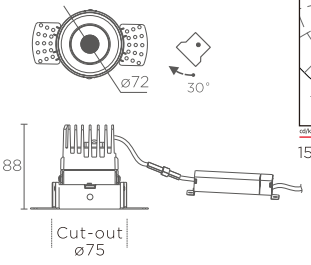


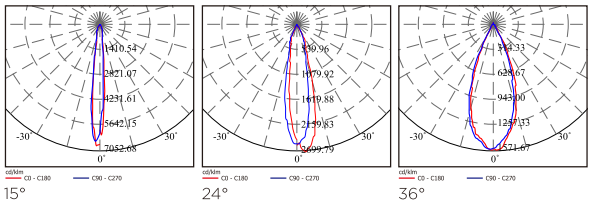
NLED8123D series

15° 24° 36° 220-240V DIMMING + 0-10V DIMMING Digital DIMMING CE IP20 50000h

NLED8123D

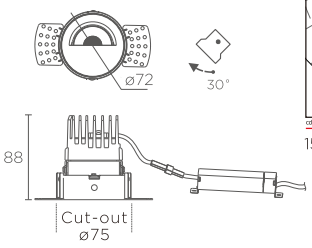
Model	Color temp.	Lumens	CRI	PF	Beam angle
NLED8123D 8W	2700K	460 lm	90	0.9	15°/24°/36°
NLED8123D 8W	3000K	490 lm	90	0.9	15°/24°/36°
NLED8123D 8W	4000K	570 lm	90	0.9	15°/24°/36°

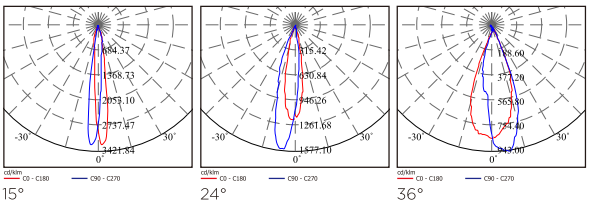




NLED8113D1
(NLED8123D+small circle)

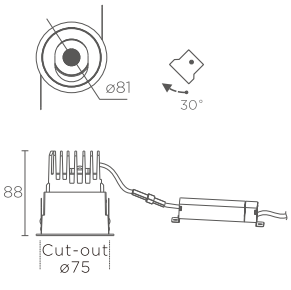
Model	Color temp.	Lumens	CRI	PF	Beam angle
NLED8123D1 8W	2700K	230 lm	90	0.9	15°/24°/36°
NLED8123D1 8W	3000K	250 lm	90	0.9	15°/24°/36°
NLED8123D1 8W	4000K	290 lm	90	0.9	15°/24°/36°

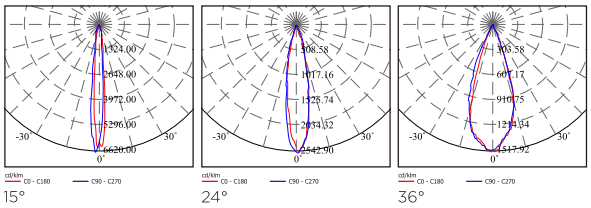




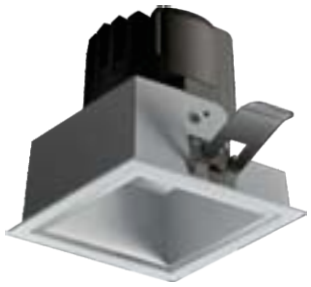
NLED8123D2
(NLED8123D+clear glass)

Model	Color temp.	Lumens	CRI	PF	Beam angle
NLED8123D2 8W	2700K	320 lm	90	0.9	15°/24°/36°
NLED8123D2 8W	3000K	350 lm	90	0.9	15°/24°/36°
NLED8123D2 8W	4000K	400 lm	90	0.9	15°/24°/36°



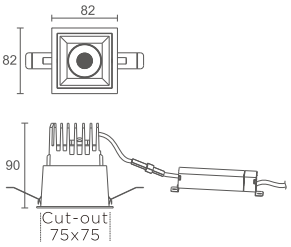


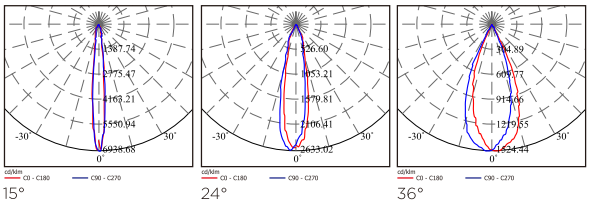
NLED813 series



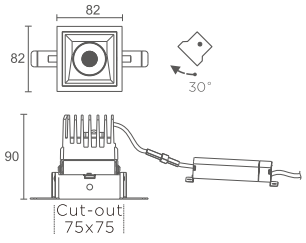
Fixed
NLED8133A 8W

Model	Color temp.	Lumens	CRI	PF	Beam angle
NLED8133A 8W	2700K	460 lm	90	0.9	15°/24°/36°
NLED8133A 8W	3000K	490 lm	90	0.9	15°/24°/36°
NLED8133A 8W	4000K	570 lm	90	0.9	15°/24°/36°
NLED8133D 8W	2700K	460 lm	90	0.9	15°/24°/36°
NLED8133D 8W	3000K	490 lm	90	0.9	15°/24°/36°
NLED8133D 8W	4000K	570 lm	90	0.9	15°/24°/36°



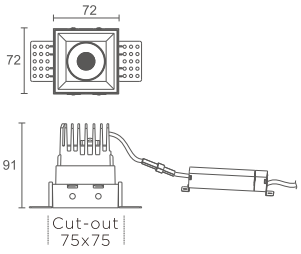


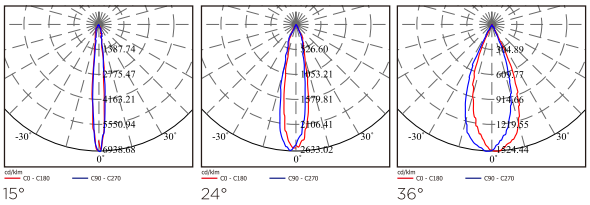
Adjustable
NLED8133D 8W



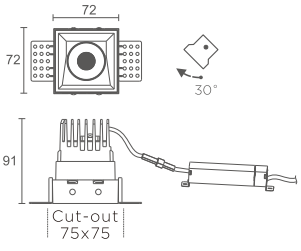
Fixed
NLED8134A 8W

Model	Color temp.	Lumens	CRI	PF	Beam angle
NLED8134A 8W	2700K	460 lm	90	0.9	15°/24°/36°
NLED8134A 8W	3000K	490 lm	90	0.9	15°/24°/36°
NLED8134A 8W	4000K	570 lm	90	0.9	15°/24°/36°
NLED8134D 8W	2700K	460 lm	90	0.9	15°/24°/36°
NLED8134D 8W	3000K	490 lm	90	0.9	15°/24°/36°
NLED8134D 8W	4000K	570 lm	90	0.9	15°/24°/36°





Adjustable
NLED8134D 8W



NLED81 4 inch series

High-specification LED commercial and residential downlights

Fixed/Adjustable

NLED8114AS 11W NLED8114A 15W
NLED8114DS 11W NLED8114D 15W

Fixed/Adjustable

NLED8124AS 11W NLED8124A 15W
NLED8124DS 11W NLED8124D 15W

CRI 90

APPLICATIONS

- Hotels
- Shopping malls
- Theatres
- Exhibition centres

TECHNICAL DETAILS

- Separate, non-dimmable, NVC-brand driver included
  - PF>0.9 (12W), PF>0.95 (15W)
  - Ta: -20°C ~ 40°C
- Rated life: 50,000 hours

CONSTRUCTION

- Die-cast aluminium housing
- PMMA lens
- Adjustable angle: horizontal 355°, vertical 30°
- Vacuum painting reflector with 35° shielding angle
- Remote constant current driver included

OPTIONS

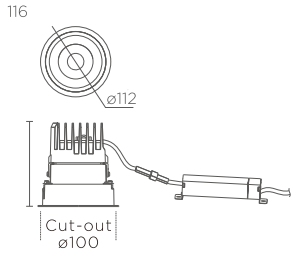
- **Bezel version**: Choice of the standard bezel or rimless bezel
- **Direction**: Choice of the fixed, adjustable (wall wash) version
- **Beam angle**: Choice of the 15°, 24° or 36°
- **Dimming:** The standard product is non-dimmable. For the other dimmable option can be specified by adding the following suffixes: MD (mains dimmable), DD (digital dimmable, includes DALI, switch dim and corridor function in one driver) or 0-10 (analogue) as required
- **Emergency:** Emergency maintained 3 hours and 1.5 hours versions are available, add suffix M3 or M1.5 if required. Please refer to the driver section

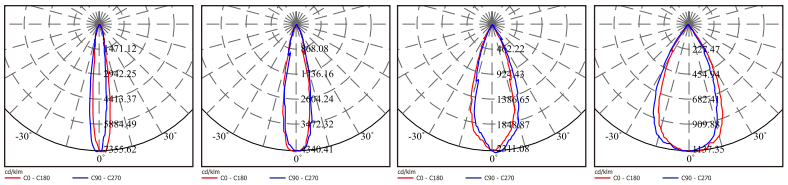
NLED814 series

15° 24° 36° 60° 220-240V DIMMING 0-10V DIMMING Digital DIMMING CE IP20 50000h

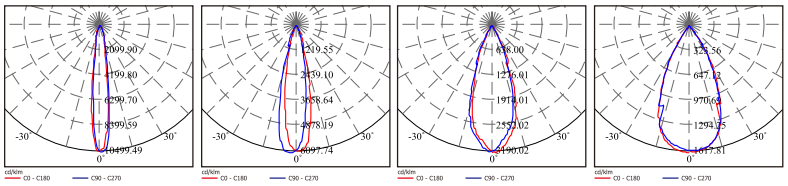
Fixed

Model	Color temp.	Lumens	CRI	PF	Beam angle
NLED8114AS 11W	2700K	760 lm	90	0.9	15°/24°/36°/60°
NLED8114AS 11W	3000K	810 lm	90	0.9	15°/24°/36°/60°
NLED8114AS 11W	4000K	870 lm	90	0.9	15°/24°/36°/60°
NLED8114A 15W	2700K	1,040 lm	90	0.9	15°/24°/36°/60°
NLED8114A 15W	3000K	1,120 lm	90	0.9	15°/24°/36°/60°
NLED8114A 15W	4000K	1,200 lm	90	0.9	15°/24°/36°/60°
High output					
NLED8114AS 11W	4000K	990 lm	90	0.95	24°
NLED8114A 15W	4000K	1,350 lm	90	0.95	24°





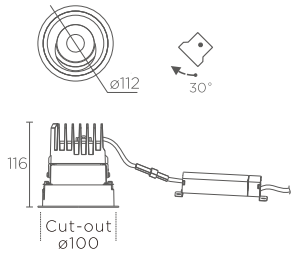
NLED8114AS 15° NLED8114AS 24° NLED8114AS 36° NLED8114AS 60°

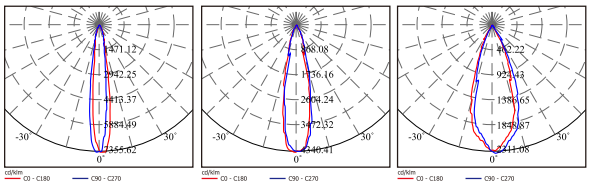


NLED8114A 15° NLED8114A 24° NLED8114A 36° NLED8114A 60°

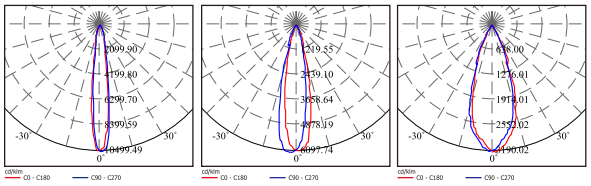
Adjustable

Model	Color temp.	Lumens	CRI	PF	Beam angle
NLED8114DS 11W	2700K	760 lm	90	0.9	15°/24°/36°
NLED8114DS 11W	3000K	810 lm	90	0.9	15°/24°/36°
NLED8114DS 11W	4000K	870 lm	90	0.9	15°/24°/36°
NLED8114D 15W	2700K	1,040 lm	90	0.9	15°/24°/36°
NLED8114D 15W	3000K	1,120 lm	90	0.9	15°/24°/36°
NLED8114D 15W	4000K	1,200 lm	90	0.9	15°/24°/36°





NLED8114DS 15° NLED8114DS 24° NLED8114DS 36°



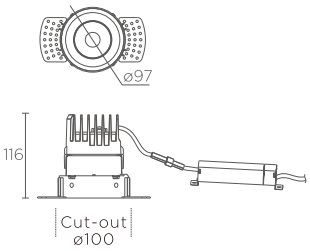
NLED8114D 15° NLED8114D 24° NLED8114D 36°

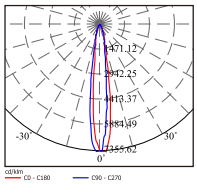
NLED8124 series

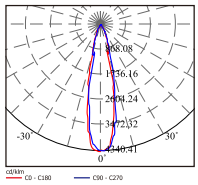
15° 24° 36° 220-240V DIMMING + 0-10V DIMMING Digital DIMMING CE IP20 50000h

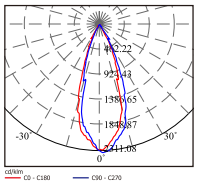
Fixed

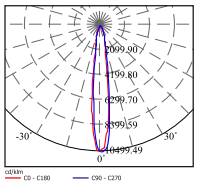
Model	Color temp.	Lumens	CRI	PF	Beam angle
NLED8124AS 11W	2700K	760 lm	90	0.9	15°/24°/36°
NLED8124AS 11W	3000K	810 lm	90	0.9	15°/24°/36°
NLED8124AS 11W	4000K	870 lm	90	0.9	15°/24°/36°
NLED8124A 15W	2700K	1,040 lm	90	0.9	15°/24°/36°
NLED8124A 15W	3000K	1,120 lm	90	0.9	15°/24°/36°
NLED8124A 15W	4000K	1,200 lm	90	0.9	15°/24°/36°

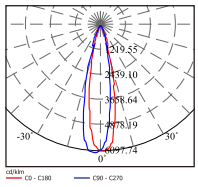


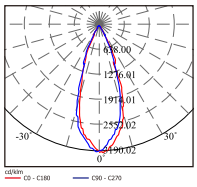

NLED8124AS 15°


NLED8124AS 24°


NLED8124AS 36°

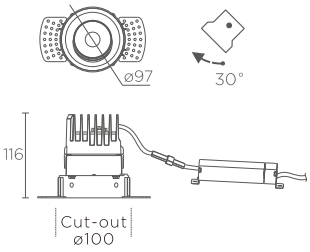

NLED8124A 15°

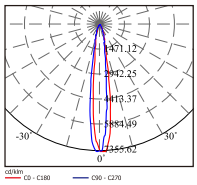

NLED8124A 24°

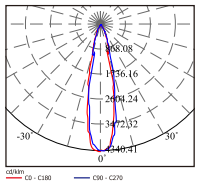

NLED8124A 36°

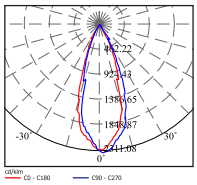
Model	Color temp.	Lumens	CRI	PF	Beam angle
NLED8124DS 11W	2700K	760 lm	90	0.9	15°/24°/36°
NLED8124DS 11W	3000K	810 lm	90	0.9	15°/24°/36°
NLED8124DS 11W	4000K	870 lm	90	0.9	15°/24°/36°
NLED8124D 15W	2700K	1,040 lm	90	0.9	15°/24°/36°
NLED8124D 15W	3000K	1,120 lm	90	0.9	15°/24°/36°
NLED8124D 15W	4000K	1,200 lm	90	0.9	15°/24°/36°

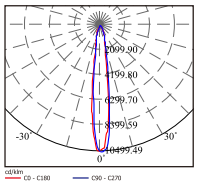
Adjustable

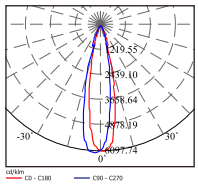


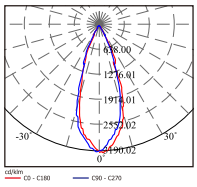

NLED8124DS 15°


NLED8124DS 24°


NLED8124DS 36°


NLED8124D 15°


NLED8124D 24°


NLED8124D 36°

NLED81 5 inch series

High-specification LED commercial and residential downlights

Fixed

NLED8115AS 20W NLED8115A 30W

Adjustable

NLED8115DS 20W NLED8115D 30W

Wall wash

NLED8115BS 20W NLED8115B 30W

CRI 90

APPLICATIONS

- Hotels
- Shopping malls
- Theatres
- Exhibition centres

TECHNICAL DETAILS

- Separate, non-dimmable, NVC-brand driver included
  - PF>0.95
  - Ta: -20°C ~ 40°C
- Rated life: 50,000 hours

CONSTRUCTION

- Die-cast aluminium housing
- PMMA lens
- Adjustable angle: horizontal 355°, vertical 30°
- Vacuum painting reflector with 35° shielding angle
- Remote constant current driver included

OPTIONS

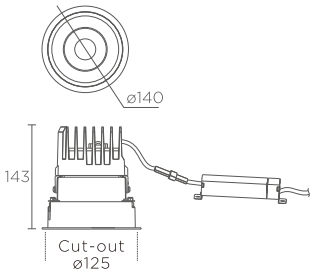
- **Direction**: Choice of the fixed, adjustable or wall wash version (not available for beam angle 60°)
- **Beam angle**: Choice of the 15°, 24°, 36° or 36°
- **Dimming:** The standard product is non-dimmable. For the other dimmable option can be specified by adding the following suffixes: MD (mains dimmable), DD (digital dimmable, includes DALI, switch dim and corridor function in one driver) or 0-10 (analogue) as required
- **Emergency:** Emergency maintained 3 hours and 1.5 hours versions are available, add suffix M3 or M1.5 if required. Please refer to the driver section

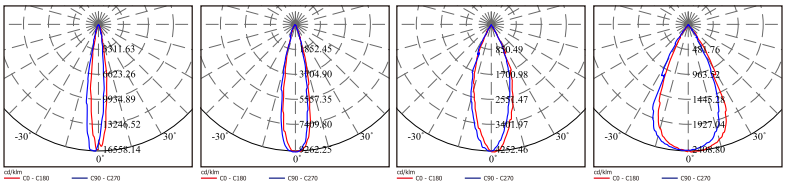
NLED8115 series

15° 24° 36° 60° 220-240V DIMMING 0-10V DIMMING Digital DIMMING CE IP20 50000h

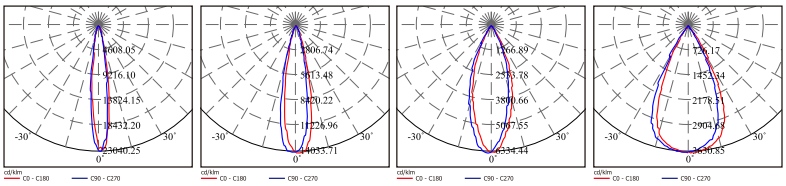
Fixed

Model	Color temp.	Lumens	CRI	PF	Beam angle
NLED8115AS 20W	2700K	1,480 lm	90	0.95	15°/24°/36°/60°
NLED8115AS 20W	3000K	1,600 lm	90	0.95	15°/24°/36°/60°
NLED8115AS 20W	4000K	1,700 lm	90	0.95	15°/24°/36°/60°
NLED8115A 30W	2700K	2,170 lm	90	0.95	15°/24°/36°/60°
NLED8115A 30W	3000K	2,330 lm	90	0.95	15°/24°/36°/60°
NLED8115A 30W	4000K	2,500 lm	90	0.95	15°/24°/36°/60°
High output					
NLED8115AS 20W	4000K	1,960 lm	90	0.95	24°
NLED8115A 30W	4000K	2,840 lm	90	0.95	24°





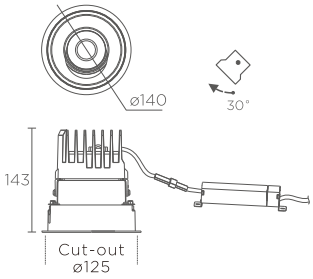
NLED8115AS 15° NLED8115AS 24° NLED8115AS 36° NLED8115AS 60°

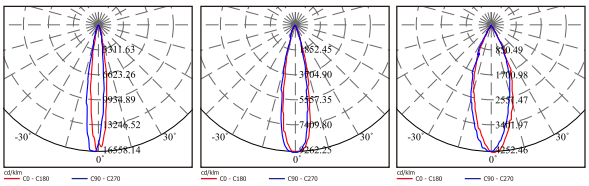


NLED8115A 15° NLED8115A 24° NLED8115A 36° NLED8115A 60°

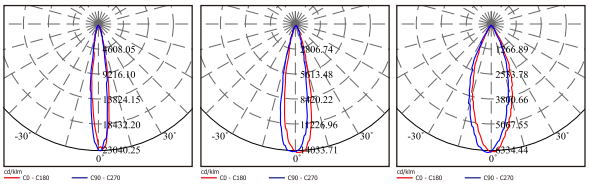
Model	Color temp.	Lumens	CRI	PF	Beam angle
NLED8115DS 20W	2700K	1,480 lm	90	0.95	15°/24°/36°
NLED8115DS 20W	3000K	1,600 lm	90	0.95	15°/24°/36°
NLED8115DS 20W	4000K	1,700 lm	90	0.95	15°/24°/36°
NLED8115D 30W	2700K	2,170 lm	90	0.95	15°/24°/36°
NLED8115D 30W	3000K	2,330 lm	90	0.95	15°/24°/36°
NLED8115D 30W	4000K	2,500 lm	90	0.95	15°/24°/36°

Adjustable





NLED8115DS 15° NLED8115DS 24° NLED8115DS 36°



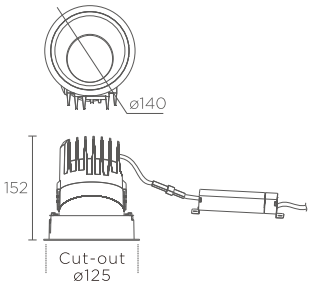
NLED8115D 15° NLED8115D 24° NLED8115D 36°

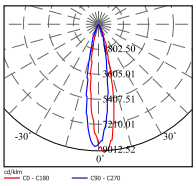
NLED815 series

15° 24° 36° 220-240V DIMMING 0-10V DIMMING Digital DIMMING CE IP20 50000h

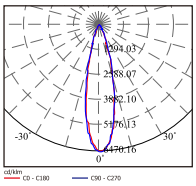
Wall wash

Model	Color temp.	Lumens	CRI	PF	Beam angle
NLED8115BS 20W	2700K	1,210 lm	90	0.95	15°/24°/36°
NLED8115BS 20W	3000K	1,300 lm	90	0.95	15°/24°/36°
NLED8115BS 20W	4000K	1,400 lm	90	0.95	15°/24°/36°
NLED8115B 30W	2700K	1,820 lm	90	0.95	15°/24°/36°
NLED8115B 30W	3000K	1,960 lm	90	0.95	15°/24°/36°
NLED8115B 30W	4000K	2,100 lm	90	0.95	15°/24°/36°

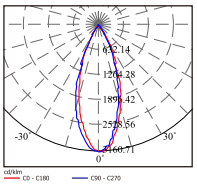




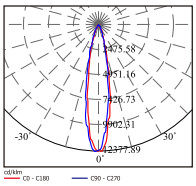
NLED8115BS 15°



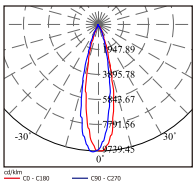
NLED8115BS 24°



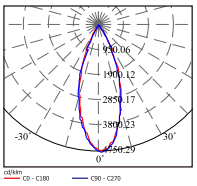
NLED8115BS 36°



NLED8115B 15°



NLED8115B 24°



NLED8115B 36°

NLED81 6 inch series

High-specification LED commercial and residential downlights

Fixed

NLED8115AS 20W NLED8115A 30W

Adjustable

NLED8115DS 20W NLED8115D 30W

Wall wash

NLED8115BS 20W NLED8115B 30W

CRI 90

APPLICATIONS

- Hotels
- Shopping malls
- Theatres
- Exhibition centres

TECHNICAL DETAILS

- Separate, non-dimmable, NVC-brand driver included
  - PF>0.95
  - Ta: -20°C ~ 40°C
- Rated life: 50,000 hours

CONSTRUCTION

- Die-cast aluminium housing
- PMMA lens
- Adjustable angle: horizontal 355°, vertical 30°
- Vacuum painting reflector with 35° shielding angle
- Remote constant current driver included

OPTIONS

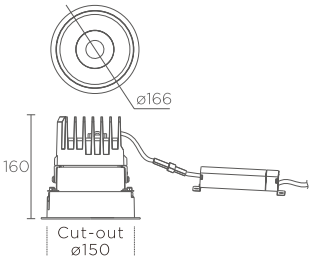
- **Direction**: Choice of the fixed, adjustable or wall wash version (not available for beam angle 60°)
- **Beam angle**: Choice of the 15°, 24°, 36° or 60°
- **Reflector colour:** Choice of the silver, white, black and gold

- **Dimming:** The standard product is non-dimmable. For the other dimmable option can be specified by adding the following suffixes: MD (mains dimmable), DD (digital dimmable, includes DALI, switch dim and corridor function in one driver) or 0-10 (analogue) as required
- **Emergency:** Emergency maintained 3 hours and 1.5 hours versions are available, add suffix M3 or M1.5 if required. Please refer to the driver section

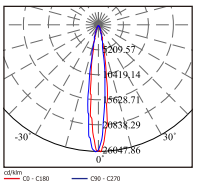
NLED816 series

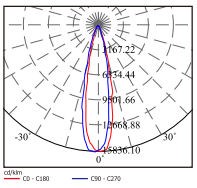
15° 24° 36° 60° 220-240V DIMMING 0-10V DIMMING Digital DIMMING CE IP20 50000h

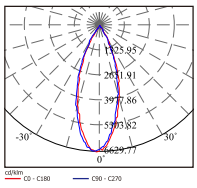
Fixed

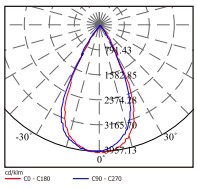


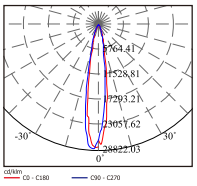
Model	Color temp.	Lumens	CRI	PF	Beam angle
NLED8116AS 35W	2700K	2,520 lm	90	0.95	15°/24°/36°/60°
NLED8116AS 35W	3000K	2,700 lm	90	0.95	15°/24°/36°/60°
NLED8116AS 35W	4000K	2,900 lm	90	0.95	15°/24°/36°/60°
NLED8116A 50W	2700K	3,400 lm	90	0.95	15°/24°/36°/60°
NLED8116A 50W	3000K	3,620 lm	90	0.95	15°/24°/36°/60°
NLED8116A 50W	4000K	3,900 lm	90	0.95	15°/24°/36°/60°
High output					
NLED8116AS 35W	4000K	3,210 lm	90	0.95	24°
NLED8116A 50W	4000K	4,110 lm	90	0.95	24°

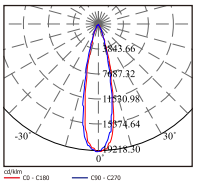

NLED8116AS 15°

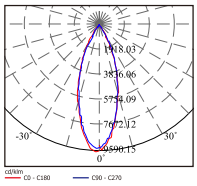

NLED8116AS 24°

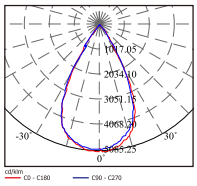

NLED8116AS 36°


NLED8115AS 60°

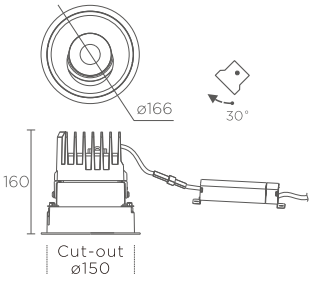

NLED8116A 15°


NLED8116A 24°

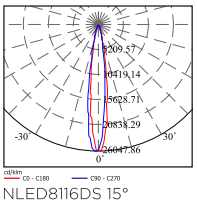

NLED8116A 36°

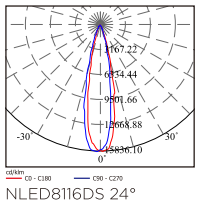

NLED8116A 60°

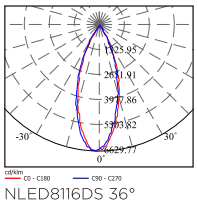
Adjustable

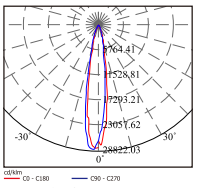


Model	Color temp.	Lumens	CRI	PF	Beam angle
NLED8116DS 35W	2700K	2,520 lm	90	0.95	15°/24°/36°/60°
NLED8116DS 35W	3000K	2,700 lm	90	0.95	15°/24°/36°/60°
NLED8116DS 35W	4000K	2,900 lm	90	0.95	15°/24°/36°/60°
NLED8116D 50W	2700K	3,400 lm	90	0.95	15°/24°/36°/60°
NLED8116D 50W	3000K	3,620 lm	90	0.95	15°/24°/36°/60°
NLED8116D 50W	4000K	3,900 lm	90	0.95	15°/24°/36°/60°


NLED8116DS 15°


NLED8116DS 24°


NLED8116DS 36°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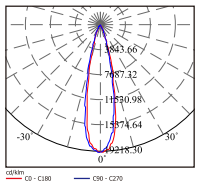
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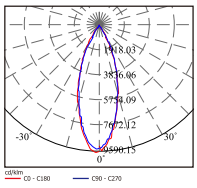
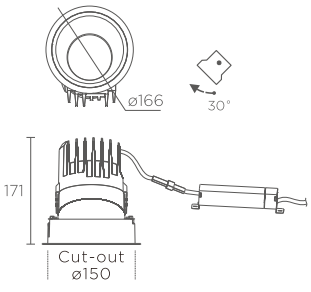
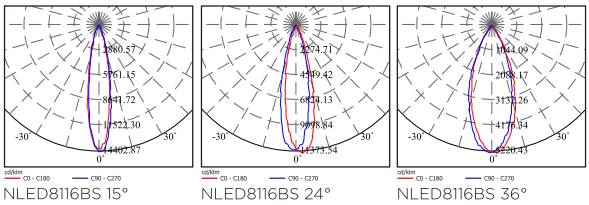

NLED8116D 36°

NLED816 series

Wall wash

Model	Color temp.	Lumens	CRI	PF	Beam angle
NLED8116BS 35W	2700K	2,150 lm	90	0.95	15°/24°/36°
NLED8116BS 35W	3000K	2,300 lm	90	0.95	15°/24°/36°
NLED8116BS 35W	4000K	2,500 lm	90	0.95	15°/24°/36°
NLED8116B 50W	2700K	2,950 lm	90	0.95	15°/24°/36°
NLED8116B 50W	3000K	3,150 lm	90	0.95	15°/24°/36°
NLED8116B 50W	4000K	3,400 lm	90	0.95	15°/24°/36°

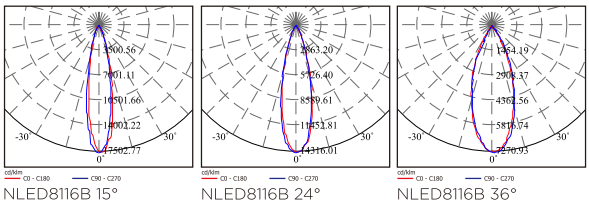




NLED8116BS 15°

NLED8116BS 24°

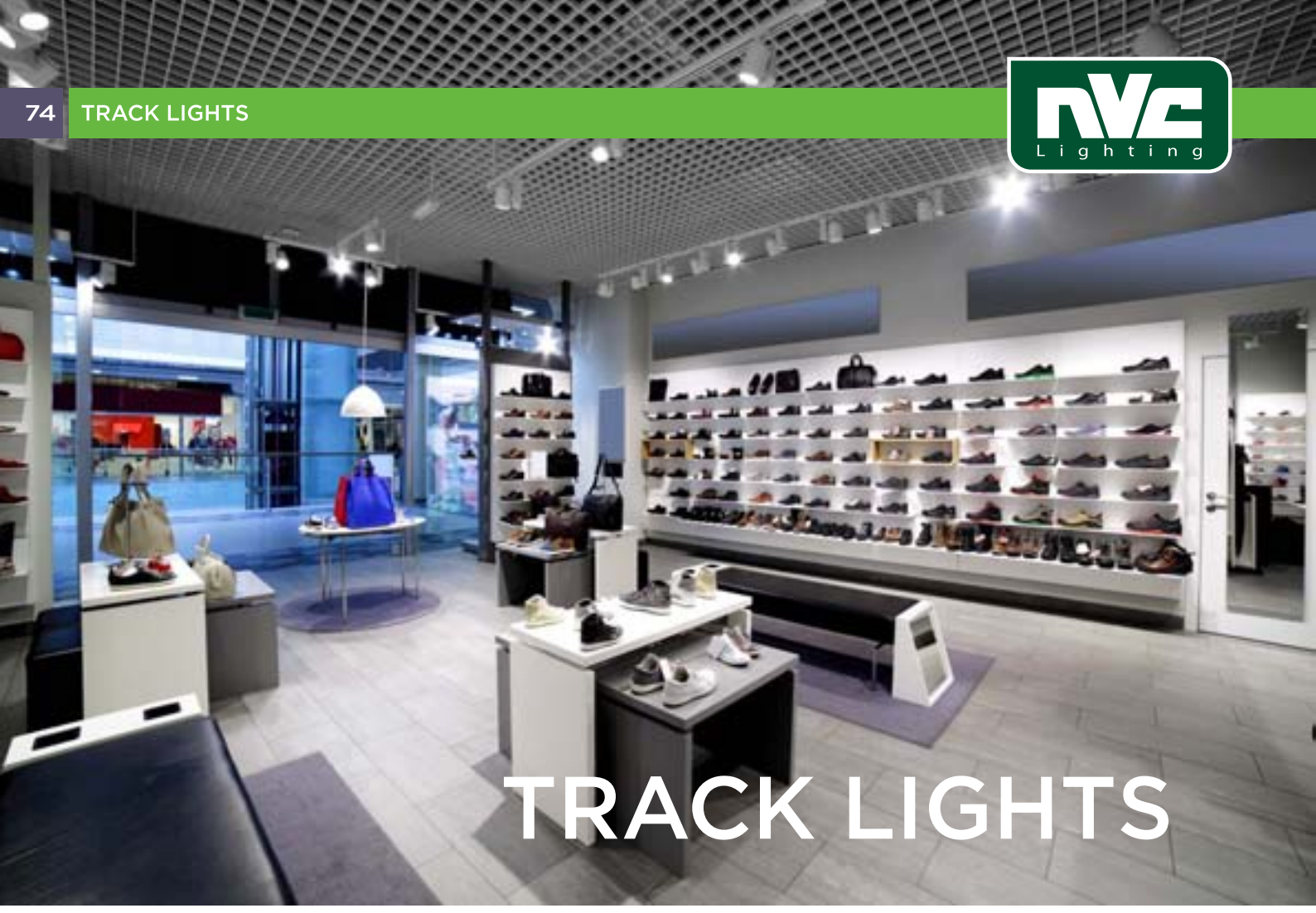
NLED8116BS 36°



NLED8116B 15°

NLED8116B 24°

NLED8116B 36°



TRACK LIGHTS

76 NTRLED306P

77 NTLED328

78 NTLED320*

79 NTLED332*

80 NTRLED327*

81 NTLED317N

82 NTLED318N

83 NTLED319N

84 Accessories

85 Accessories

LED TRACK LIGHTS RANGE SUMMARY

	NTRLED306P PAGE 76	TLED328 PAGE 77	TLED320* PAGE 78	TLED332* PAGE 79	NTRLED327* PAGE 80	TLED317N PAGE 81	TLED318N PAGE 82
WATTAGE	**LUMEN OUTPUTS**						
9					700 lm		
12			810 lm				
15					1,050 lm		
18			1,120 lm				
20				1,100 lm			
24			1,360 lm		1,700 lm		
30				1,650 lm			
33							2,970 lm
35	3,450 lm	2,200 lm			2,500 lm	2,100 lm	2,100 lm
45	4,450 lm						4,050 lm
50					3,000 lm	3,000 lm	3,100 lm
FEATURES	NTRLED306P	TLED328	TLED320*	TLED332*	NTRLED327*	TLED317N	TLED318N
Colour Temp	2000K 3500K 4000K 5000K	3000K 4000K 5700K	3000K 4000K 5700K	3000K 4000K 5700K	3000K 3500K 4000K 5700K	3000K 3500K 4000K 5700K	3000K 4000K
Visible LED	COB	High power	COB	COB	COB	COB	COB
Mounting	single/three circuit track	single circuit track	single circuit track	single circuit track	single circuit track	single circuit track	single circuit track
IP Rating	IP 20	IP 20	IP 20	IP 20	IP 20	IP 20	IP 20
Finishes	Black/ Semi-white/ Black+white	Black/ Semi-white	Black/ Semi-white	Black/ Semi-white	Black/ Semi-white	Black/ Semi-white	Black/ Semi-white

NTRLED306P

Professional LED track lights

White+Black
(Standard version)

White (Customize version)

Black (Customize version)

APPLICATIONS

- Museums
- Displays
- Car showrooms
- Retail stores

TECHNICAL DETAILS

- COB LED
- Rated life: 30,000 hours

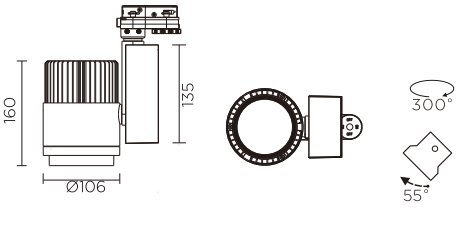
CONSTRUCTION

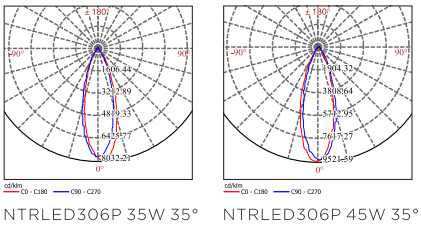
- Die-cast aluminium housing
- Powder coated surface treatment
- Built-in constant current driver included
- 24° or 38° beam angle available
- For single circuit NVC track or three circuit NVC track

OPTIONS

- **Colour:** Choice of white, black or white+black
- **Wire:** Choice of single circuit track or three circuit track
- NVC track and accessories, see page 84 and 85

Model	Colour temp.	Lumens	CRI	PF	Beam angle
NTRLED306P 35W	2700K/3000K/4000K/5000K	3,450 lm	>80	>0.9	24°/38°
NTRLED306P 45W	2700K/3000K/4000K/5000K	4,450 lm	>80	>0.9	24°/38°





NTRLED306P 35W 35°

NTRLED306P 45W 35°

NTLED328

Economic high power track lights

15° 24° 36° 220-240V IP20 30000h

APPLICATIONS

- Fashion shops
- Shop windows
- Retail stores
- Hotels

TECHNICAL DETAILS

- High power LEDs
- Rated life: 30,000 hours

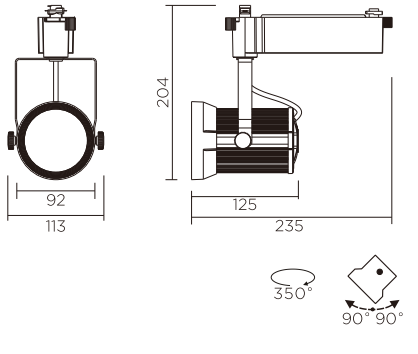
CONSTRUCTION

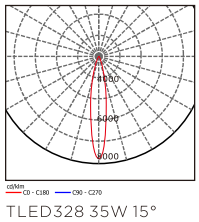
- Die-cast aluminium housing and heat sink with powder coated finish
- Adjustable angle: horizontal 350°, vertical 90°
- Polycarbonate driver housing
- Built-in constant current driver included
- For single circuit NVC track

OPTIONS

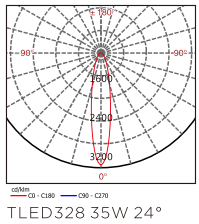
- **Colour:** Choice of black or semi white
- **Beam angle:** Choice of 15° , 24° or 36°
- NVC track and accessories, see page 84 and 85

Model	Colour temp.	Lumens	CRI	PF	Beam angle
NTLED328 35W	3000K/4000K/5700K	2,200 lm	>80	>0.9	15°/24°/36°





TLED328 35W 15°



TLED328 35W 24°

NTLED320 series

Low power COB accent lighting for track or surface mounting

SLED320
(Surface mounted)

TLED320*
(Track mounted)

APPLICATIONS

- Fashion shops
- Supermarkets
- Retail stores
- Shop windows

TECHNICAL DETAILS

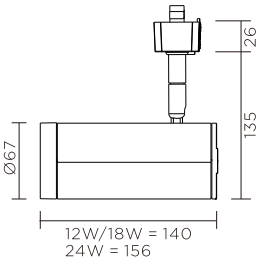
- COB LED
- Rated life: 30,000 hours

CONSTRUCTION

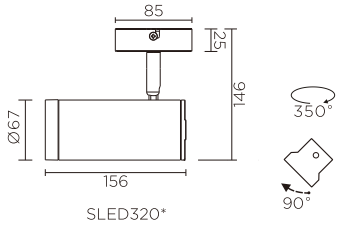
- Aluminium alloy housing
- Adjustable angle: horizontal 350°, vertical 90°
- Powder coated finish
- Built-in constant current driver included
- For single circuit NVC track

OPTIONS

- **Colour:** Choice of black or semi white
- **Beam angle:** Choice of 15° , 24° or 38°
- **Installation:** Choice of track mounted (TLED) or surface mounted (SLED)
- NVC track and accessories, see page 84 and 85

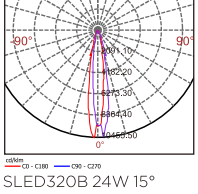


TLED320*

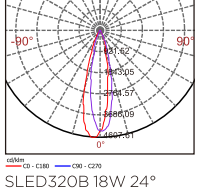


SLED320*

Model	Colour temp.	Lumens	CRI	PF	Beam angle
NTLED320A 12W	3000K/4000K/5700K	810 lm	>80	>0.9	15°/24°/38°
NTLED320B 18W	3000K/4000K/5700K	1,120 lm	>80	>0.9	15°/24°/38°
NTLED320C 24W	3000K/4000K/5700K	1,360 lm	>80	>0.9	15°/24°/38°
SLED320 12W	3000K/4000K/5700K	810 lm	>80	>0.9	15°/24°/38°
SLED320 18W	3000K/4000K/5700K	1,120 lm	>80	>0.9	15°/24°/38°
SLED320 24W	3000K/4000K/5700K	1,360 lm	>80	>0.9	15°/24°/38°



SLED320B 24W 15°



SLED320B 18W 24°

NTLED332 series

Versatile LED spotlights for a wide range of installation conditions

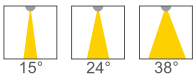
TLED332D (Class I)
(Track mounted)

NTLED332C (Class I)
(Track mounted)

NTLED332Z (Class I)
(Track mounted)

SLED332 (Class I)
(Surface mounted)

SLED332Q (Class II)
(Recessed mounted)



APPLICATIONS

- Retail stores
- Showrooms
- Museums & galleries
- Bars & restaurants

TECHNICAL DETAILS

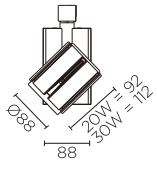
- COB LED
- Rated life: 30,000 hours

CONSTRUCTION

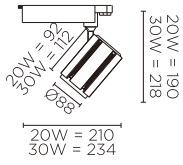
- Adjustable angle: horizontal 350°, vertical 90°
- Die-cast aluminium housing, powder coated
- Built-in constant current driver included
- For single circuit NVC track, surface and recessed installations

OPTIONS

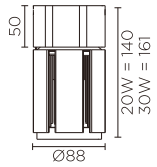
- **Colour:** Choice of black or semi-white
- **Beam angle:** Choice of 15°, 24° or 36°
- NVC track and accessories, see page 84 and 85



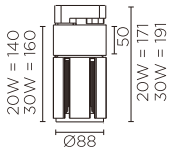
TLED332C



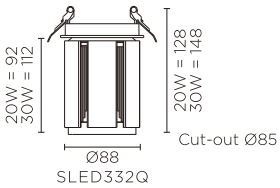
TLED332D



SLED332

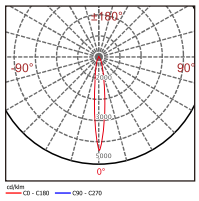


TLED332Z

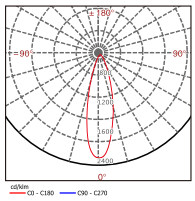


SLED332Q

Model	Colour temp.	Lumens	CRI	PF	Beam angle
NTLED332D 20W	3000K/4000K/5700K	1,100 lm	>90	>0.9	15°/24°/38°
NTLED332D 30W	3000K/4000K/5700K	1,650 lm	>90	>0.9	15°/24°/38°
NTLED332Z 20W	3000K/4000K/5700K	1,100 lm	>90	>0.9	15°/24°/38°
NTLED332Z 30W	3000K/4000K/5700K	1,650 lm	>90	>0.9	15°/24°/38°
NTLED332C 20W	3000K/4000K/5700K	1,100 lm	>90	>0.9	15°/24°/38°
NTLED332C 30W	3000K/4000K/5700K	1,650 lm	>90	>0.9	15°/24°/38°
SLED332Q 20W	3000K/4000K/5700K	1,100 lm	>90	>0.9	15°/24°/38°
SLED332Q 30W	3000K/4000K/5700K	1,650 lm	>90	>0.9	15°/24°/38°
SLED332 20W	3000K/4000K/5700K	1,100 lm	>90	>0.9	15°/24°/38°
SLED332 30W	3000K/4000K/5700K	1,650 lm	>90	>0.9	15°/24°/38°



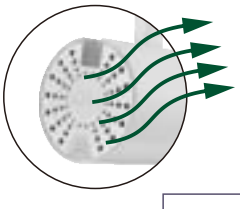
TLED332D 20W 15°



TLED332D 20W 38°

NTRLED327 series

Track lights with a simple minimalist design



Gold

Silver

15° 24° 36° 220-240V IP20 30000h

APPLICATIONS

- Chain stores
- Museums
- Fashion shops
- Showrooms

TECHNICAL DETAILS

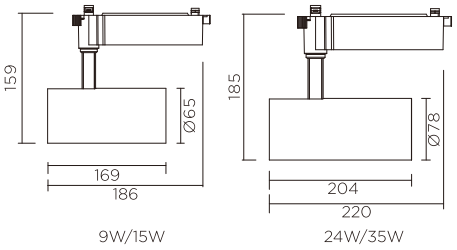
- COB LED
- Rated life: 30,000 hours

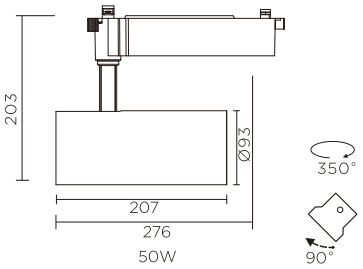
CONSTRUCTION

- Die-cast aluminium housing
- Powder coated surface treatment
- 30° glare-proof design
- Adjustable angle: horizontal 350°, vertical 90°
- Die-cast aluminium heat sink with air convection design
- Built-in constant current driver included
- For single circuit NVC track

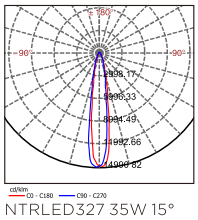
OPTIONS

- **Beam angle:** Choice of 15°, 24° or 36°
- **Body color:** Choice of black or semi white
- **Glare-proof ring colour:** Choice of gold or silver colour
- NVC track and accessories, see page 84 and 85

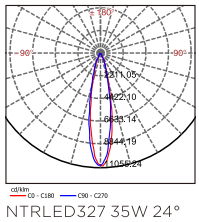




Model	Colour temp.	Lumens	CRI	PF	Beam angle
NTRLED327A 9W	3000K/3500K/4000K/5700K	700 lm	>90	>0.9	15°/24°/36°
NTRLED327B 15W	3000K/3500K/4000K/5700K	1,050 lm	>90	>0.9	15°/24°/36°
NTRLED327C 24W	3000K/3500K/4000K/5700K	1,700 lm	>90	>0.9	15°/24°/36°
NTRLED327 35W	3000K/3500K/4000K/5700K	2,500 lm	>90	>0.9	15°/24°/36°
NTRLED327D 50W	3000K/3500K/4000K/5700K	3,200 lm	>90	>0.9	15°/24°/36°



NTRLED327 35W 15°



NTRLED327 35W 24°

NTLED317N

COB LED track lights with built-in driver

APPLICATIONS

- Fashion shops
- Shop windows
- Retail stores
- Restaurants

TECHNICAL DETAILS

- COB LED
- Rated life: 30,000 hours

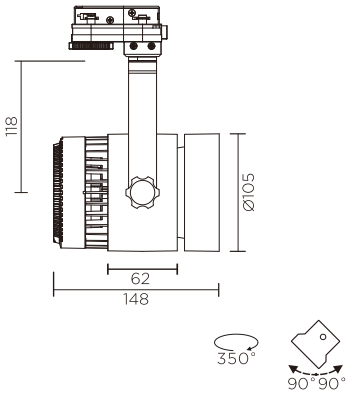
CONSTRUCTION

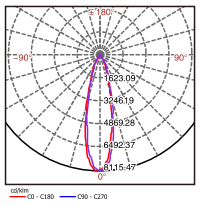
- Die-cast aluminium housing and heat sink
- Adjustable angle: horizontal 350°, vertical 90°
- Powder coated finish
- Built-in constant current driver included
- For single circuit NVC track

OPTIONS

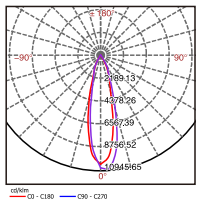
- **Colour:** Choice of black or semi white
- **Beam angle:** Choice of 15°, 24° or 40°
- NVC track and accessories, see page 84 and 85

Model	Colour temp.	Lumens	CRI	PF	Beam angle
NTLED317NA 35W	3000K/3500K/4000K/5700K	2,100 lm	>90	>0.95	15°/24°/40°
NTLED317N 50W	3000K/3500K/4000K/5700K	3,000 lm	>90	>0.95	15°/24°/40°





NLED317N 35W 24°



NLED317N 50W 24°

NTLED318N

COB LED track lights

CRI 90

APPLICATIONS

- Fashion shops
- Supermarkets
- Retail stores
- Food display areas

TECHNICAL DETAILS

- COB LED
- Rated life: 30,000 hours

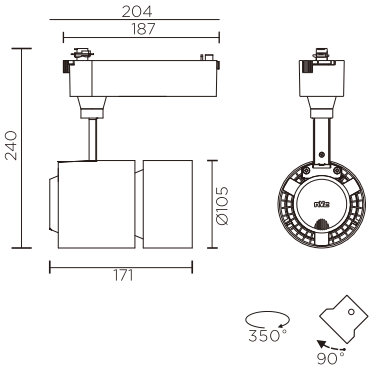
CONSTRUCTION

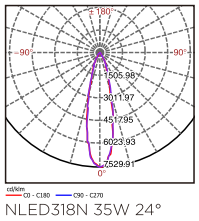
- Die-cast aluminium housing and heat sink
- Adjustable angle: horizontal 350°, vertical 90°
- Aluminium driver housing
- Powder coated finish
- Built-in constant current driver included
- For single circuit NVC track

OPTIONS

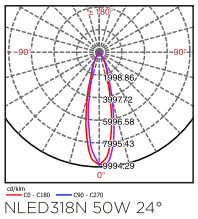
- **Colour:** Choice of black or semi white
- **Beam angle:** Choice of 15°, 24° or 40°
- NVC track and accessories, see page 84 and 85

Model	Colour temp.	Lumens	CRI	PF	Beam angle
NTLED318N 35W	3000K/4000K	2,100 lm	>90	>0.95	15°/24°/40°
NTLED318N 50W	3000K/4000K	3,100 lm	>90	>0.95	15°/24°/40°
High output					
NTLED318N 33W	3000K/4000K	2,970 lm	>80	>0.95	15°/24°/40°
	3000K/4000K	2,640 lm	>90	>0.95	15°/24°/40°
NTLED318N 45W	3000K/4000K	4,050 lm	>80	>0.95	15°/24°/40°
	3000K/4000K	3,600 lm	>90	>0.95	15°/24°/40°





NLED318N 35W 24°



NLED318N 50W 24°

NTLED319N

Rectangular COB LED track lights

CRI 90

15° 24° 40° 220-240V IP20 30000h

APPLICATIONS

- Fashion shops
- Supermarkets
- Retail stores
- Restaurants

TECHNICAL DETAILS

- COB LED
- Rated life: 30,000 hours

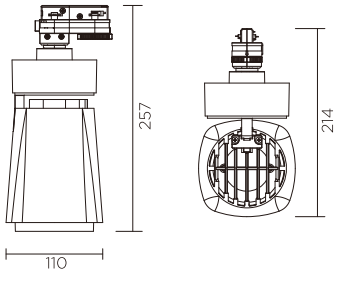
CONSTRUCTION

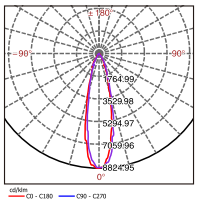
- Die-cast aluminium housing and heat sink
- Adjustable angle: horizontal 350°, vertical 90°
- Powder coated finish
- Built-in constant current driver included
- For single circuit NVC track

OPTIONS

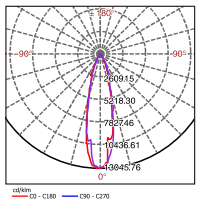
- **Colour:** Choice of black or semi white
- **Beam angle:** Choice of 15°, 24° or 40°
- NVC track and accessories, see page 84 and 85

Model	Colour temp.	Lumens	CRI	PF	Beam angle
NLED319N 35W	3000K/3500K/4000K	2,100 lm	>90	>0.95	15°/24°/40°
NLED319N 50W	3000K/3500K/4000K	3,000 lm	>90	>0.95	15°/24°/40°





NLED319N 35W 24°



NLED319N 50W 24°

Single circuit track + accessories

Black

Semi white

FEATURES AND SPECIFICATION

- Three copper wires (conductors), secured in an insulating (polycarbonate) retainer
- The configuration of the I, L, T and X connectors prevents any connection either with another connector (listed below) or an NVC light fitting with reversed polarity
- Aluminium body, powder coated in white or black
- Available in three lengths of 1m, 1.5m and 2m
- Uniform surface and interior colour (black or white)

Single circuit track

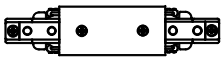
- Live and dead ends included with each length of track
- Avallable in three lengths: 1m, 1.5m or 2m

Model	QTY/CTN	CTN Dimension	MOQ
T3/1M	20 PCS	1030x190x83mm	100 PCS
T3/1.5M	20 PCS	1530x190x83mm	100 PCS
T3/2M	20 PCS	2030x190x83mm	100 PCS

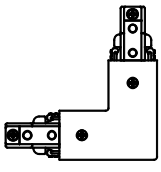
- Three Joining accessories are available to give I, L, T and X installations, as listed below
- Material: PMMA(Polymethylmethacrylate)

Model	QTY/CTN	CTN Dimension	MOQ
T3-IJ	100 PCS	375x195x225mm	100 PCS
T3-LJ	50 PCS	370x235x140mm	100 PCS
T3-TJ	50 PCS	375x195x225mm	100 PCS
T3-XJ	25 PCS	360x220x175mm	100 PCS

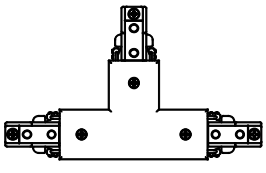
T3-IJ



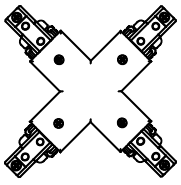
T3-LJ



T3-TJ



T3-XJ



Three circuit track + accessories

Black

Semi white

Three circuit track

- Live and dead ends included with each length of track
- Avallable in three lengths: 1m, 1.5m or 2m

Model	QTY/CTN	CTN Dimension	MOQ
T4/1M	10 PCS	1030x185x95mm	100 PCS
T4/1.5M	10 PCS	1530x185x95mm	100 PCS
T4/2M	10 PCS	2030x185x95mm	100 PCS

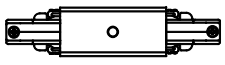
FEATURES AND SPECIFICATION

- Four copper wires (conductors), secured in an insulating (polycarbonate) retainer
- The configuration of the live and neutral connectors prevents any connection either with another connector (listed below) or an NVC light fitting with reversed polarity
- Aluminium body, powder coated in white or black
- Available in three lengths of 1m, 1.5m and 2m
- Uniform surface and interior colour (black or white)

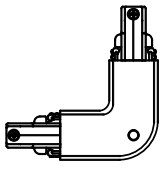
- Four Joining accessories are available to give I, L, T and X installations, as listed below
- Material: PMMA(Polymethylmethacrylate)

Model	QTY/CTN	CTN Dimension	MOQ
T4-IJ	50 PCS	375x195x225mm	100 PCS
T4-LJ	50 PCS	375x195x225mm	100 PCS
T4-TJ	30 PCS	375x195x225mm	100 PCS
T4-XJ	20 PCS	370x235x220mm	100 PCS

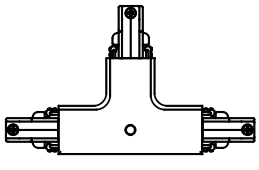
T4-IJ



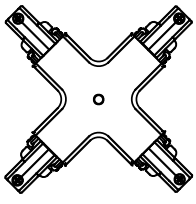
T4-LJ



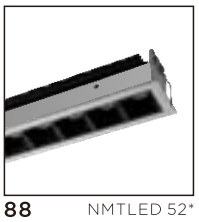
T4-TJ



T4-XJ



MULTIPLE LIGHTS



88 NMTLED 52*

90 NMTLED 585*

91 NMTLED585*

92 NLED54*

93 NLED55*

94 NLED582*

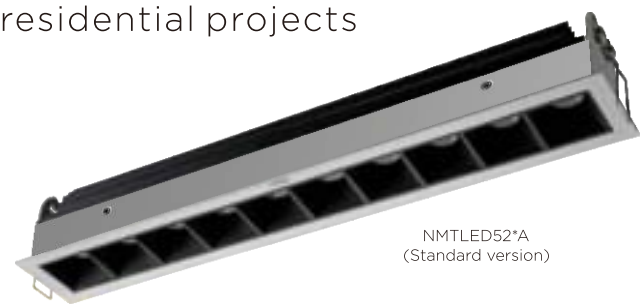
95 NLED583*

LED MULTIPLE LIGHTS RANGE SUMMARY

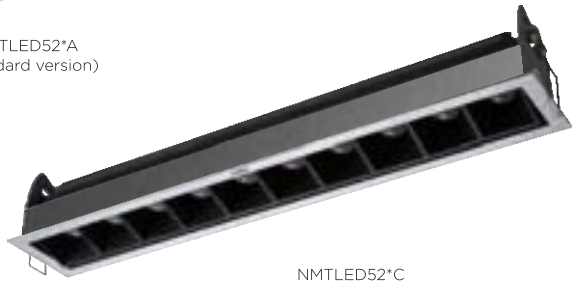
	NMTLED52* PAGE 30	NMTLED585* PAGE 31	NLED54* PAGE 32	NLED55*N/NS PAGE 32	NLED582* PAGE 32	NLED583* PAGE 33
WATTAGE			**LUMEN OUTPUTS**			
3	160 lm					
6	350 lm				450 lm	
9	530 lm	720 lm			500 lm	
12	720 lm		650 lm	750 lm	720/900 lm	
15	970 lm					
18		1,440 lm			1,000/1,350 lm	
20				1,320 lm	1,500 lm	
24		2,140 lm	1,300 lm	1,500 lm	1,440 lm	2,100 lm
27		2,160 lm			1,500 lm	
30	1,950 lm					
35		2,800 lm				2,600 lm
36			1,950 lm	2,250 lm	2,160 lm	
40				2,640 lm	3,000 lm	
48		4,270 lm				3,500 lm
60				3,960 lm	4,500 lm	
70		5,300 lm				5,100 lm
72		6,320 lm				5,000 lm
105		8,370 lm				7,600 lm
FEATURES	**NMTLED52***	**NMTLED585***	**NLED54***	**NLED55*N/NS**	**NLED582***	**NLED583***
Colour Temp	3000K 3500K 4000K	3000K 3500K 4000K 5700K	3000K 3500K 6500K	3000K 3500K 5700K	3000K 3500K 5700K	3000K 3500K 4000K 5700K
Visible LED	HP LED	COB LED	COB LED	COB LED	COB LED	COB LED
Mounting	Recessed	Recessed	Recessed	Recessed	Recessed	Recessed
IP Rating	IP 20	IP 20	IP 20	IP 20	IP 20	IP 20
Finishes	Black/White /Silver grey	Black/Semi-white	Semi-white/Silver	Black/Semi-white	Semi-white	Semi-white
Dimmable	Yes	No	No	No	No	No
Emerg.	No	No	No	No	No	No
Protection Class	Class II	Class II	Class II	Class I	Class II	Class II
Input Voltage	110-240V	110-240V	110-240V	110-240V	110-240V	110-240V
Material & Housing	Aluminium	Aluminium	Aluminium	Aluminium	Aluminium	Aluminium

NMTLED52 series

A range of multiple lights for high-specification retail, hospitality and residential projects



NMTLED52*A
(Standard version)



NMTLED52*C
(Adjustable version)

NMTLED52*B
(Rimless version)

CRI 90

APPLICATIONS

- Fashion retailing; jewellery, accessories and clothing
- Hotels and restaurants
- Luxury residential properties

Options

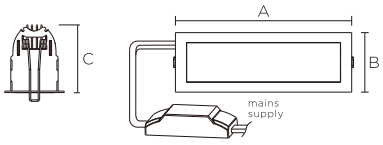
- **Body colour:** Rimmed versions available in a choice of white or silver grey. Rimless version available in black only
- **Beam angle:** Choice of 12°, 30° or 50°
- **CCT:** Choice of 3000K, 3500K or 4000K
- **Body style:** Rimmed (suffix A), rimmed adjustable (suffix C) or rimless (suffix B)

TECHNICAL DETAILS

- COB LEDs
- Rated life: 30,000 hours

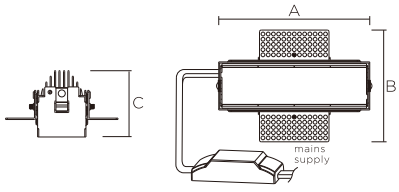
CONSTRUCTION

- Aluminium body in a choice of finishes
- Extruded aluminium heat sink for excellent thermal performance and long life
- Three body styles, all for recessed installation:
  - Rimed with fixed beam direction and spring clips
  - Rimed with adjustable beam direction and spring clips. Rimless with fixed beam direction
- Constructed of multiple 3W modules assembled in units of 1, 2, 3, 4, 5 or 10 modules
- Cut-off angle of 35° for minimum glare product design allows units to be joined together seamlessly
- Separate driver included with each unit



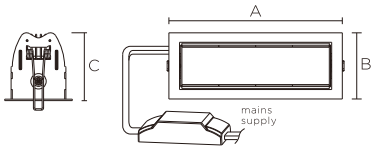
NMTLED52*A

Model	A	B	C	Cut-out
3W	50	48	55	43x40
2x3W	81	48	55	74x40
3x3W	112	48	55	105x40
4x3W	143	48	55	136x40
5x3W	174	48	55	167x40
10x3W	330	48	55	320x40



NMTLED52*B

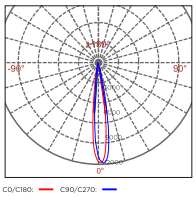
Model	A	B	C	Cut-out
3W	37	97	57	40x46
2x3W	68	97	57	70x46
3x3W	99	97	57	101x46
4x3W	130	97	57	132x46
5x3W	160	97	57	163x46
10x3W	318	97	57	319x46



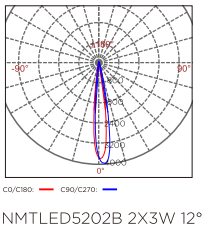
NMTLED52*C

Model	A	B	C	Cut-out
3W	53	56	56	47x47
2x3W	84	56	56	78x47
3x3W	116	56	56	109x47
4x3W	147	56	56	140x47
5x3W	178	56	56	171x47
10x3W	334	56	56	327x47

Model	Colour temp.	Lumens	CRI	PF	Beam angle
NMTLED5201* 3W	3000K/3500K/4000K	160 lm	>90	>0.45	12°/30°/50°
NMTLED5202*2X3W	3000K/3500K/4000K	350 lm	>90	>0.45	12°/30°/50°
NMTLED5203* 3X3W	3000K/3500K/4000K	530 lm	>90	>0.9	12°/30°/50°
NMTLED5204* 4X3W	3000K/3500K/4000K	720 lm	>90	>0.9	12°/30°/50°
NMTLED5205* 5X3W	3000K/3500K/4000K	970 lm	>90	>0.9	12°/30°/50°
NMTLED5210* 10X3W	3000K/3500K/4000K	1,950 lm	>90	>0.9	12°/30°/50°



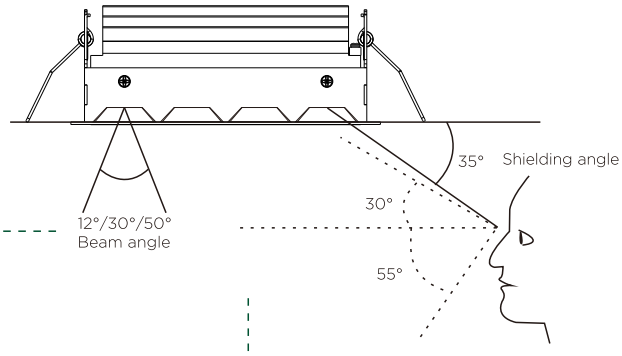
NMTLED5201A 3W 12°



NMTLED5202B 2X3W 12°

Structure and details

High colour rendering index
CRI >90, The high CRI makes this fitting very suitable for high-end retail applications where very accurate colour rendering is required.



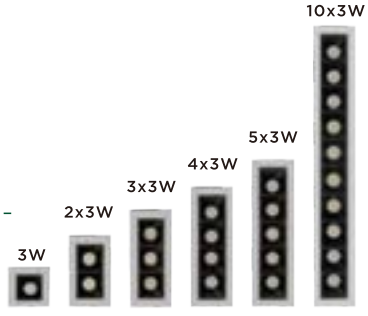
Low-glare characteristics
The NMTLED52 range offers a choice of beam angles, but all with excellent low-glare characteristics. Because the COB light source is deeply recessed inside the fitting body it is not easily visible, so whichever beam angle is chosen end-users benefit from glare-free lighting. This makes the fitting very suitable for a range of retail, hospitality and residential projects.

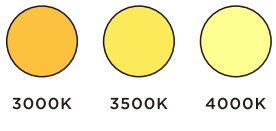
Viewing angles
When looking at an object in front of them a person's view is concentrated in the area from 55 degrees below the horizontal to 30 degrees above the horizontal. The NMTLED has a sheilding angle of 35 degrees, so the viewer is protected from glare.

Compact size
The visible area can be as little as 48mm wide, making this exceptionally slim for a fitting of this type.

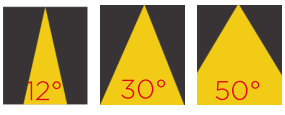
Easily joined together
Individual units can be installed end-to-end giving an almost seamless installation for a neater and more versatile effect.

Extruded aluminium heat sink
Each unit has an extruded aluminium heat sink. This provides each unit with its mechanical strength, so it is easier to install, and excellent heat dissipation properties so the COB LEDs remain cool and have a long service life.





Wide range of specifications
With three different body styles, six product lengths and three beam angles this range of products can be specified on a wide range of projects.



NMTLED585 series

High-powered modular multiple lights

NLED5853C / NLED5853D

NLED5851C / NLED5851D

NLED5852C / NLED5852D

APPLICATIONS

- Retail stores
- Shopping malls
- Hotels and restaurants

TECHNICAL DETAILS

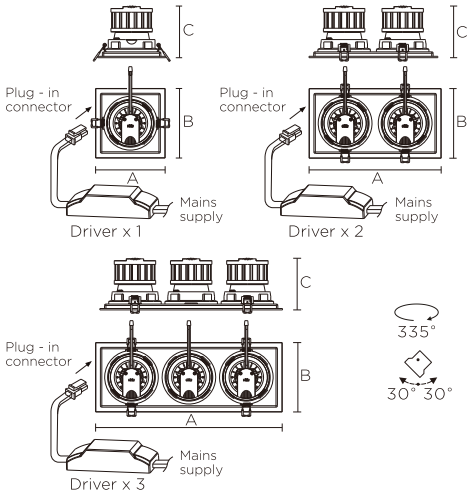
- COB LEDs
- Large diameter acrylic lens for precise beam angle and light control
- Choice of two wattages (24W or 35W) per module and 1, 2 or 3 modules per fitting
- Rated life: 30,000 hours

CONSTRUCTION

- Adjustable angle: horizontal 335°, vertical 30°
- LED module is easily removed and replaced if required for maintenance purposes
- 24W and 35W modules are both the same size, so fittings of different wattages can be mixed in the same installation and retain a uniform appearance
- Separate driver for each head included

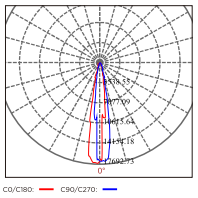
OPTIONS

- **Bezel colour:** Choices of semi white or black
- **Beam angle:** Choices of 15°, 24° or 36°
- **Emergency:** 1.5 hours or 3 hours emergency kit (EM001/002) available. Please refer to the driver section

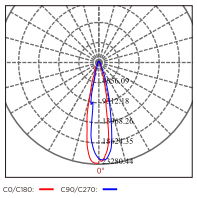


Watts	A	B	C	Cut-out
24W/35W	145	145	110	130x130
2x24W/2x35W	275	145	110	130x260
3x24W/3x35W	390	145	110	130x375

Model	Colour temp.	Lumens	CRI	PF	Beam angle
NMTLED5851C 24W	3000K/3500K/4000K/5700K	2140 lm	>80	>0.95	15°/24°/36°
NMTLED5852C 2x24W	3000K/3500K/4000K/5700K	4270 lm	>80	>0.95	15°/24°/36°
NMTLED5853C 3x24W	3000K/3500K/4000K/5700K	6320 lm	>80	>0.95	15°/24°/36°
NMTLED5851D 35W	3000K/3500K/4000K/5700K	2800 lm	>80	>0.95	15°/24°/36°
NMTLED5852D 2x35W	3000K/3500K/4000K/5700K	5300 lm	>80	>0.95	15°/24°/36°
NMTLED5853D 3x35W	3000K/3500K/4000K/5700K	8370 lm	>80	>0.95	15°/24°/36°



NMTLED5851C 24W 15°



NMTLED5851C 24W 24°

NMTLED585 series

Economical low-powered modular multiple lights

NMTLED5853A

NMTLED5851A

NMTLED5852A

APPLICATIONS

- Retail stores
- Shopping malls
- Hotels and restaurants

TECHNICAL DETAILS

- 9W COB LEDs
- Large diameter acrylic lens for precise beam angle and light control
- 9W per module and 1, 2 or 3 modules per fitting
- Rated life: 30,000 hours

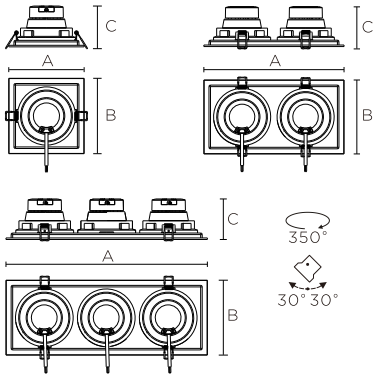
CONSTRUCTION

- Polycarbonate body
- Adjustable angle: horizontal 350°, vertical 30°
- Integrated driver included

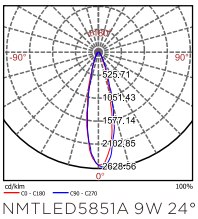
OPTIONS

- **Body colour:** Choice of black or semi-white
- **Beam angle:** Choice of 15°, 24° or 36°

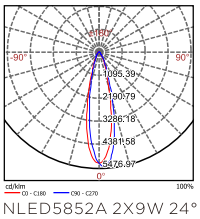
Model	Colour temp.	Lumens	CRI	PF	Beam angle
NMTLED5851A 9W	3000K/4000K/5700K	720 lm	>80	>0.75	15°/24°/36°
NMTLED5852A 2x9W	3000K/4000K/5700K	1,440 lm	>80	>0.75	15°/24°/36°
NMTLED5853A 3x9W	3000K/4000K/5700K	2,160 lm	>80	>0.75	15°/24°/36°



Watts	A	B	C	Cut-out
9W	145	145	83	130x130
2x9W	275	145	83	130x260
3x9W	390	145	83	130x375



NMTLED5851A 9W 24°

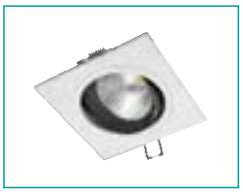


NLED5852A 2X9W 24°

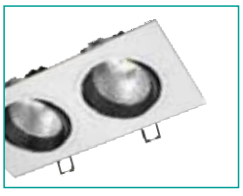
NLED54 series

Ultra-slim multiple lights

NLED543



NLED541



NLED542

APPLICATIONS

- Retail stores
- Clubs
- Fashion shops

TECHNICAL DETAILS

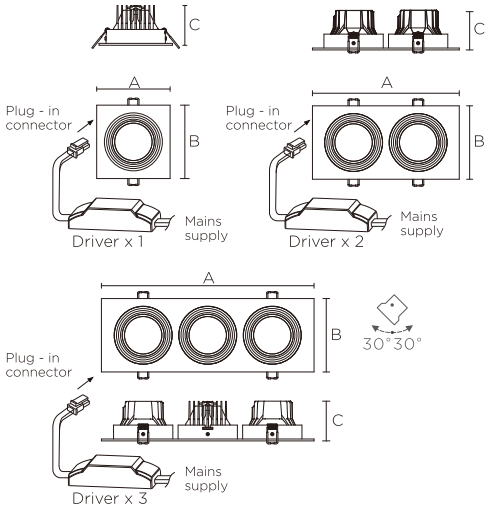
- COB LEDs
- Rated life: 30,000 hours

CONSTRUCTION

- Die-cast aluminium bezel with powder coated finish
- Anodized aluminium reflector
- Adjustable angle 30°
- One-head, two-head and three-head designs
- Separate driver for each head included

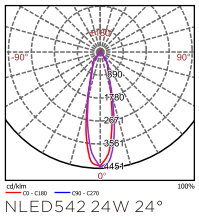
OPTIONS

- **Body Colour:** Choices of cream white or oxidized brushed sliver
- **Emergency:** 1.5 hours or 3 hours emergency kit (EM001/002) available. Please refer to the driver section

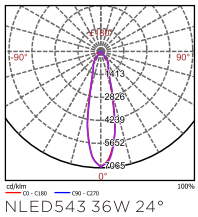


Watts	A	B	C	Cut-out
12W	116	116	63	100x100
2x12W	232	116	63	100x200
3x12W	336	116	63	100x300

Model	Colour temp.	Lumens	CRI	PF
NLED541 12W	3000K/4000K/6500K	650 lm	>80	>0.9
NLED542 2x12W	3000K/4000K/6500K	1,300 lm	>80	>0.9
NLED543 3x12W	3000K/4000K/6500K	1,950 lm	>80	>0.9



NLED542 24W 24°



NLED543 36W 24°

NLED55 series

Popular style multiple lights

All white

24° 220-240V IP20 30000h

APPLICATIONS

- Retail stores
- Showrooms
- Fashion shops

TECHNICAL DETAILS

- COB LEDs
- Rated life: 30,000 hours

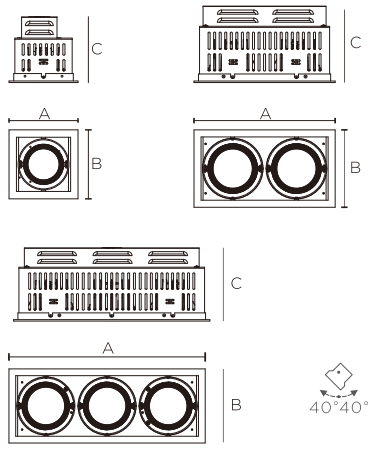
CONSTRUCTION

- Die-cast aluminium bezel
- Steel housing
- Powder coated finish
- Adjustable angle 40°
- Integrated driver

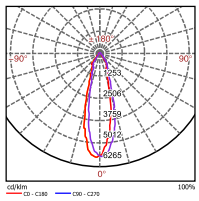
OPTIONS

- **Body Colour:** Choices of black or white

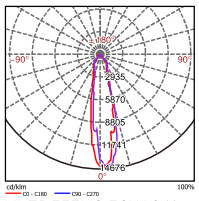
Model	Colour temp.	Lumens	CRI	PF
NLED551NS 12W	3000K/4000K/5700K	750 lm	>80	>0.9
NLED552NS 2x12W	3000K/4000K/5700K	1,500 lm	>80	>0.9
NLED553NS 3x12W	3000K/4000K/5700K	2,250 lm	>80	>0.9
NLED551N 20W	3000K/4000K/5700K	1,320 lm	>80	>0.9
NLED552N 2x20W	3000K/4000K/5700K	2,640 lm	>80	>0.9
NLED553N 3x20W	3000K/4000K/5700K	3,960 lm	>80	>0.9



Model	A	B	C	Cut-out
NLED551NS 12W	130	130	124	120x120
NLED551NS 2x12W	233	130	124	120x233
NLED551NS 3x12W	335	130	124	120x325
NLED551N 20W	153	153	152	144x144
NLED551N 2x20W	280	153	152	144x270
NLED551N 3x20W	406	153	152	144x397



NLED552NS 24W 24°

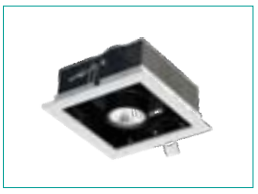


NLED553NS 36W 24°

NLED582 series

Multiple light with several wattages and sizes

NLED5823



NLED5821

NLED5823

APPLICATIONS

- Retails stores
- Showrooms
- Fashion shops

TECHNICAL DETAILS

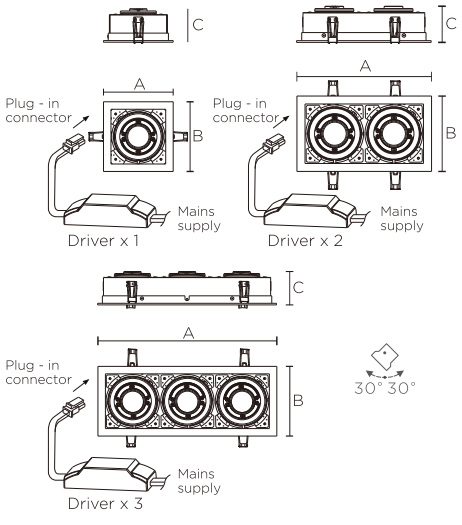
- COB LEDs
- Rated life: 30,000 hours

CONSTRUCTION

- Die-cast aluminium bezel
- Steel housing
- Powder coated finish
- Adjustable angle: horizontal 350°, vertical 30°
- One-head, two-head and three-head designs
- Separate driver for each head included

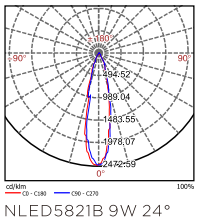
OPTIONS

- **Beam angle:** Choice of 15° or 24°

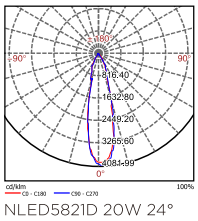


Watts	A	B	C	Cut-out
6W	131	131	63	120x120
2x6W	233	131	63	120x223
3x6W	335	131	63	120x325
9W/12W	131	131	78	121x121
2x9W/2x12W	233	131	78	120x223
3x9W/3x12W	235	131	78	120x325
20W	131	131	86	121x121
2x20W	233	131	86	120x223
3x20W	335	131	86	120x325

Model	Colour temp.	Lumens	CRI	PF	Beam angle
NLED5821A 6W	3000K/4000K/5700K	450 lm	>80	>0.9	15°/24°
NLED5822A 2x6W	3000K/4000K/5700K	900 lm	>80	>0.9	15°/24°
NLED5823A 3x6W	3000K/4000K/5700K	1,350 lm	>80	>0.9	15°/24°
NLED5821B 9W	3000K/4000K/5700K	500 lm	>80	>0.9	15°/24°
NLED5822B 2x9W	3000K/4000K/5700K	1,000 lm	>80	>0.9	15°/24°
NLED5823B 3x9W	3000K/4000K/5700K	1,500 lm	>80	>0.9	15°/24°
NLED5821C 12W	3000K/4000K/5700K	720 lm	>80	>0.9	15°/24°
NLED5822C 2x12W	3000K/4000K/5700K	1,440lm	>80	>0.9	15°/24°
NLED5823C 3x12W	3000K/4000K/5700K	2,160 lm	>80	>0.9	15°/24°
NLED5821D 20W	3000K/4000K/5700K	1,500 lm	>80	>0.9	15°/24°
NLED5822D 2x20W	3000K/4000K/5700K	3,000 lm	>80	>0.9	15°/24°
NLED5823D 3x20W	3000K/4000K/5700K	4,500 lm	>80	>0.9	15°/24°



NLED5821B 9W 24°



NLED5821D 20W 24°

NLED583 series

High power multiple down lights

NLED5833

NLED5831

NLED5832

CRI 90

15° 24° 220-240V IP20 30000h

APPLICATIONS

- Shopping malls
- Showrooms
- Fashion shops
- Lobbies

TECHNICAL DETAILS

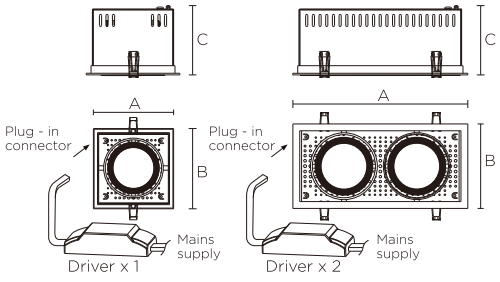
- COB LEDs
- Rated life: 30,000 hours

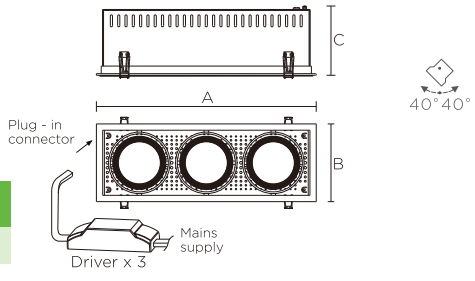
CONSTRUCTION

- Die-cast aluminium bezel
- Anodized aluminium reflector
- Steel housing
- Semi-white powder coated finish
- Adjustable angle 40°
- One-head, two-head and three-head designs
- Separate driver for each head included

OPTIONS

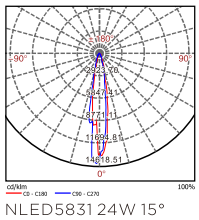
- Beam angle: Choice of 15°, or 24°



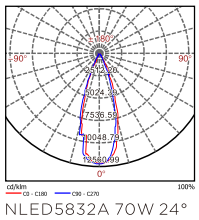


Model	Colour temp.	Lumens	CRI	PF	Beam angle
NLED5831 24W	3000K/3500K/4000K/5700K	2,100 lm	>90	>0.9	15°/24°
NLED5832 2x24W	3000K/3500K/4000K/5700K	3,500 lm	>90	>0.9	15°/24°
NLED5833 3x24W	3000K/3500K/4000K/5700K	5,000 lm	>90	>0.9	15°/24°
NLED5831A 35W	3000K/3500K/4000K/5700K	2,600 lm	>90	>0.9	15°/24°
NLED5832A 2x35W	3000K/3500K/4000K/5700K	5,100 lm	>90	>0.9	15°/24°
NLED5833A 3x35W	3000K/3500K/4000K/5700K	7,600 lm	>90	>0.9	15°/24°

Watts	A	B	C	Cut-out
24W/35W	173	173	128	160x160
2x24W/2x35W	358	173	128	345x160
3x24W/3x35W	489	173	128	475x160



NLED5831 24W 15°



NLED5832A 70W 24°

PANELS

98 NPNLED451*

100 NLED450*

101 NLED420*

102 NTFLED41*

105 BISMARCK

106 ORION

107 SEATTLE

108 NLILED495

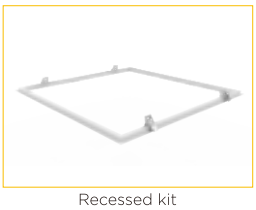
LED PANEL RANGE SUMMARY

We have one of the widest ranges of panels in the industry, so you can choose the fitting that is right for your project

	Edge-lit Panel			Back-lit Panel			Direct/Indirect	
	NLED451* V1 PAGE 98	NLED451* V2 PAGE 99	NLED450* PAGE 100	NLED420* PAGE 101	NTFLED41* PAGE 102	BISMARCK PAGE 105	ORION PAGE 106	SEATTLE PAGE 107
WATTAGE	**LUMEN OUTPUTS**							
18			1,800 lm	1,800 lm				
19		2,000 lm						
30								1,760 lm
33			3,500 lm	4,000 lm				
35						3,400 lm	3,800 lm	
36				3,600 lm	3,200 lm			
37	3,400 lm							
43		4,200 lm						
58		5,700 lm						
60								3,500 lm
68			6,800 lm					
FEATURES	**NLED451* V1**	**NLED451* V2**	**NLED450***	**NLED420***	**NTFLED41***	**BISMARCK**	**ORION**	**SEATTLE**
Lumen per Watt	92 lm/W	98 lm/W	100 lm/W	100-120 lm/W	89 lm/W	97 lm/W	109 lm/W	60 lm/W
Colour Temp	3000K 4000K 6500K	3000K 4000K 6500K	3000K 4000K 6500K	3000K 4000K 6500K	3500K 4000K 5000K	5000K	5000K	5000K
Dimensions	595x595mm 295x1195mm	295x595mm 595x595mm 295x1195mm 595x1195mm	295x595mm 595x595mm 295x1195mm 595x1195mm	295x595mm 595x595mm 295x1195mm	598x598mm 298x1198mm	597x597mm	595x595mm	295x595mm 295x1195mm
Mounting	Lay-in Surface Recessed Suspended	Lay-in Surface Recessed Suspended	Lay-in Surface Recessed Suspended	Lay-in Recessed	Lay-in Surface	Recessed	Lay-in	Lay-in
IP Rating (to the front face)	IP 20	IP 20	IP 20	IP 20	IP 20	IP 54	IP 20	IP 20
Input Voltage	110-240V	220-240V	110-240V	110-240V	220-240V	220-240V	220-240V	220-240V
Material & Housing	Aluminium	Aluminium	Aluminium	Steel	Steel	Steel	Steel	Steel
Optical Diffuser	PS	PP	PS	PS	PC	PC	PMMA	PC
Protection Class	Class II	Class II	Class II	Class II	Class I	Class II	Class I	Class I

NPNLED451 v1 series

New generation LED panels with a low flicker driver



Recessed kit

Surface kit

Suspension kit

APPLICATIONS

- General commercial use
- Offices
- Schools
- Hospitals

CONSTRUCTION

- Seamless aluminium frame
- White powder coated finish
- PS (polystyrene) diffuser
- Separate low-flicker driver included

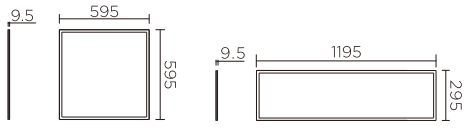
TECHNICAL DETAILS

- SMD LEDs
- Rated life: 30,000 hours

OPTIONS

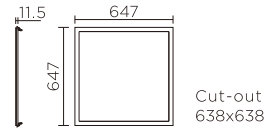
- **Available to be mounted in four different ways:**
  - **Lay-in:**
    On 15-24mm exposed T ceiling grids. Two sizes available (600x600 or 1200x300). No attachments required
  - **Pull-up/Recessed:**
    In plasterboard ceilings (cut-out needed). One size available only (600x600). Recessed kit (supplied with mounting springs) required Order this as a separate item
  - **Suspended:**
    Two sizes available (600x600 or 1200x300). Wire suspension kit required. Order this as a separate item
  - **Surface mounted:**
    Two sizes available (600x600 or 1200x300). Surface mounting kit required. Order this as a separate item
- **Emergency:** 1.5 hours or 3 hours emergency kit(EM001/002/003) available. Please refer to the driver section
- **Dimming:** 0-10V, mains dimming and digital dimming available.

Dimensions



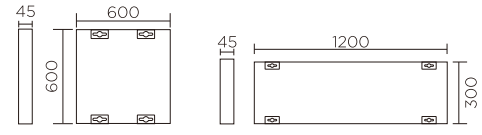
Dimensions (after assembly)

- **Pull-up/Recessed**

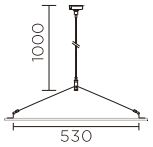


Cut-out
638x638

- **Surface**

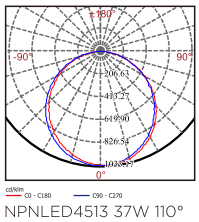


- **Suspended**



Model	Colour temp.	Lumens	CRI	PF
NPNLED4514/37W/66	3000K/4000K/6500K	3,400 lm	>80	>0.97
NPNLED4513/37W/123	3000K/4000K/6500K	3,400 lm	>80	>0.97

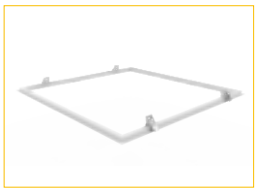
Accessories	Description
Suspension kit	NPNLED4513/NPNLED4514 Kit (2pcsx1m/set)
Surface kit	NPNLED4514 Kit (595x595mm)
	NPNLED4513 Kit (295x1195mm)
Recessedkit	NPNLED4514 Kit (595x595mm)



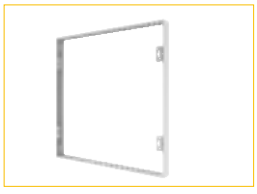
NPNLED4513 37W 110°

NPNLED451 v2 series

Upgraded high lumen output LED panel



Recessed kit



Surface kit

Suspension kit

APPLICATIONS

- General commercial use
- Offices
- Schools
- Hospitals

CONSTRUCTION

- Seamless aluminium frame
- White powder coated finish
- PP (Polypropylene) diffuser
- Separate low-flicker driver included

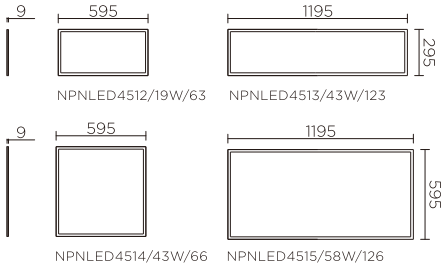
TECHNICAL DETAILS

- SMD LEDs
- Rated life: 30,000 hours

OPTIONS

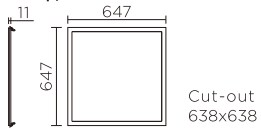
- **Available to be mounted in four different ways:**
  - **Lay-in:**
    On 15-24mm exposed T ceiling grids.
    No attachments required
  - **Pull-up/Recessed:**
    In plasterboard ceilings (cut-out needed). Recessed kit (supplied with mounting springs) required. Order this as a separate item
  - **Surface mounted:**
    Surface mounting kit required. Order this as a separate item
  - **Suspended:**
    Wire suspension kit required. Order this as a separate item

Dimensions

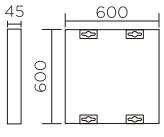


Dimensions (after assembly)

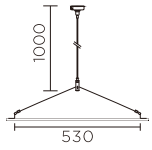
- **Pull-up/Recessed**



- **Surface mounted**

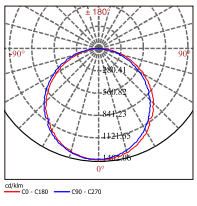


- **Suspended**

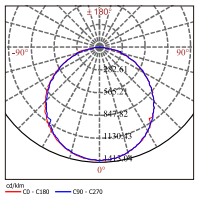


Model	Colour temp.	Lumens	CRI	PF
NPNLED4512/19W/63	3000K/4000K/6000K	2,000 lm	>80	>0.9
NPNLED4513/43W/123	3000K/4000K/6000K	4,200 lm	>80	>0.9
NPNLED4514/43W/66	3000K/4000K/6000K	4,200 lm	>80	>0.9
NPNLED4515/58W/126	3000K/4000K/6000K	5,700 lm	>80	>0.9

Accessories	Description
Suspension kit	NPNLED4514 Kit (2pcs*1m/set)
Surface kit	NPNLED4514 Kit (595x595mm)
Recessed kit	NPNLED4514 Kit (595x595mm)



NPNLED4514 43W 4000K

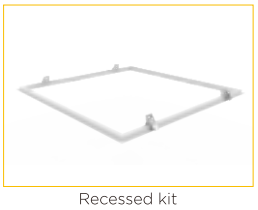


NPNLED4514 43W 6000K

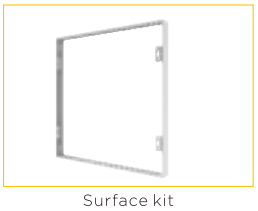
NLED450 series

Ultrathin LED panel

Suspension kit



Recessed kit



Surface kit

APPLICATIONS

- General commercial use in Offices, schools and hospitals

CONSTRUCTION

- Side-lit design with LEDs in aluminium frame
- PS (polystyrene) diffuser
- Powder coated surface treatment
- Separate low-flicker driver included
- For 15-24mm exposed T ceiling grids

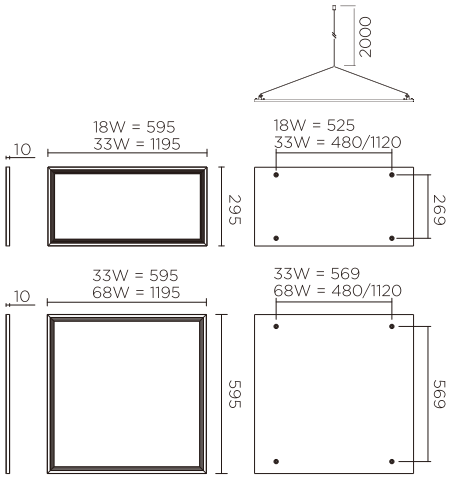
TECHNICAL DETAILS

- SMD LEDs
- Rated life: 30,000 hours

OPTIONS

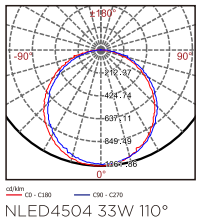
- **Available to be mounted in four different ways:**
  - Lay-in: On 15-24mm exposed T ceiling grids. Four sizes available (300x600, 600x600, 1200x300 or 1200x600). No attachments required
  - Pull-up/Recessed: In plasterboard ceilings (cut-out needed). One size available only (600x600). Recessed kit (supplied with mounting springs) requiredOrder this as a separate item
  - Suspended: Four sizes available (300x600, 600x600, 1200x300 or 1200x600). Wire suspension kit required. Order this as a separate item
  - Surface mounted: Two sizes available (600x600 or 1200x300). Surface mounting kit required. Order this as a separate item

- **Emergency:** 1.5 hours or 3 hours emergency kit(EM001/002/003) available. Please refer to the driver section
- **Dimming:** 0-10V, mains dimming and digital dimming available

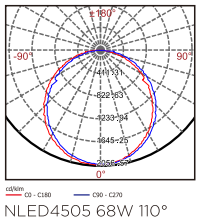


Model	Colour temp.	Lumens	CRI	PF
NLED4502/0306/18W	3000K/4000K/6500K	1,800 lm	>85	>0.97
NLED4503/0312/33W	3000K/4000K/6500K	3,500 lm	>85	>0.97
NLED4504/0606/33W	3000K/4000K/6500K	3,500 lm	>85	>0.97
NLED4505/0612/68W	3000K/4000K/6500K	6,800 lm	>85	>0.97

Accessories	Description
Suspension kit	Panel Wire NLED4502/3 (2x0.18m/pair)
	Panel Wire NLED4504/5 (2x0.5m/pair)
	Panel Wire NLED450 series (2x0.6m/pair)
Surface kit	NPNLED4514 Kit (595x595mm)
	NPNLED4513 Kit (295x1195mm)
Recessed kit	NPNLED4514 Kit (595x595mm)



NLED4504 33W 110°



NLED4505 68W 110°

NLED420 series

Recessed LED fittings with class-leading performance

Recessed clip kit

110° 110-240V IP20 DIMMING 0-10V DIMMING Digital DIMMING 30000h

APPLICATIONS

- Classrooms, offices and meeting rooms
- Hospitals and medical centers

CONSTRUCTION

- Robust steel body with white powder coated finish
- PS (polystyrene) diffuser
- Separate low-flicker driver included
- For 15-24mm exposed T ceiling grids and plasterboard ceiling

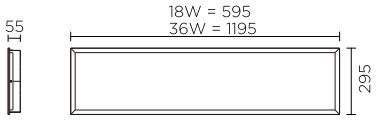
TECHNICAL DETAILS

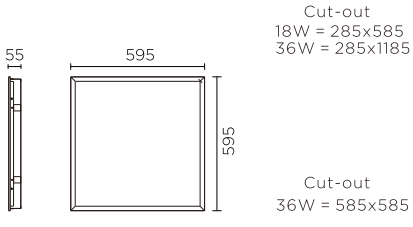
- SMD LEDs
- Rated life: 30,000 hours

OPTIONS

- **Available to be mounted in two different ways:**
  - Lay-in: On 15-24mm exposed T ceiling grids. Three sizes available (300x600, 600x600 or 1200x300). No attachments required
  - Pull-up/Recessed: In plasterboard ceilings (cut-out is needed). Three sizes available (300x600, 600x600 or 1200x300). Recessed clip kit required. Order this as a separate item
  - HO version: High lumen output is available

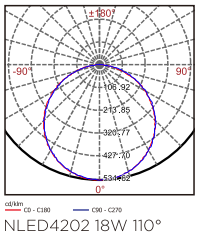
- **Emergency:** 1.5 hours or 3 hours emergency kit(EM001/002/003) available. Please refer to the driver section
- **Dimming:** 0-10V, mains dimming and digital dimming available



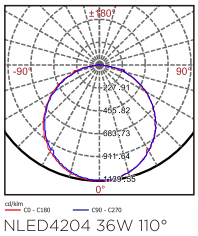


Model	Colour temp.	Lumens	CRI	PF
NLED4202/0306/18W	3000K/4000K/6500K	1,800 lm	>85	>0.97
NLED4203/0312/36W	3000K/4000K/6500K	3,600 lm	>85	>0.97
NLED4204/0606/36W	3000K/4000K/6500K	3,600 lm	>85	>0.97
NLED4204/33W/66/HO	6500K	4,000 lm	>85	>0.97

Accessories	Description
Recessed clip kit	Panel Clip NLED420 series (4pcs or 6pcs included)



NLED4202 18W 110°



NLED4204 36W 110°

NTFLED41 series

A range of troffer fittings for recessed or surface installation that deliver low UGR in most installations

Lay-in

Surface mounted

90° 220-240V IP20 30000h

APPLICATIONS

- Schools
- Hospitals
- Offices

TECHNICAL DETAILS

- SMD LEDs
- Rated life: 30,000 hours
- SDCM<2

CONSTRUCTION

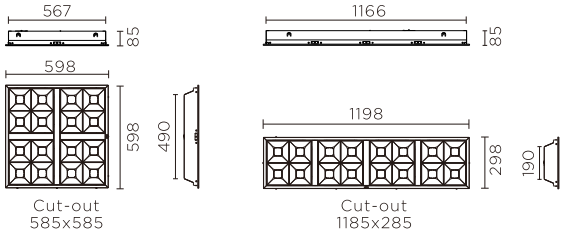
- Steel body with white powder coated finish
- Clusters of SMD LEDs covered with a PC diffuser, deep recessed in steel reflector cells for low-glare performance
- Integral low-flicker driver included

OPTIONS

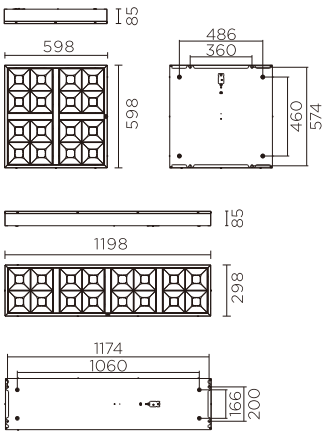
- Available to be mounted in two different ways:

- Lay-in: On 15-24mm exposed T ceiling grids. Two sizes available (598 x 598 or 1198 x 298). No attachments required
- Surface mounted: use suffix M. Two sizes available (598 x 598 or 1198 x 298). No attachments required. Folded mounting lugs on rear for surface mounting included

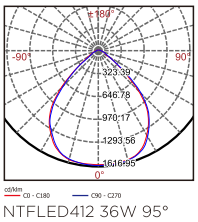
• **Lay-in**



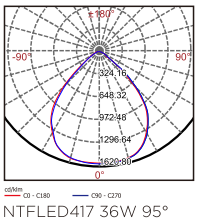
• **Surface mounted**



Model	Watts	Colour temp.	Lumens	CRI	PF
Lay-in					
NTFLED412/36W/66	36W	3500K/4000K/5000K	3,200 lm	>90	>0.95
NTFLED417/36W/123	36W	3500K/4000K/5000K	3,200 lm	>90	>0.95
Surface mounted					
NTFLED412M/36W/66	36W	3500K/4000K/5000K	3,200 lm	>90	>0.95
NTFLED417M/36W/123	36W	3500K/4000K/5000K	3,200 lm	>90	>0.95



NTFLED412 36W 95°



NTFLED417 36W 95°

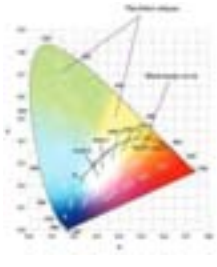
Low glare for maximum comfort

Flexible Installation
Flexible Installation (lay-in and surface mounted), meeting various installation requirements.

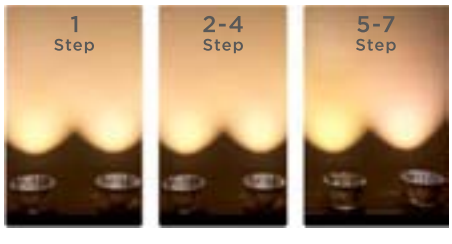
Low Flicker (Ripple <5% at 50/60HZ)

Deep Anti-glare Design (UGR<16)
A low UGR creates a comfortable learning environment (See opposite page for details of UGR).

Excellent Color Consistency (SDCM<2)
In LED lighting, SDCM (Standard Deviation Colour Matching) uses deviations relative to MacAdam ellipses to describe color precision of a light source. Each MacAdam ellipse can be divided into seven Steps, the smaller SDCM value, the more consistent color you will get.



SDCM Step	Color Deviation
1	Undetectable
2-4	No Significant Differences
5-7	Obvious Distinction



High CRI (RA>90)
CRI (Colour Rendering Index) is an objective measure of the ability of a light source to reveal the colours of objects faithfully in comparison to a perfect light source. CRI plays a vital role in product display. The higher the CRI, the more accurately will the colours of an object be presented.

The Unified Glare Ratio (UGR) can be calculated for every installation. The important points to note are that:

- Actually, the UGR is calculated for an installation. UGR is not a feature of a single luminaire, but the design of the luminaire does influence what the UGR will be after installation.
- However, the features of a luminaire that help it to deliver low UGR values where it is installed also have drawbacks, and these can include reduced uniformity and increased shadowing along the tops of walls.
- Generally, the lower the UGR the better. International standards such as EN12464 recommend maximum UGR values for specific applications and the degree of discomfort glare as below:

MAXIMUM RECOMMENDED UGR FOR DIFFERENT APPLICATIONS

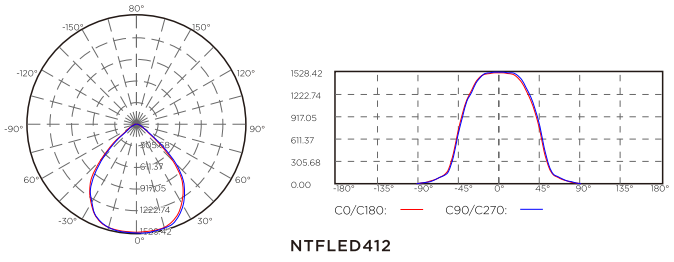
Applications	Working Area	Maximum allowed UGR	Discomfort Glare Criterion
Hospital	Operation Room	10	Imperceptible
	Ward room	13	Just perceptible
Office	Drawing office, Meeting room	16	Slight but negligible
	General office, Exhibition room	19	Just acceptable
School	Class room, Laboratory	16	Slight but negligible
	Library, Common room	19	Just acceptable
Commercial	Supermarket, Restaurant	22	Unacceptable
Public	Lobby, Corridor	25	Strong, uncomfortable
Industrial	Ultra precise processing	19	Just acceptable
	Precise processing	22	Unacceptable
	Normal processing	25	Strong, uncomfortable
	Group assembly	28	Too strong, unbearable

The NTFLED41* has been designed with a number of features to ensure that, compared with other fittings that might be used in the same application (such as flat LED panel NLED4504), the NTFLED41 will result in a lower UGR in almost any situation.

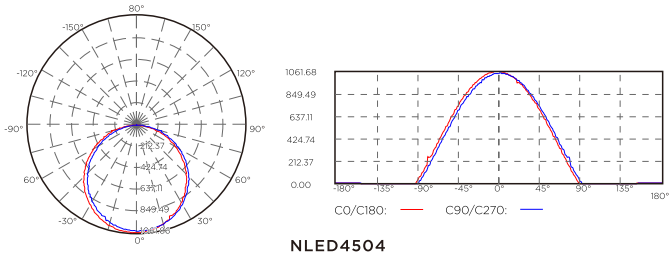
- The LEDs are mounted behind an opal diffuser.
- Each cluster of LEDs is mounted in a deeply recessed louvre.
- The sides of the louvre are coated in a highly reflective but non-specular coating.

Together, these features ensure the exceptionally low-glare performance of the NTFLED41* and can assist lighting designers achieve low UGR values (typically <19) in a wide range of installations.

Polar Curve Comparison of the NTFLED412 and NLED4504



NTFLED412



NLED4504

NTFLED412 (UGR<16):
The light is directed downwards. The risk of glare is greatly reduced, but less light is projected onto the walls, so a wall-wash fitting might be recommended. Careful attention also needs to be given to the luminaire spacing to avoid a loss of uniformity at the working plane or at floor level.

NLED4504 (UGR<19):
Compared with the NTFLED 412, more light is directed sideways. This increases the risk of glare, but there is a benefit that more light is projected onto the walls which is generally considered to give a pleasing effect. High levels of uniformity are also easier to achieve with a light distribution like this.

BISMARCK

IP54 rated recessed modular LED fitting

Supplied complete with side-arm support brackets

APPLICATIONS

- Health centres and hospitals
- Food preparation areas
- Laboratories and clean rooms

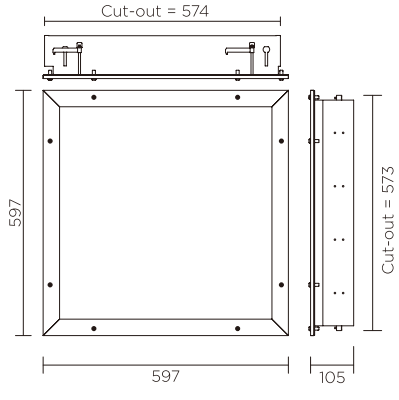
CONSTRUCTION

- Robust steel body
- White semi-gloss powder coated finish
- IP54 rated to the front of the fitting
- For 15-24mm exposed T, plasterboard and some concealed grid ceilings

TECHNICAL DETAILS

- SMD LEDs
- Rated life: 50,000 hours
- Leading brand ENEC driver

Model	Colour temp.	Lumens	CRI	PF
NBI3400/LED/850/35W IP54	5000K	3,400 lm	>80	>0.95



ORION

Recessed modular LED fitting, direct/indirect with diffuser

110° 220-240V IP20 50000h

APPLICATIONS

- Classrooms
- Offices
- Meeting rooms

CONSTRUCTION

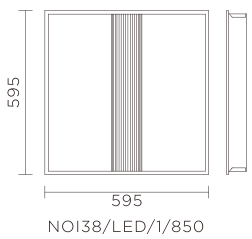
- Robust steel body
- Matt white powder coated finish
- Opal acrylic diffuser(s)
- Easy access terminal block on rear
- For 15-24mm exposed T ceiling

TECHNICAL DETAILS

- SMD LEDs
- Single diffuser version
  - 35W, 3,800 lm
- Twin diffuser version
  - 35W, 3,800 lm
- Rated life: 50,000 hours
- Leading brand ENEC driver

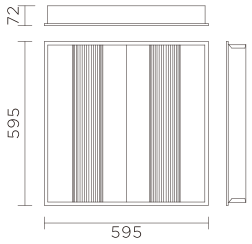
Model	Watts	Colour temp.	Lumens	CRI	PF
NOI38/LED/1/850	35W	5000K	3,800 lm	>85	>0.95
NOI38/LED/2/850	35W	5000K	3,800 lm	>85	>0.95

Single diffuser version



NOI38/LED/1/850

Twin diffuser version



NOI38/LED/2/850

SEATTLE

Recessed asymmetric wallwash fittings

220-240V IP20 50000h

APPLICATIONS

- Retails
- Class rooms

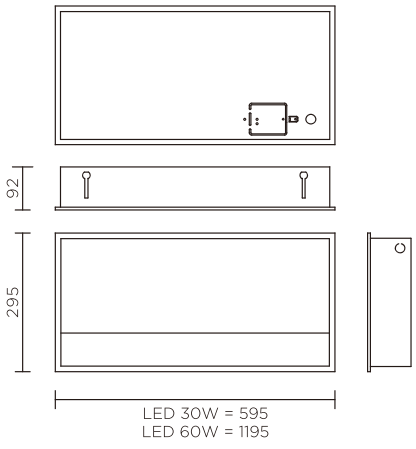
CONSTRUCTION

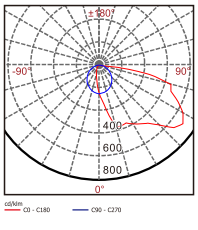
- Robust steel body
- White semi-gloss powder coated finish
- Hinged terminal access on rear for easy installation
- For 15-24mm exposed T ceiling grids
- Semi-specular asymmetric reflector

TECHNICAL DETAILS

- SMD LEDs
- Rated life: 50,000 hours
- Leading brand ENEC driver

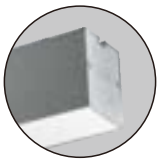
Model	Colour temp.	Lumens	CRI	PF
NSE30/LED/850/0.6 30W	5000K	1,760 lm	>80	>0.95
NSE60/LED/850/1.2 60W	5000K	3,500 lm	>80	>0.95





NLILED495

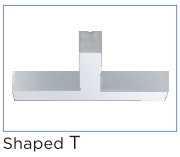
A range of very adaptable linear fittings with some advanced features



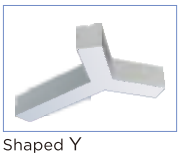
NLILED495AM1200

NLILED495A1200

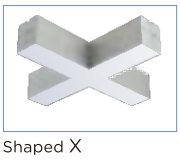
Shaped L



Shaped T



Shaped Y



Shaped X

APPLICATIONS

- Offices and corridors
- Shops and shopping malls

OPTIONS

- **Width:** 30mm, 60mm & 80mm available
- **Suspended or recessed installation:** For suspended installation, use suffix M
- **Straight sections or shaped modules:**
  - **Straight sections:** one length (1200mm)
  - **Shaped modules:** Four shapes (L, T, Y, X)
- See drawings for dimensions

CONSTRUCTION

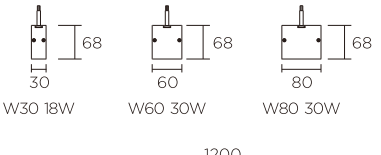
- Extruded aluminium housing with anodised finish
- Matt silver-grey
- Opal PC diffuser
- Constant current driver included in each module, no through-wiring required
- **Suspended variants** supplied complete with 1.0m long wire
- **Recessed variants** supplied complete with mounting clips

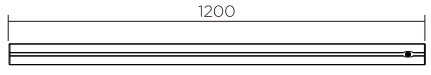
TECHNICAL DETAILS

- SMD LEDs
- Rated life: 25,000 hours

Model	Colour temp.	Lumens	CRI	PF
Suspended				
NLILED495AM1200 W30 18W	3000K/4000K/5700K	1,224 lm	>80	>0.95
NLILED495AM1200 W60 30W	3000K/4000K/5700K	2,250 lm	>80	>0.95
NLILED495AM1200 W80 30W	3000K/4000K/5700K	2,400 lm	>80	>0.95
Recessed				
NLILED495A1200 W30 18W	3000K/4000K/5700K	1,224 lm	>80	>0.95
NLILED495A1200 W60 30W	3000K/4000K/5700K	2,250 lm	>80	>0.95
NLILED495A1200 W80 30W	3000K/4000K/5700K	2,400 lm	>80	>0.95
Shaped modules				
Suspended				
NLILED495LM/TM/YM/XM W30 9W	3000K/4000K/5700K	612 lm	>80	>0.8
NLILED495LM/TM/YM/XM W60 15W	3000K/4000K/5700K	1,125 lm	>80	>0.85
NLILED495LM/TM/YM/XM W80 15W	3000K/4000K/5700K	1,200 lm	>80	>0.85
Recessed				
NLILED495L/T/Y/X W30 9W	3000K/4000K/5700K	612 lm	>80	>0.8
NLILED495L/T/Y/X W60 15W	3000K/4000K/5700K	1,125 lm	>80	>0.85
NLILED495L/T/Y/X W80 15W	3000K/4000K/5700K	1,200 lm	>80	>0.85

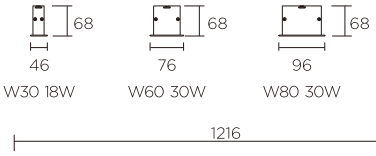
• **Suspended**

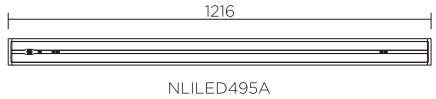




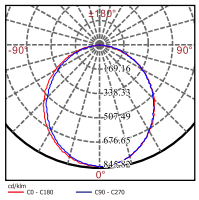
NLILED495AM

• **Recessed**

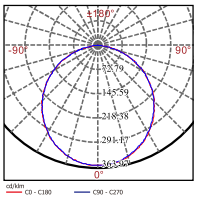




NLILED495A



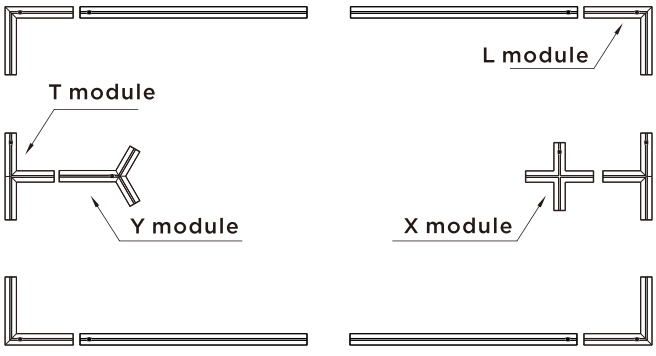
NLILED495A 30W 120°



NLILED495L 15W 120°

Structure and details

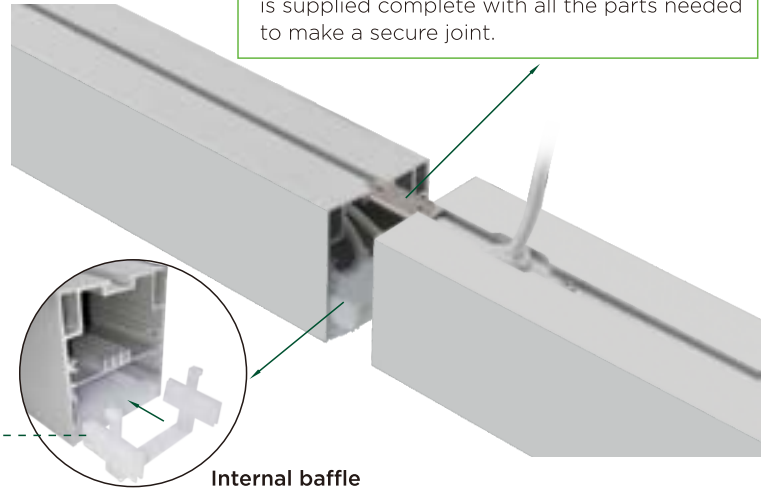
Light Uniformity
Shadows and dark spots at the joint between sections are a problem with some rival products, but with the NLILED495 there are no dark spots at all – just a continuous line of uniform light.



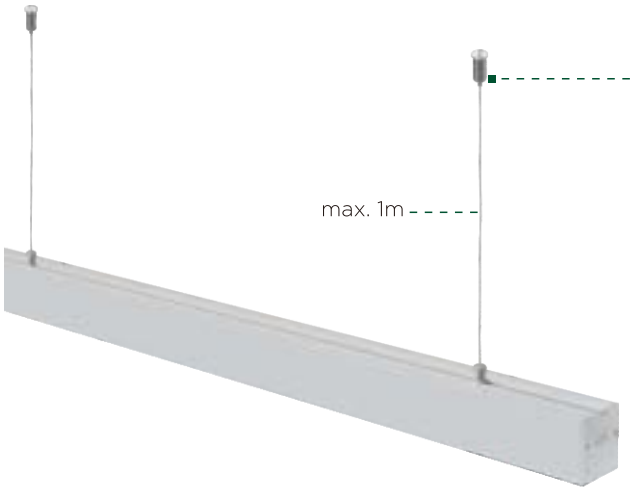
Design flexibility
With the simple construction and choice of modules, NLILED495 can be assembled on-site in many different ways to create a wide range of shapes and effects as required.

Simple connection
Each straight section and shaped module is supplied complete with all the parts needed to make a secure joint.

No light leakage
Light bleed is a problem on similar rival fittings, but on NVC NLILED495 this problem is eliminated with an internal baffle overlapping the joints between sections.



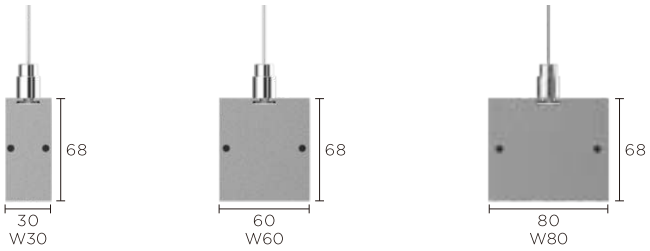
Mounting options

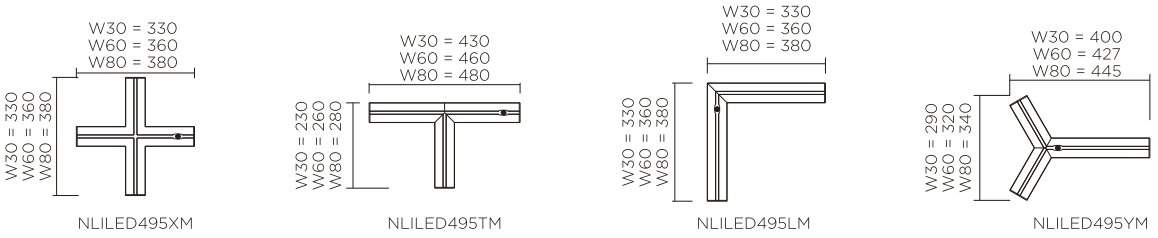


Suspended installation
Suitable for offices and other spaces with high ceilings. A wire suspension kit (max length 1.0m) is supplied with each module.

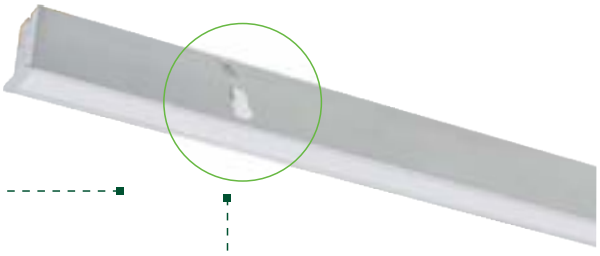
Suspended

Dimensions





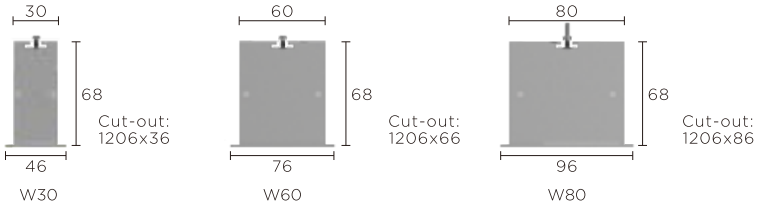
Recessed installation
Suitable for installation in plaster board ceilings. Each module is supplied complete with recessed mounting clips.

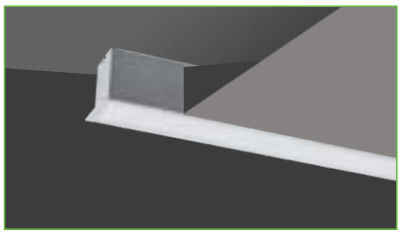


Mounting clip

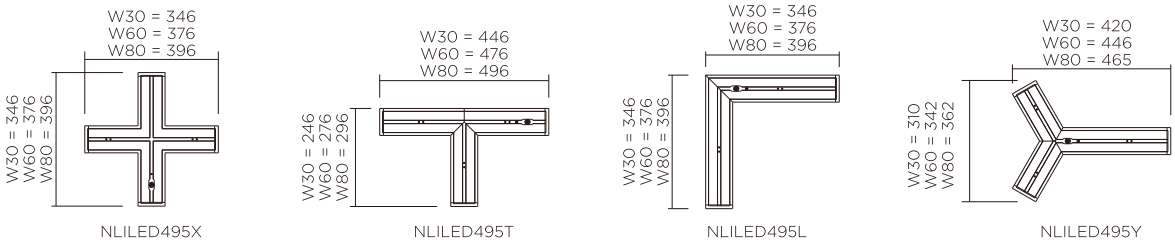
Recessed

Dimensions





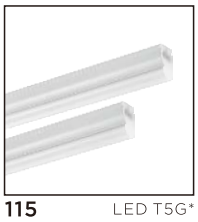
Recessed installation effect



Notes: For cutout of variants as above, please contact local distributors for details.

BATTENS

114 NBTLED T5E


115 LED T5G*

116 NBTLED T5P

117 NLED4810*

117 NLED492G

120 PHOENIX

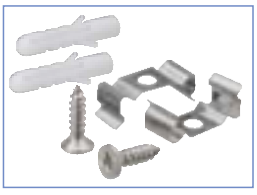
LED BATTENS for every application

We have a complete range of battens covering most working areas like residential, commercial, cove lighting, grocery shelves lighting and general area lighting

	T5E PAGE 82	T5G-II PAGE 83	T5GH PAGE 84	T5P PAGE 83	NLED4810A PAGE 85	NLED4810E PAGE 85	NLED492G PAGE 86	PHOENIX PAGE 86
WATTAGE	LUMEN OUTPUTS							
4	380 lm	280 lm	400 lm	400 lm				
7	665 lm	550 lm	700 lm	700 lm				
9					940 lm	850 lm		
10		800 lm	1,000 lm	1,000 lm				
11	1,045 lm							
14	1,330 lm	1,050 lm	1,400 lm	1,400 lm				
18			2,000 lm		1,840 lm	1,700 lm	1,200 lm	
30								3,600 lm
36							2,400 lm	
40								4,800 lm
50								6,000 lm
55								6,600 lm
65								7,800 lm
75								9,000 lm
85								
FEATURES	T5E	T5G-II	T5GH	T5P	NLED4810A	NLED4810E	NLED492G	PHOENIX
Lumen per Watt	95 lm/W	70-80 lm/W	100-110 lm/W	100 lm/W	104 lm/W	95 lm/W	67 lm/W	120 lm/W
Colour Temp	3000K 4000K 6500K	3000K 4000K 6500K	3000K 4000K 6500K	3000K 4000K 6500K	2700K 3000K 4000K 6500K	3000K 4000K 6500K	3000K 4000K 6500K	5000K
Input Voltage	220-240V	110-240V	110-240V	220-240V	220-240V	220-240V	220-240V	220-240V
Wiring	Double-ended input	Double-ended input	Double-ended input	Double-ended input	Any input	Double-ended input	Single-ended	Single-ended
Material & Housing	Steel	Aluminium	Aluminium	Plastic	Steel	Steel	Steel	Steel
Optical Diffuser	Glass	PC	PC	PC	T8 Glass tube	T8 Glass tube	PC	PC
Lamp Replacable	NO	NO	NO	NO	Yes	Yes	NO	NO
Protection Class	Class I	Class I	Class I	Class II	Class II	Class II	Class I	Class I
Linkable	Yes	Yes	Yes	Yes	NO	NO	NO	NO

NBTLED T5E

Glass battens



APPLICATIONS

- Residential cove lighting
- Small retail stores
- Advertisement lighting

NOTES

- Maximum connection
  •8pcs for all wattages

CONSTRUCTION

- SPCC (steel plate cold common) housing by bending and forming processes
- Glass tube with inner nano optical powder coating
- Built-in LED driver included
- Linkable
- Plugs, middle connectors, end caps and installation accessories included

TECHNICAL DETAILS

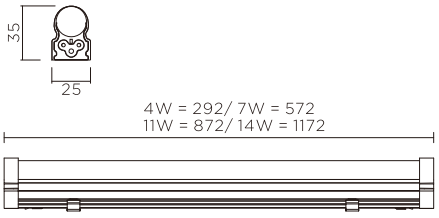
- SMD LEDs
- Rated life: 25,000 hours

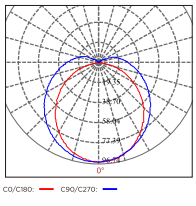
OPTIONS

- **Jumper cable:** Order this as a separate item

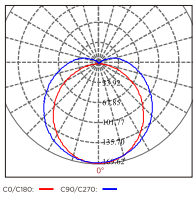
Model	Watts	Colour temp.	Lumens	CRI	PF
NBTLED T5E4/03	4W	3000K/4000K/6500K	380 lm	70	0.5
NBTLED T5E7/06	7W	3000K/4000K/6500K	665 lm	70	0.5
NBTLED T5E11/09	11W	3000K/4000K/6500K	1,045 lm	70	0.5
NBTLED T5E14/12	14W	3000K/4000K/6500K	1,330 lm	70	0.5

Accessories	Description
Jumper cable	NBTLED T5E Jumper Cable (3 wires 25CM long)





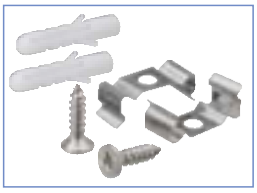
NBTLED T5E4/03 140°



NBTLED T5E7/06 140°

LED T5G series

Slim T5 LED battens for cove lighting



150° 100-240V IP20 30000h

APPLICATIONS

- General commerical use
- Cove lighting
- Residential lighting

TECHNICAL DETAILS

- SMD LEDs
- Standard version (T5G-II):
  - 4W/280 lm, 7W/550 lm, 10W/800 lm, 14W/1,050 lm
- High lumen version (T5GH):
  - 4W/400 lm, 7W/700 lm, 10W/1,000 lm, 14W/1,400 lm, 18W/2,000 lm
- Rated life: 30,000 hours

CONSTRUCTION

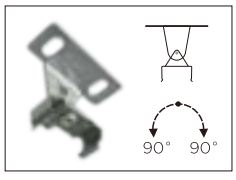
- Aluminium housing
- Opal polycarbonate diffuser
- Anodized surface treatment
- Built-in driver
- Linkable
- Plugs, middle connectors, end caps and installation accessories included

NOTES

- Maximum connection
  - 8pcs for 4W, 7W, 10W, and 14W, 5pcs for 18W

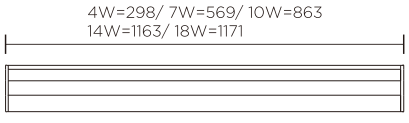
OPTIONS

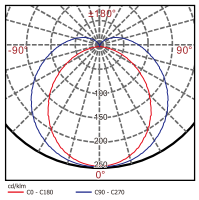
- **Version:**
  - Standard version (T5G-II)
  - High output version (T5GH)
- **Jumper cable:** Order this as a separate item
- **Adjustable bracket:** Order this as a separate item



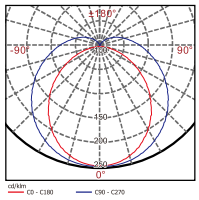
Model	Colour temp.	Lumens	CRI	PF
Standard version				
LED T5G-II 4W	3000K/4000K/6500K	280 lm	>75	>0.5
LED T5G-II 7W	3000K/4000K/6500K	550 lm	>75	>0.5
LED T5G-II 10W	3000K/4000K/6500K	800 lm	>75	>0.5
LED T5G-II 14W	3000K/4000K/6500K	1,050 lm	>75	>0.5
High output version				
LED T5GH 4W	3000K/4000K/6500K	400 lm	>75	>0.5
LED T5GH 7W	3000K/4000K/6500K	700 lm	>75	>0.5
LED T5GH 10W	3000K/4000K/6500K	1,000 lm	>75	>0.5
LED T5GH 14W	3000K/4000K/6500K	1,400 lm	>75	>0.5
LED T5GH 18W	3000K/4000K/6500K	2,000 lm	>75	>0.5

Accessories	Description
Jumper cable	LED T5G Jumper Cable (3 wires 33CM long)
Adjustable bracket	LED T5G Adjustable Bracket (2 pcs/set)





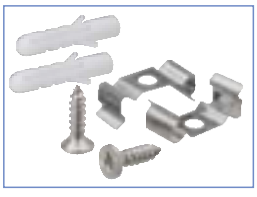
LED T5G-II 10W 150°



LED T5G-II 14W 150°

NBTLED T5P

Plastic battens



APPLICATIONS

- General commercial lighting
- Stores
- Cove lighting

TECHNICAL DETAILS

- SMD LEDs
- Rated life: 30,000 hours

CONSTRUCTION

- Plastic housing
- Opal polycarbonate diffuser
- Built-in LED driver included
- Linkable
- Plugs, middle connectors, end caps and installation accessories included

NOTES

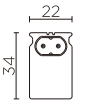
- Maximum connection
  •10pcs for all wattages

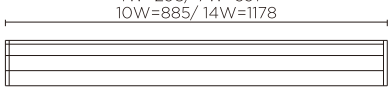
OPTIONS

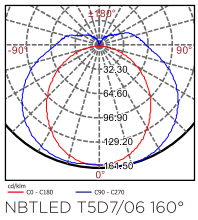
- Built-in switch version available, use suffix S
- **Jumper cable:** Order this as a separate item

Model	Watts	Colour temp.	Lumens	CRI	PF
Standard version					
NBTLED T5P4/03	4W	3000K/4000K/6500K	400 lm	>70	>0.5
NBTLED T5P7/06	7W	3000K/4000K/6500K	700 lm	>70	>0.5
NBTLED T5P10/09	10W	3000K/4000K/6500K	1,000 lm	>70	>0.5
NBTLED T5P14/12	14W	3000K/4000K/6500K	1,400 lm	>70	>0.5
Switch version					
NBTLED T5PS4/03	4W	3000K/4000K/6500K	400 lm	>70	>0.5
NBTLED T5PS7/06	7W	3000K/4000K/6500K	700 lm	>70	>0.5
NBTLED T5PS10/09	10W	3000K/4000K/6500K	1,000 lm	>70	>0.5
NBTLED T5PS14/12	14W	3000K/4000K/6500K	1,400 lm	>70	>0.5

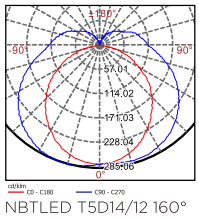
Accessories	Description
Jumper cable	NBTLED T5P Jumper Cable (2 wires 20cm long)







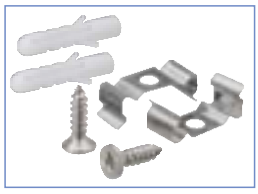
NBTLED T5D7/06 160°



NBTLED T5D14/12 160°

NLED4810 series

LED T8 battens with replaceable tube



150° 110-240V 220-240V IP20 25000h 30000h

APPLICATIONS

- Schools
- Workshops
- Stores

NOTES

- Maximum connection
  - 10pcs for 9W
  - 5pcs for 18W

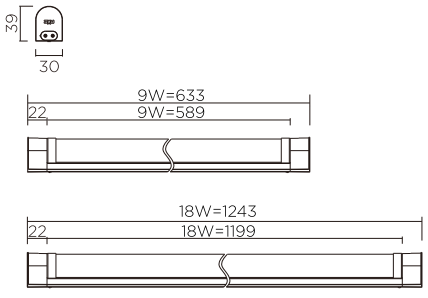
CONSTRUCTION

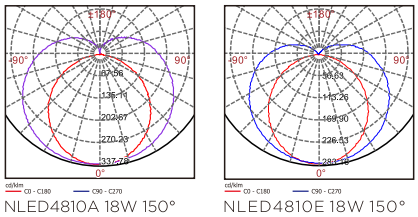
- Folded aluminium body with white painted finish
- Replaceable driver housed inside the body
- LEDs housed in T8 glass tube
- Plugs, middle connectors, end caps and installation accessories included

TECHNICAL DETAILS

- High output version (NLED4810A):
  - Rated life: 30,000 hours
  - 110-240V
  - 9W, 940 lm
  - 18W, 1,840 lm
- Economical version (NLED4810E):
  - Rated life: 25,000 hours
  - 220-240V
  - 9W, 850 lm
  - 18W, 1,700 lm

Model	Colour temp.	Lumens	Input	CRI	PF	Rated life
High output version						
NLED4810A 9W	2700K/3000K/ 4000K/6500K	940 lm	110-240V	>70	>0.9	30,000h
NLED4810A 18W	2700K/3000K/ 4000K/6500K	1,840 lm	110-240V	>70	>0.9	30,000h
Economical version						
NLED4810E 9W	3000K/4000K/ 6500K	850 lm	220-240V	>70	>0.5	25,000h
NLED4810E 18W	3000K/4000K/ 6500K	1,700 lm	220-240V	>70	>0.5	25,000h





NLED4810A 18W 150° NLED4810E 18W 150°

NLED492G

LED fittings for surface suspended installation

Mounting Bracket

APPLICATIONS

- Supermarkets
- Department stores
- Offices

TECHNICAL DETAILS

- SMD LEDs
- Rated life: 30,000 hours

CONSTRUCTION

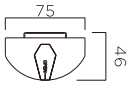
- Steel body
- Polycarbonate diffuser
- Powder coated surface treatment
- Built-in driver
- Supplied complete with mounting bracket and screws for surface installation

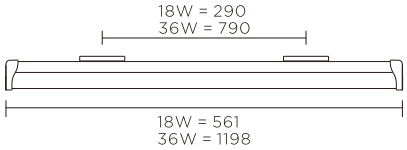
OPTIONS

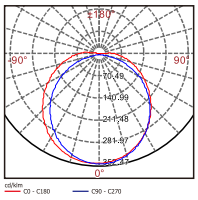
- A wire suspension kit (1.5m long) is available to be ordered as a separate item
- **Wire suspension kit**: Order this as a separate item

Model	Colour temp.	Lumens	CRI	PF
NLED492G06 18W	3000K/4000K/6500K	1,200 lm	>75	>0.9
NLED492G12 36W	3000K/4000K/6500K	2,400 lm	>75	>0.9

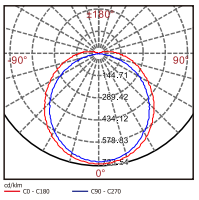
Accessories	Description
Wire suspension kit	NLED492G Suspension wire (1.5m, 2 pcs/set)







NLED492G06 18W 120°



NLED492G12 36W 120°

PHOENIX LED

LEDs behind a slim opal diffuser, mounted on a traditional batten body. Available in 4, 5' and 6', standard and high output - a direct replacement for traditional single and twin battens

220-240V CE IP20 50000h

CONSTRUCTION DETAIL.
LED's ON MCPCB WITH
OPAL DIFFUSER

APPLICATIONS

- Garages & workshops
- Store rooms
- Corridors & circulation areas
- Non-emergency versions rated from -25˚C to 25˚C

CONSTRUCTION

- Conventional batten width steel body
- White gloss powder coated finish
- Opal polycarbonate LED diffuser

TECHNICAL DETAILS

- LEDs on metal-core PCB
- CRI >80
- CCT 5000K
- Up to 120 luminaire lumens/circuit watt
- ENEC approved low-flicker driver

DIRECT BATTEN REPLACEMENT

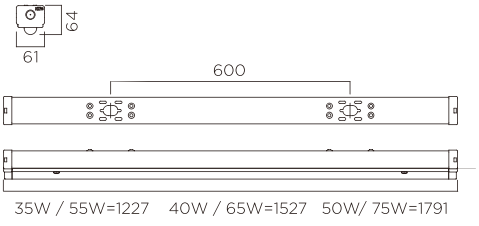
- Standard LED batten replaces single lamp batten 30W, 40W, 50W LED replaces 1X36W, 1X58W, 1X70W T8
- HO LED batten replaces twin lamp batten 55W, 65W, 75W LED replaces 2x36W, 2x58W, 2x70W T8

OPTIONS

- Standard version available in three sizes:
  - 4ft, 30W 3,600 lm, 120 lm/w
  - 5ft, 40W 4,800 lm, 120 lm/w
  - 6ft, 50W 6,000 lm, 120 lm/w

  High output version available in three sizes:
  - 4ft, 55W 6,600 lm, 120 lm/w
  - 5ft, 65W 7,800 lm, 120 lm/w
  - 6ft, 75W 9,000 lm, 120 lm/w
- **EMERGENCY** 1.5 hours or 3 hours emergency kit(EM001/002/003) available. Please refer to the driver section
- **DIMMING** DALI dimming available
- **ATTACHMENTS** Full range available. See opposite

Model	Watts	Colour temp.	Lumens	CRI	PF
Standard version					
NPH30/LED/850	30W	5000K	3,600 lm	>80	>0.95
NPH40/LED/850	40W	5000K	4,800 lm	>80	>0.95
NPH50/LED/850	50W	5000K	6,000 lm	>80	>0.95
High output version					
NPH55/LED/850	55W	5000K	6,600 lm	>80	>0.95
NPH65/LED/850	65W	5000K	7,800 lm	>80	>0.95
NPH75/LED/850	75W	5000K	9,000 lm	>80	>0.95

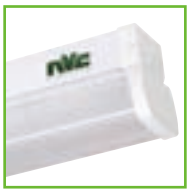


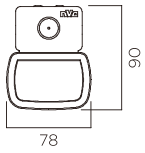
PHOENIX LED ATTACHMENTS

CONTROLLER

Made from polycarbonate, the controller is shatter proof and virtually indestructible. The smooth exterior gives an easily cleaned surface while the ribbed interior gives an attractive appearance and good glare control. Supplied complete with the necessary support clips.

ORDER CODE	DESCRIPTION
NPH/CNTR/LED/30	PHOENIX CONTROLLER LED 30/55W 4'
NPH/CNTR/LED/40	PHOENIX CONTROLLER LED 40/65W 5'
NPH/CNTR/LED/50	PHOENIX CONTROLLER LED 50/75W 6'
NPH/CNTR/CLIP/PK4	PHOENIX CONTROLLER LED SUPPORT CLIP (PACK OF 4)





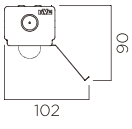
STEEL REFLECTOR

Made from steel with white gloss powder coated finish. Order as required to create a symmetric or an asymmetric distribution:

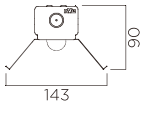
- When fitted singly, these will give an asymmetric light distribution.
- When fitted as a pair, these will give a symmetric distribution.

ORDER CODE	DESCRIPTION
NPH/REFL/LED/30/ST	PHOENIX REFLECTOR STEEL LED 30/55W 4' (1-SIDE)
NPH/REFL/LED/40/ST	PHOENIX REFLECTOR STEEL LED 40/65W 5' (1-SIDE)
NPH/REFL/LED/50/ST	PHOENIX REFLECTOR STEEL LED 50/75W 6' (1-SIDE)

ASYMMETRIC



SYMMETRIC

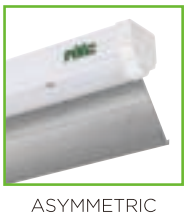


ALUMINIUM REFLECTOR

Made from aluminium with a polished (specular) finish. Ideal for warehouses with racking aisles and other applications where maximum efficiency is required. Order as required to create a symmetric or an asymmetric distribution:

- When fitted singly, these will give an asymmetric light distribution.
- When fitted as a pair, these will give a symmetric distribution.

ORDER CODE	DESCRIPTION
NPH/REFL/LED/30/AL	PHOENIX REFLECTOR ALU LED 30/55W 4' (1-SIDE)
NPH/REFL/LED/40/AL	PHOENIX REFLECTOR ALU LED 40/65W 5' (1-SIDE)
NPH/REFL/LED/50/AL	PHOENIX REFLECTOR ALU LED 50/75W 6' (1-SIDE)



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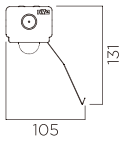

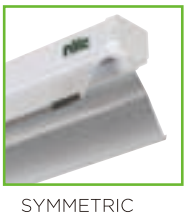

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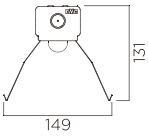


COMMON AREA LIGHTING

124 ADDISON

125 OAKLAND

125 LESZNO

127 NWLED1001

127 NWLED1002

128 NWLED1003

129 NWLED1004

130 NSPLED1001

LED AMENITY PRODUCT AVAILABILITY

	ADDISON PAGE 124	OAKLAND PAGE 125	LESZNO PAGE 125	NWLED1001 PAGE 127	NWLED1002 PAGE 127	NWLED1003 PAGE 128	NWLED1004 PAGE 129	NSPLED1001 PAGE 130
WATTAGE	**LUMEN OUTPUTS**							
1.5								90 lm
3						102 lm		
3.5								175 lm
4.5								115 lm
6				440 lm	440 lm	198 lm	149 lm	
7								270 lm
10		900 lm	900 lm					
12						390 lm		
18						590 lm		
20		1,800 lm	1,800 lm					
22	2,200 lm							
24								
27		2,500 lm	2,500 lm					
FEATURES	**ADDISON**	**OAKLAND**	**LESZNO**	**NWLED1001**	**NWLED1002**	**NWLED1003**	**NWLED1004**	**NSPLED1001**
IP Rating	IP 40	IP 20	IP 20	IP 20/54	IP 20/54	IP 20	IP 20	IP 20
Colour Temp	3000K/5000K	3000/4000/ 6000K	3000/4000/ 6000K	3000K	3000K	3000K	3000K	3000/4000
Material	Steel + PMMA	Aluminium + PC	Aluminium + PC	Aluminium	Aluminium	Aluminium	Aluminium	Aluminium
Angle	Fixed	Fixed	Fixed	Fixed	Fixed	Adjustable	Adjustable	Fixed
Colour	White+Chromic	White	White	Black/White	Black/White	Black/White	Black/White	White
Input Voltage	220-240V			110-240V				220-240V/ 220-240V

ADDISON

IP40 decorative circular LED fitting

Available with micro-wave sensor fitted

APPLICATIONS

- Corridors
- Stairwells
- Foyers

CONSTRUCTION

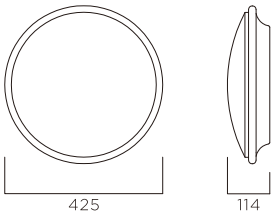
- Opal acrylic diffuser
- Built-in constant current driver included
- Circular steel base available with a white painted or chrome plated finish

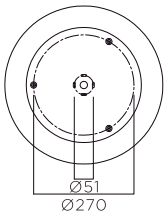
OPTIONS

- **Sensor:** Available with micro-wave sensor fitted internally
- **Colour:** Supplied as standard with white painted finish. For a chrome plated finish, use suffix CH
- **Dimming:** Corridor function as standard, available with dim-to-10% technology
- **Emergency:** 1.5 hours or 3 hours emergency kit (EM001/002) available. Please refer to the driver section

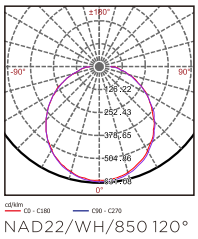
TECHNICAL DETAILS

- SMD LEDs
- Rated life: 35,000 hours





Model	Colour temp.	Lumens	CRI	PF
NAD22LED 22W	3000K/5000K	2,200 lm	>80	>0.96



NAD22/WH/850 120°

OAKLAND LESZNO

High lumen efficiency PC ceiling fitting

OAKLAND

LESZNO

120° 220-240V IP20 35000h

APPLICATIONS

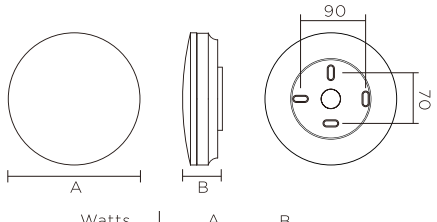
- Residences
- Corridors
- Balconies
- Hotels
- Exhibition halls
- Restaurants
- Storerooms

CONSTRUCTION

- Whole aluminium substrate
- Polycarbonate housing and diffuser
- Built-in high power factor driver included

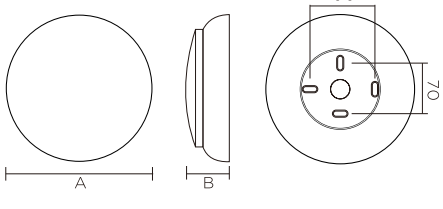
Options

- **Sensor:** Available with a voice-activated sensor fitted internally



Watts	A	B
10W	Ø240	65
17W	Ø290	70
27W	Ø330	70

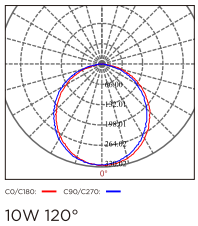
OAKLAND



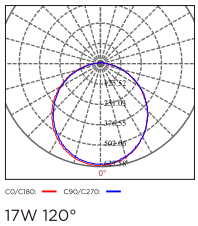
Watts	A	B
10W	Ø300	65
17W	Ø350	70
27W	Ø400	75

LESZNO

Model	Colour temp.	Lumens	CRI	PF
NOA 10W	3000K/4000K/6000K	900 lm	>80	>0.95
NOA 17W	3000K/4000K/6000K	1,800 lm	>80	>0.95
NOA 27W	3000K/4000K/6000K	2,500 lm	>80	>0.95
NLES 10W	3000K/4000K/6000K	900 lm	>80	>0.95
NLES 17W	3000K/4000K/6000K	1,800 lm	>80	>0.95
NLES 27W	3000K/4000K/6000K	2,500 lm	>80	>0.95



10W 120°



17W 120°

NWLED1001/1002

LED surface wall lights

NWLED1001

NWLED1002

110-240V CE IP20 IP54 20000h

APPLICATIONS

- Paths and gardens
- Building perimeters

TECHNICAL DETAILS

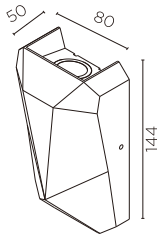
- COB LED
- Rated life: 20,000 hours

CONSTRUCTION

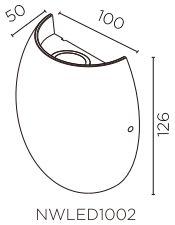
- Aluminium housing
- White or black powder coated finish
- Built-in driver included

OPTIONS

- **IP rate:** Choice of IP20 or IP54

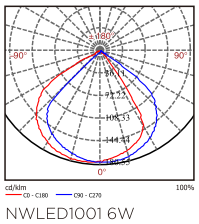


NWLED1001

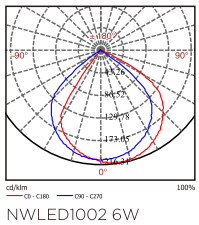


NWLED1002

Model	Colour temp.	Lumens	CRI	IP
NWLED1001 6W	3000K	440 lm	>80	20/54
NWLED1002 6W	3000K	440 lm	>80	20/54



NWLED1001 6W



NWLED1002 6W

NWLED1003

Adjustable LED surface wall lights

110-240V IP20 20000h

APPLICATIONS

- Public areas in hotels and offices etc.
- Restaurants

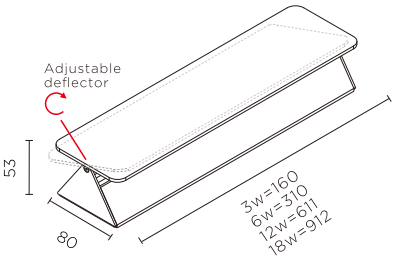
CONSTRUCTION

- Aluminium housing with white or black powder coated finish
- Built-in driver included
- Adjustable deflector: The deflector is adjustable to control glare and allow the light distribution to be altered to suit the installation

TECHNICAL DETAILS

- HP LEDs
- Rated life: 20,000 hours

Model	Colour temp.	Lumens	CRI
NWLED1003 3W	3000K	102 lm	>80
NWLED1003 6W	3000K	198 lm	>80
NWLED1003 12W	3000K	390 lm	>80
NWLED1003 18W	3000K	590 lm	>80



NWLED1004

Adjustable LED surface wall lights

110-240V

IP20

20000h

APPLICATIONS

- Home
- Restaurants
- Exhibitions

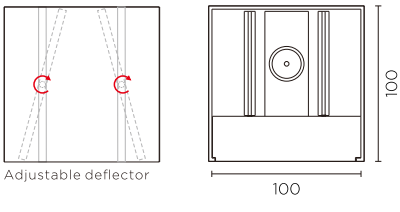
CONSTRUCTION

- Aluminium housing with white or black powder coated finish
- Double-ended construction giving up and down light
- Movable internal deflector allows the beam angle to be adjusted.
  - Narrow beam up, wide beam down
  - Wide beam up, narrow beam down
  - Medium beam up and down
- Built-in driver included

TECHNICAL DETAILS

- COB LEDs
- Rated life: 20,000 hours

Model	Colour temp.	Lumens	CRI
NWLED1004 4W	3000K	149 lm	>80



NSPLED100 Series

Indoor stairs lights

NSPLED1001

NSPLED1002

NSPLED1003

NSPLED1004

110-240V 220-240V CE IP20 30000h

APPLICATIONS

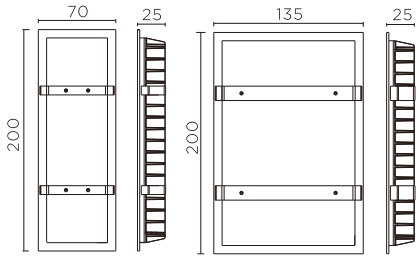
- Hotels
- Shopping malls
- Offices
- Residential areas
- Exhibition halls

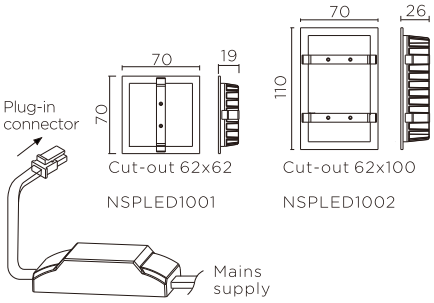
CONSTRUCTION

- Construction material: Aluminium alloy and glass
- Body colour: White
- Electroplated aluminium reflector
- Separate driver included

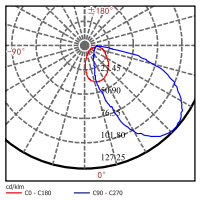
TECHNICAL DETAILS

- SMD LEDs
- Rated life: 30,000 hours
- Input: 110-240V for 1.5W, 3.5W and 4.5W, 220-240V for 7W

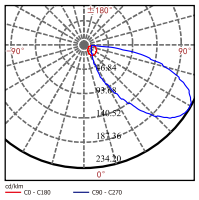




Model	Colour temp.	Lumens	CRI	PF
NSPLED1001 1.5W	3000K/4000K	90 lm	>80	>0.4
NSPLED1002 3.5W	3000K/4000K	175 lm	>80	>0.4
NSPLED1003 4.5W	3000K/4000K	115 lm	>80	>0.4
NSPLED1004 7W	3000K/4000K	270 lm	>80	>0.4



NSPLED1002 3.5W



NSPLED1004 7W

LED LAMPS

134 LED T8N*

135 LED T8E

136 LED T8G-II

137 LED MR16*

138 LED MR16I
LED GU10I

139 LED MR16L
LED GU10L

140 LED CLE/CLLE

141 LED A45

142 LED A60I/A65I

143 LED A60I-E/A70I-E

144 LED R63A/R80A

145 LED G4
LED G9-II

146 LED QR111D
LED QR111E

LED LAMPS RANGE SUMMARY

We have various types of LED lamps which can be used in most LED fittings, such as batten lights, spot lights or the residential lighting etc.

	T8N PAGE 134	T8E PAGE 135	T8G-II PAGE 136	MR16-B/C/H PAGE 137	MR16I GU10I PAGE 138	CLEC LLE PAGE 140	A45 PAGE 141	A60I A65I PAGE 142	A60I-E A70I-E PAGE 143	R63A R80A PAGE 144	G4 PAGE 145	QR111D QR111E PAGE 146
WATTAGE	**LUMEN OUTPUTS**											
1											110 lm	
2											200 lm	
3						300 lm	240 lm	240 lm			280 lm	
4					220 lm	360 lm	310 lm		400 lm			
5					270 lm	440 lm	370 lm	400 lm	500 lm			
6					330 lm	580 lm			600 lm			
7									700 lm			
8									800 lm			
9	800 lm	900 lm	1000 lm						900 lm	750 lm		
10									1000 lm			
11									1100 lm			
12									1200 lm	950 lm		850 lm
14									1400 lm			
15												950 lm
18	1600 lm	1800 lm	1800 lm	2000 lm								
20												1300 lm
FEATURES	**T8N**	**T8E**	**T8G-II**	**MR16-B/C/H**	**MR16I GU10I**	**CLEC LLE**	**A45**	**A60I A65I**	**A60I-E A70I-E**	**R63A R80A**	**G4**	**QR111D QR111E**
Lumem per Watt	90 lm/W	100 lm/W	110 lm/W	55 lm/W	70 lm/W	80 lm/W	80 lm/W	100 lm/W	100 lm/W	80 lm/W	100 lm/W	70 lm/W
Colour Temp	3000K 4000K 6500K	2700K 3000K 4000K 6500K	2700K 3000K 4000K 6500K	2700K 3000K 4000K 6500K	2700K 3000K 4000K 6500K	2700K 3000K 4000K 6500K	2700K 3000K 4000K 6500K	2700K 3000K 4000K 6500K	3000K 4000K 6500K	3000K 4000K 6500K	2700K 3000K 6000K	3000K 4000K 6000K
Input Voltage	220-240V	220-240V	110-240V	DC/AC12V	DC/AC12V 110-240V	DC/AC12V 110-240V	110-240V	110-240V 220-240V	110-240V 220-240V	220-240V	DC/AC12V 220-240V	DC/AC12V 220-240V
Wiring	Double-ended input	all-ended input	all-ended input									
Material	Glass	Glass	Polycar-bonate	Aluminium	Polycar-bonate coated aluminium	Polycar-bonate coated aluminium	Plastic	Polycar-bonate coated aluminium	Polycar-bonate coated aluminium	Polycar-bonate coated aluminium	Polycar-bonate	Aluminium
Optical Diffuser	Glass	Glass	Glass	PC	PC	PC	PC	PC	PC	PC	Glass	PC

LED T8N series

Economical LED tubes, suitable for replacing conventional T8 fluorescent lamps

180° 220-240V IP20 20000h Non Dimmable

APPLICATIONS

- Economical LED tubes, suitable for replacing conventional T8 fluorescent lamps in open fixtures in offices, schools, hospitals and many commercial buildings

TECHNICAL DETAILS

- SMD LEDs
- Rated life: 20,000 hours

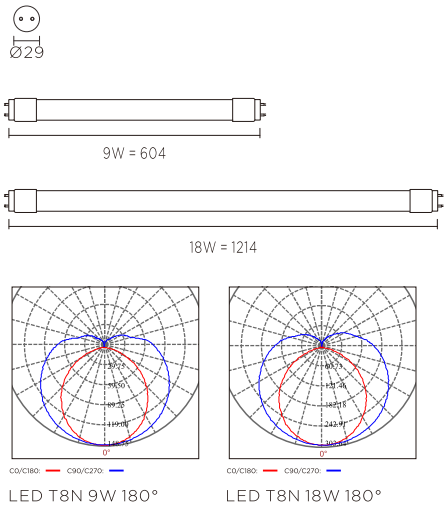
CONSTRUCTION

- Glass tube with high light transmittance
- Polycarbonate light guide plate inside
- Constant current driver inside with smart IC
- Contact pins made of high-quality bronze to ensure a good electrical connection
- Double packed for protection against vibration and impact in transit

Options

- Not suitable for use in sealed fittings

Model	Colour temp.	Lumens	CRI	PF
LED T8N 9W	3000K/4500K/6500K	800 lm	>70	>0.5
LED T8N 18W	3000K/4500K/6500K	1,600 lm	>70	>0.5



LED T8N 9W 180°

LED T8N 18W 180°

LED T8E

Standard LED tubes for general lighting

APPLICATIONS

- Ideal solution for replacement of traditional fluorescent tubes in schools, offices, supermarkets and rail stations

TECHNICAL DETAILS

- SMD 2835
- Rated life: 30,000 hours

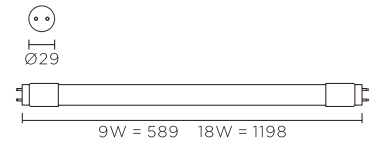
CONSTRUCTION

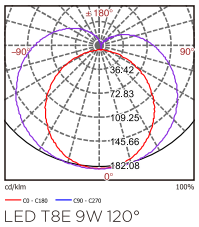
- Glass body with plastic external light diffusion film
- Built-in constant current LED driver included
- Safe to install. Input is via any two pins and the other pins are automatically isolated

OPTIONS

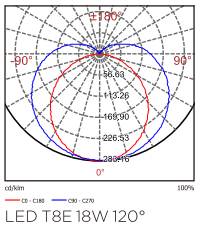
- Not suitable for use in sealed fittings

Model	Colour temp.	Lumens	CRI	PF
LED T8E 9W	2700K/3000K/4000K/6500K	940 lm	>70	>0.9
LED T8E 18W	2700K/3000K/4000K/6500K	1,800 lm	>70	>0.9





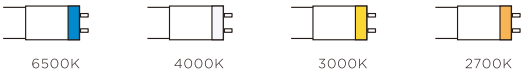
LED T8E 9W 120°



LED T8E 18W 120°

LED T8G-II

High output, premium LED tubes with rotatable, color coded lamp base



APPLICATIONS

- Ideal solution for replacement of traditional fluorescent tubes in schools, offices, supermarkets and rail stations

TECHNICAL DETAILS

- SMD 2835
- Rated life: 30,000 hours

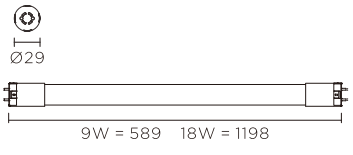
CONSTRUCTION

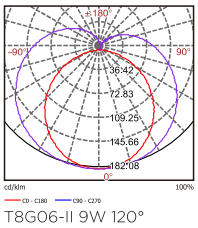
- Polycarbonate body
- Built-in constant current LED driver included
- Easy identification of colour temperature by coloured lamp base
- Safe to install. Input is via any two pins and the other pins are automatically isolated
- Rotatable lamp base for easy installation

OPTIONS

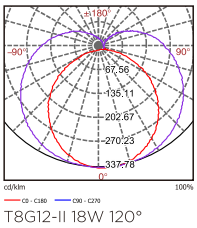
- Not suitable for use in sealed fittings

Model	Colour temp.	Lumens	CRI	PF
LED T8G06-II 9W	2700K/3000K/4000K/6500K	1,000 lm	>80	>0.95
LED T8G12-II 18W	2700K/3000K/4000K/6500K	2,000 lm	>80	>0.95





T8G06-II 9W 120°



T8G12-II 18W 120°

LED MR16B/C/H

LED lamp with GX5.3 base and aluminium body

MR16B

MR16C

MR16H

25° | 12V AC/DC | CE | III | DIMMING | Non Dimmable | 30000h

APPLICATIONS

- Suitable for use in fittings with a GX5.3 lamp holder

OPTIONS

- **Dimming:** Fixed output as standard, but mains dimmable versions are available for use with suitable phase-cutting dimmers. If required, add suffix MD when ordering

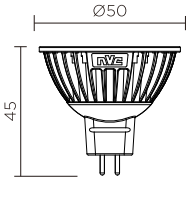
CONSTRUCTION

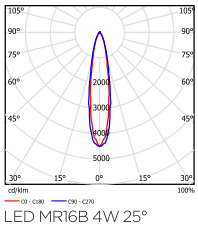
- GX5.3 base
- Die-cast aluminium housing
- Anodized surface treatment
- Dimmable version complete with dimmable driver
- Built-in constant current LED driver included

TECHNICAL DETAILS

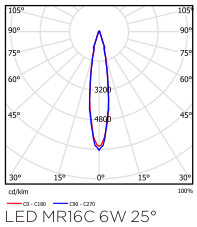
- COB LED for MR16B, high power LED for MR16H/C
- Rated life: 30,000 hours

Model	Colour temp.	Lumens	Dimmable	CRI	PF
LED MR16B 4W	2700K/3000K/4000K/6000K	220 lm	NO	>80	>0.75
LED MR16B DIM 4W	2700K/3000K/4000K/6000K	220 lm	YES	>80	>0.75
LED MR16H 5W	2700K/3000K/4000K/6000K	270 lm	NO	>80	>0.75
LED MR16C 6W	2700K/3000K/4000K/6000K	330 lm	NO	>80	>0.75
LED MR16C DIM 6W	2700K/3000K/4000K/6000K	310 lm	YES	>80	>0.75





LED MR16B 4W 25°



LED MR16C 6W 25°

MR16I/GU10I

PC coated aluminium housing LED lamps, ideal replacement for traditional spotlight

GX5.3 base (Class III)

GU10 base (Class II)

APPLICATIONS

- Suitable for use in fittings with either a GX5.3 or GU10 lamp holder

TECHNICAL DETAILS

- High Power LED
- Rated life: 30,000 hours

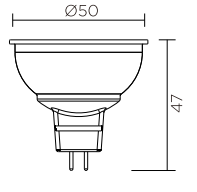
CONSTRUCTION

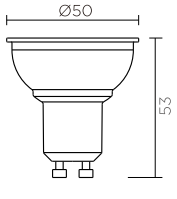
- Polycarbonate coated aluminium housing
- Built-in constant current LED driver included
- Dimmable version complete with dimmable driver

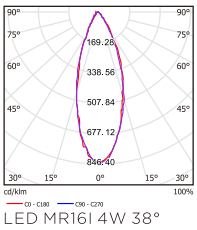
OPTIONS

- **Beam angle:** Choice of 24° or 38°
- **Dimming:** Fixed output as standard, but mains dimmable versions are available for use with suitable phase-cutting dimmers. If required, add suffix MD when ordering

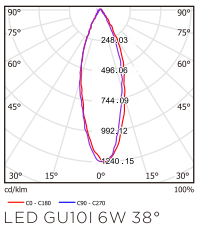
Model	Colour temp.	Lumens	Input	Dimmable	CRI	PF	Beam angle
LED MR16I 3W	2700K/3000K/ 4000K/6000K	220lm	AC/DC12V	NO	>80	>0.75	24°/38°
LED MR16I 4W	2700K/3000K/ 4000K/6000K	360lm	AC/DC12V	NO	>80	>0.75	24°/38°
LED MR16I 5W	2700K/3000K/ 4000K/6000K	440lm	AC/DC12V	NO	>80	>0.75	24°/38°
LED GU10I 3W	2700K/3000K/ 4000K/6000K	300lm	110-240V	NO	>80	>0.75	24°/38°
LED GU10I 4W	2700K/3000K/ 4000K/6000K	360lm	110-240V	NO	>80	>0.75	24°/38°
LED GU10I 6W	2700K/3000K/ 4000K/6000K	580lm	110-240V	NO	>80	>0.75	24°/38°
LED GU10I DIM 6W	2700K/3000K/ 4000K/6000K	550lm	220-240V	YES	>80	>0.75	24°/38°







LED MR16I 4W 38°



LED GU10I 6W 38°

LED MR16L / GU10L

LED lamp with GX5.3/GU10 base

GX5.3 base (Class III)

GU10 base (Class II)

APPLICATIONS

- Suitable for use in fittings with a GX5.3/GU10 lamp holder

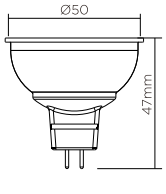
CONSTRUCTION

- GX5.3/GU10 base
- Die-cast aluminium housing
- Anodized surface treatment
- Dimmable version complete with dimmable driver
- Built-in LED driver included

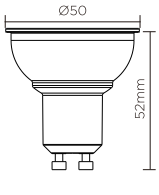
TECHNICAL DETAILS

- COB LED
- CRI >80
- PF >0.75
- CCT: 2700K, 3000K, 4000K or 6500K
- Rated life: 30,000 hours

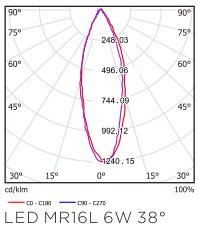
Model	Color temp.	Lumens	CRI	PF	Beam angle
LED MR16L 6W	2700K/3000K/4000K/6500K	520 lm	>80	>0.75	24°/38°
LED GU10L 7W	2700K/3000K/4000K/6500K	520 lm	>80	>0.75	24°/38°



LED MR16L



LED GU10L



LED MR16L 6W 38°

LED CLE/CLLE

Convenient replacement for CFL and incandescent lamps with E14 base

CLE E14 CLLE E14

270° 110-220V 220-220V DIMMING Non Dimmable 25000h

APPLICATIONS

- To replace conventional candle lamps in fittings with E14 lampholders

TECHNICAL DETAILS

- SMD LED
- Rated life: 25,000 hours

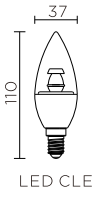
CONSTRUCTION

- Plastic coated aluminium housing
- Built-in constant current LED driver included

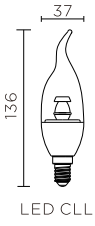
OPTIONS

- **Dimming:** Fixed output as standard, but mains dimmable versions are available for use with suitable phase-cutting dimmers. If required, add suffix MD when ordering.
  - 110-240V: Standard version
  - 220-240V: Dimmable version

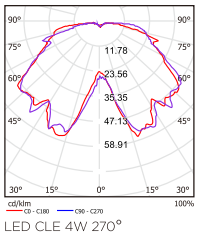
Model	Colour temp.	Lumens	Input	CRI	PF
LED CLE 3W	2700K/3000K/4000K/6500K	240lm	110-240V	>80	>0.7
LED CLE 4W	2700K/3000K/4000K/6500K	310lm	110-240V	>80	>0.7
LED CLE 5W	2700K/3000K/4000K/6500K	370lm	110-240V	>80	>0.7
LED CLE DIM 5W	2700K/3000K/4000K/6500K	370lm	220-240V	>80	>0.7
LED CLLE 3W	2700K/3000K/4000K/6500K	240lm	110-240V	>80	>0.7
LED CLLE 4W	2700K/3000K/4000K/6500K	310lm	110-240V	>80	>0.7
LED CLLE 5W	2700K/3000K/4000K/6500K	370lm	110-240V	>80	>0.7
LED CLLE DIM 5W	2700K/3000K/4000K/6500K	370lm	220-240V	>80	>0.7



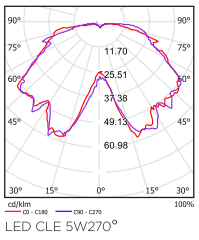
LED CLE



LED CLLE



LED CLE 4W 270°



LED CLE 5W270°

LED A45

LED lamps with a choice of E27 or E14 bases

E14

E27

160° 110-240V 15000h Non Dimmable

APPLICATIONS

- To replace incandescent and CFL lamps in fittings with E27 or E14 lampholders

TECHNICAL DETAILS

- SMD LED
- Rated life: 15,000 hours

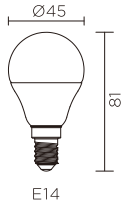
CONSTRUCTION

- Plastic housing for 3W
- Plastic coated aluminium housing for 5W
- Built-in constant current LED driver included

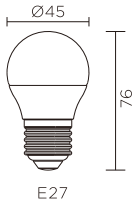
OPTIONS

- **Lamp base:** Choice of E14 or E27

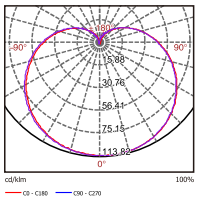
Model	Colour temp.	Lumens	Base	CRI	PF
LED A45 3W	2700K/3000K/4000K/6000K	240 lm	E14/E27	>80	>0.5
LED A45 5W	2700K/3000K/4000K/6000K	400 lm	E14/E27	>80	>0.5



E14



E27

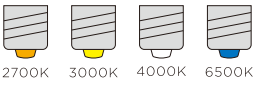


LED A45 5W 160°

LED A60I/A65I

High quality LED lamps with E27 base

E27



APPLICATIONS

- For use in fittings with E27 lampholders
- To replace incandescent and CFL lamps

TECHNICAL DETAILS

- SMD LED
- Rated life: 30,000 hours

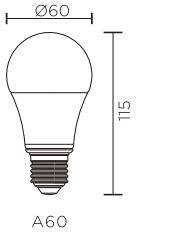
CONSTRUCTION

- Plastic coated aluminium housing
- Built-in constant current LED driver included
- Easy identification of colour temperature by coloured lamp base

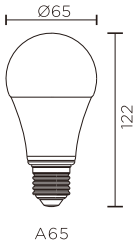
OPTIONS

- **Dimming:** Fixed output as standard, but mains dimmable versions are available for use with suitable phase-cutting dimmers. If required, add suffix MD when ordering.
  - 110-240V: Standard version
  - 220-240V: Dimmable version

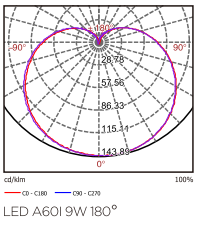
Model	Colour temp.	Lumens	Input	Dimmable	CRI	PF
LED A60I 5W	2700K/3000K/4000K/6500K	500 lm	110-240V	NO	>80	>0.8
LED A60I 7W	2700K/3000K/4000K/6500K	700 lm	110-240V	NO	>80	>0.8
LED A60I DIM 7W	2700K/3000K/4000K/6500K	700 lm	220-240V	YES	>80	>0.8
LED A60I 9W	2700K/3000K/4000K/6500K	900 lm	110-240V	NO	>80	>0.8
LED A60I DIM 9W	2700K/3000K/4000K/6500K	900 lm	220-240V	YES	>80	>0.8
LED A65I 11W	2700K/3000K/4000K/6500K	1,100 lm	110-240V	NO	>80	>0.8
LED A65I DIM 11W	2700K/3000K/4000K/6500K	1,100 lm	220-240V	YES	>80	>0.8



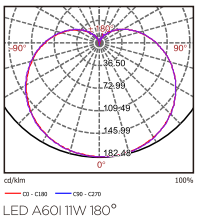
A60



A65



LED A60I 9W 180°

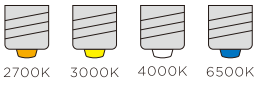


LED A60I 11W 180°

LED A60I-E/A70I-E

Economical LED lamps with E27 base

E27



APPLICATIONS

- For use in fittings with E27 lampholders
- To replace incandescent and CFL lamps

TECHNICAL DETAILS

- SMD LED
- Rated life: 15,000 hours

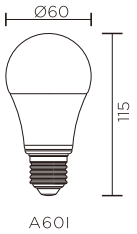
CONSTRUCTION

- Plastic coated aluminium housing
- Built-in constant current LED driver included
- Easy identification of colour temperature by coloured lamp base

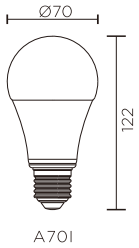
OPTIONS

- 110-240V: 4W, 6W or 8W
- 220-240V: 10W, 12W or 14W

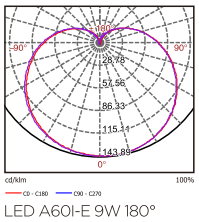
Model	Colour temp.	Lumens	Input	CRI	PF
LED A60I-E 4W	3000K/4000K/6500K	400 lm	110-240V	>80	>0.5
LED A60I-E 6W	3000K/4000K/6500K	600 lm	110-240V	>80	>0.5
LED A60I-E 8W	3000K/4000K/6500K	800 lm	110-240V	>80	>0.5
LED A60I-E 10W	3000K/4000K/6500K	1,000 lm	220-240V	>75	>0.5
LED A70I-E 12W	3000K/4000K/6500K	1,200 lm	220-240V	>75	>0.5
LED A70I-E 14W	3000K/4000K/6500K	1,400 lm	220-240V	>75	>0.5



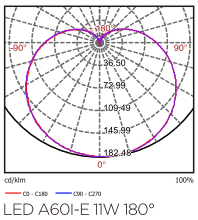
A60I



A70I



LED A60I-E 9W 180°



LED A60I-E 11W 180°

LED R63A R80A

LED lamps to replace traditional R63 and R80 lamps

E27

APPLICATIONS

- For use in fittings with E27 lampholders

TECHNICAL DETAILS

- SMD LED
- Rated life: 25,000 hours

NOTES

- Not suitable for sealed fittings

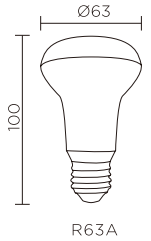
CONSTRUCTION

- PC coated aluminium housing
- Built-in constant current LED driver included
- Easy identification of colour temperature by coloured lamp base

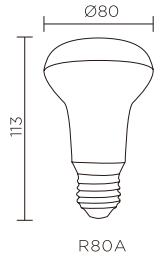
OPTIONS

- Two sizes are available;
  - Ø63mmx100mm, 9W
  - Ø80mmx113mm, 12W

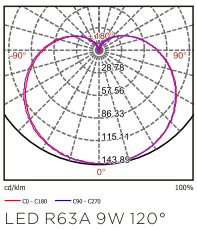
Model	Colour temp.	Lumens	CRI	PF
LED R63A 9W	3000K/4000K/6500K	750 lm	>80	>0.5
LED R80A 12W	3000K/4000K/6500K	950 lm	>80	>0.5



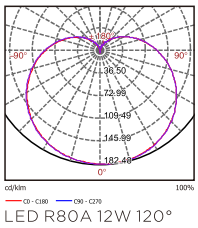
R63A



R80A



LED R63A 9W 120°



LED R80A 12W 120°

LED G4/G9-II

High efficiency LED lamps to replace tradition laps with G4 or G9 bases

G4 1W
(Class III)

G4 2W
(Class III)

G4 3W
(Class III)

G9-II 3W
(Class II)

APPLICATIONS

- Suitable for use in fittings with G4 or G9 lampholders

OPTIONS

- **Dimming:** Fixed output as standard, but mains dimmable versions are available for use with suitable phase-cutting dimmers. If required, add suffix MD when ordering

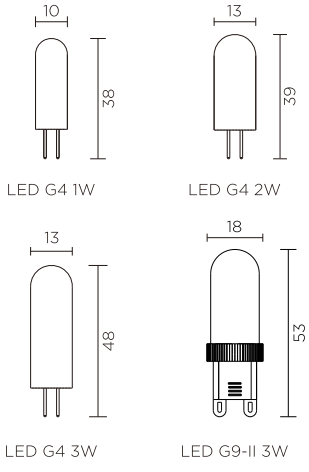
CONSTRUCTION

- Polycarbonate housing and cover
- Built-in constant current LED driver included

TECHNICAL DETAILS

- SMD LEDs
- Rated life: 30,000 hours

Model	Colour temp.	Lumens	Input	Dimmable	CRI	PF	Beam angle
LED G4 1W	2700K/3000K/6000K	110 lm	AC/DC12V	NO	>80	>0.5	180°/240°/300°
LED G4 1W	2700K/3000K/6000K	90 lm	DC12V	YES	>80	>0.5	180°/240°/300°
LED G4 2W	2700K/3000K/6000K	200 lm	AC/DC12V	NO	>80	>0.5	180°/240°/300°
LED G4 2W	2700K/3000K/6000K	180 lm	DC12V	YES	>80	>0.5	180°/240°/300°
LED G4 3W	2700K/3000K/6000K	280 lm	AC/DC12V	NO	>80	>0.5	180°/240°/300°
LED G9-II 3W	2700K/3000K/6000K	260 lm	220-240V	NO	>80	>0.8	180°/240°/300°



LED QR111D/QR111E

LED lamps to replace traditional QR111 lamps with a G53 base

QR111D

QR111E

25° 12V AC/DC 220-240V DIMMING Non Dimmable 25000h

APPLICATIONS

- For use in fittings designed for QR111 lamps with a G53 lampholder

OPTIONS

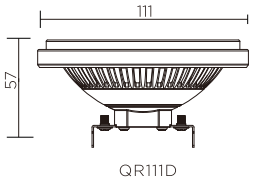
- **Dimming:** Fixed output as standard, but mains dimmable versions are available for use with suitable phase-cutting dimmers. If required, add suffix MD when ordering

TECHNICAL DETAILS

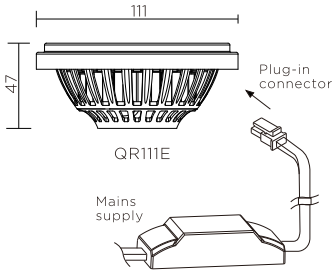
- High power LEDs
- Available in two versions:
  QR111E, with separate driver for 220-240V power supply
  • 20W non-dimmable
  • 20W dimmable
  QR111D, with integral driver and G53 base
  • 12W non-dimmable
  • 15W dimmable
- Rated life: 25,000 hours

CONSTRUCTION

- Die-cast aluminium housing
- Anodized surface treatment
- PC lens
- Dimmable version complete with dimmable driver

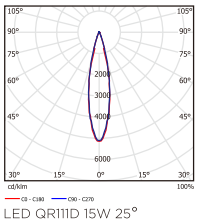


QR111D

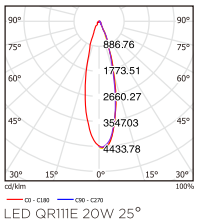


QR111E

Model	Colour temp.	Lumens	Input	Dimmable	CRI	PF
LED QR111D 15W	3000K/4000K/6000K	950 lm	AC/DC12V	NO	>80	>0.9
LED QR111D DIM 12W	3000K/4000K/6000K	850 lm	AC/DC12V	YES	>80	>0.9
LED QR111E 20W	3000K/4000K/5700K	1,300 lm	220-240V	NO	>80	>0.9
LED QR111E DIM 20W	3000K/4000K/5700K	1,300 lm	220-240V	YES	>80	>0.9



LED QR111D 15W 25°



LED QR111E 20W 25°

LED STRIP LIGHTS

The recessed linear can be lighting in the interior and exterior areas

	LED R2835/5050 PAGE 149	LED H2835/5050 PAGE 150	LED N2835/5050 PAGE 151	NFSLED2835-60P/IP65 PAGE 152
WATTAGE		LUMEN OUTPUTS		
3.5/m				450 lm
4.8	350 lm			
9		550/650/600 lm		
12		700 lm		
14.4	750/900 lm			
FEATURES	LED R2835/5050	LED H2835/5050	LED N2835/5050	NFSLED2835-60P/IP65
Colour Temp	2700/3000k/4000/6500k/RG	2700/3000k/4000/6500k/RG	W/WW/R/Y/B/G/A/P/RG	3000k/4000/6500k
Input Voltage	12/24V	220-240V	220-240V	170-240V
Material	Silicon	FPL (Flexible printed circuit)	Silicon	PVC (polyvinyl chloride)

LED R2835/5050

Slim & flexible LED strip lights

12/24V CE IP20 IP65 III 20000h 30000h

APPLICATIONS

- Cove lighting
- Cornice lighting
- Corridors
- Patios
- Pergolas

CONSTRUCTION

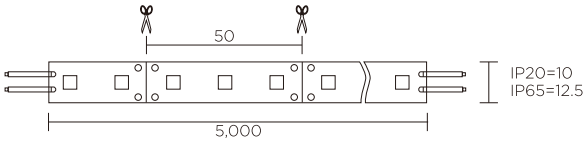
- For use with 12V constant voltage driver
- 5m/roll with no driver

OPTIONS

- **Voltage:** Choice of 12V or 24V version
- **IP rating:** Choice of IP20 or IP65
- **Colour:** Choice of white (with different CCTs), red, green, blue or yellow or RGB.
- For other wattages and outputs please enquire for details
- A wide range of accessories is available as listed below

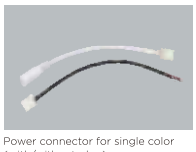
TECHNICAL DETAILS

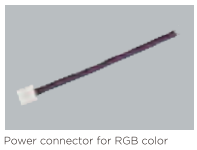
- Choice of SMD 2835 or 5050 LEDs
- Economical version
  - 20,000h rated life
- Standard version
  - 30,000h rated life
- Can be cut every 50mm

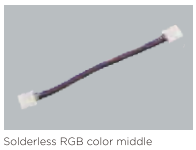


Model	Colour temp.	Lumens/m	Watts/m	IP	CRI	Rated life
LED R2835E/60P	2700K/3000K/ 4000K/6500K	350lm	4.8W	20/65	>80	20,000h
LED R5050E/60P	2700K/3000K/ 4000K/6500K	750lm	14.4W	20/65	>80	20,000h
LED R2835/60P	2700K/3000K/ 4000K/6500K	350lm	4.8W	20/65	>80	30,000h
LED R5050/60P	2700K/3000K/ 4000K/6500K	900lm	14.4W	20/65	>80	30,000h
LED R5050/60P	RGB	—	14.4W	20/65	>80	30,000h
LED R5050/60P	R	—	14.4W	20/65	>80	30,000h
LED R5050/60P	G	—	14.4W	20/65	>80	30,000h
LED R5050/60P	B	—	14.4W	20/65	>80	30,000h
LED R5050/60P	Y	—	14.4W	20/65	>80	30,000h

RGB infrared controller and remote


Power connector for single color (with/without plug)


Power connector for RGB color


Solderless RGB color middle connector

Heat shrink

Head cap
End cap

Mounting clip

Solderless single color middle connector

LED H2835/5050

Double-row high voltage, high output LED strip lights

LED H5050/60P

LED H5050/120P

LED H2835/180P

LED H3014/240P

220-240V CE 30000h

APPLICATIONS

- Cove lighting
- Cornice lighting
- Corridors
- Patios
- Pergolas

TECHNICAL DETAILS

- Choice of SMD 2835 or 5050 LEDs
- Rated life: 30,000 hours

CONSTRUCTION

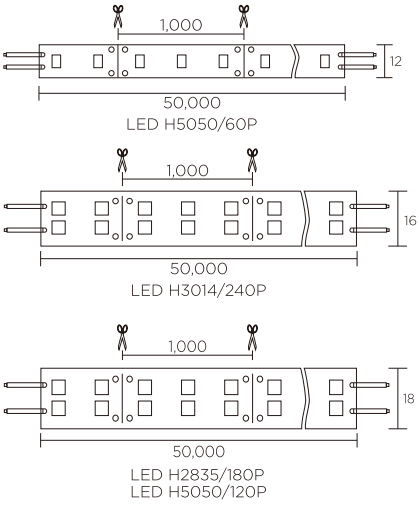
- Flame retardant PVC sleeve
- 50 meters per roll (one IP20 driver included)

NOTES

- No more than 35 meters for one LED driver

OPTIONS

- **Colour:** Choice of white (2700K, 3000K, 4000K or 6500K) or RGB



Model	Colour temp.	Lumens/m	Watts/m	CRI
LED H5050/60P	2700K/3000K/ 4000K/6500K	550lm	9W	>60
LED H5050/60P	R/G/B/Y	—	9W	>60
LED H3014/240P	2700K/3000K/ 4000K/6500K	650lm	9W	>60
LED H2835/180P	2700K/3000K/ 4000K/6500K	600lm	9W	>60
LED H5050/120P	2700K/3000K/ 4000K/6500K	700lm	12W	>60

Easy middle connector

End-cap

Mounting clip

LED Neon flex single color driver 220V

LED N2835/5050

Coloured LED strip with diffused lights

120° 24V 220-240V 30000h

APPLICATIONS

- Building decoration
- Highlighting architectural features
- Corridors and walkways
- Decorative garden lighting

TECHNICAL DETAILS

- SMD LEDs
- PVC opal jacket
- 8w/m, 50m/roll
- Available in white, warm white, red, yellow, blue, green, amber, pink and RGB
- High voltage (220-240v) and low voltage (DC24V) available

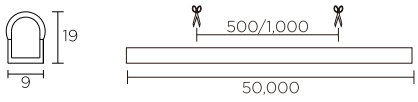
CONSTRUCTION

- 220-240V version:
  - Flame retardant PVC sleeve
  - 50 meters per roll (one IP20 driver included)
- DC24V version:
  - With 24V constant voltage driver
  - Five meters per roll (driver is not included)

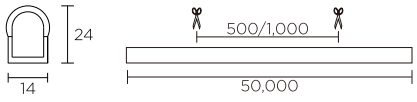
OPTIONS

- 220-240V/24V for choice
- 220-240V version not more than 30 meters for one LED driver
- 220-240V version can be cut every 1,000mm
- DC24V version can be cut every 500mm

Single color



RGB

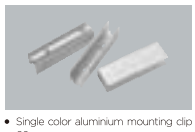


Model	Colour temp.	Input	Watts/m
LED N2835/126P	W/WW/R/Y/B/G/A/P	24V	8W
LED N2835/120P	W/WW/R/Y/B/G/A/P	220-240V	8W
LED N5050/126P	RGB	24V	8W
LED N5050/120P	RGB	220-240V	8W

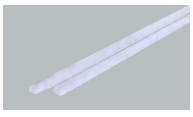
- RGB color middle connector
  Single color middle connector
- Single color mounting pins(2 pins)
  RGB color mounting pins(4 pins)

- Single color end cap
- RGB color end cap

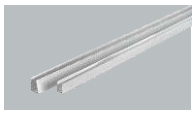
- Single color PC mounting clip
- RGB color PC mounting clip



- Single color aluminium mounting clip 60mm
- RGB color aluminium mounting clip 60mm



- Single color PVC mounting channel (H9xW10xL2000mm)
- RGB color PVC mounting channel (H19xW14xL2000mm)



- Single color aluminium mounting channel (H15xW10xL1000mm)
- RGB color aluminium mounting channel (H19xW14xL1000mm)

- LED Neon flex single color driver 220V
- LED Neon flex RGB color easy controller

- RGB infrared controller and remove

NFSLED2835-60P/IP65

IP65, high luminaire efficiency, non-flicking LED strip light

120° 170-240V IP65 50000h

APPLICATIONS

- Building lighting/decoration
- Shopping malls
- Restaurants/Hotels/Cafes
- Villas/Gardens
- Tunnels lighting
- Interior/Exterior important projects

CONSTRUCTION

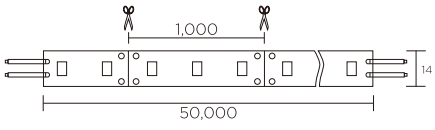
- Dedicated strip drivers (should be ordered as a separate item)
- Flame retardant anti-aging PVC
- Quality anti-sulfuration processed LEDs
- 2835 SMD LEDs, 60pcs/m

TECHNICAL DETAILS

- High luminaire efficiency, 120lm/w
- Energy saving over 50% compared with common LED strips
- Low flicker for a comfortable visual effect
- Constant voltage & current output drivers, PF>0.95, with intelligent protection function
- Even luminaire output from the initial to the ending for 100-meter strip
- Convenient installation, only one dedicated 400w driver needed for 100-meter strip
- Rated life: 50,000 hours

Options

- Choice of connection types, middle connectors
- Choice of installation methods, end-caps, clips



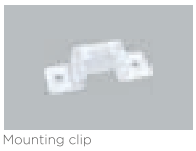
Model	Colour temp.	Lumens	Watts/m	CRI	PF
NFSLED2835-60P/IP65	3000K/4000K/6500K	450 lm/m	3.5W	>80	>0.95

Dedicated drivers	Input	Output	PF	Adapted NFSLED2835/60P/IP65
NDRLED-DV2002-100W/IP65	170-275V	190V	>0.95	1-25m
NDRLED-DV2003-200W/IP65	170-275V	190V	>0.95	10-50m
NDRLED-DV2004-400W/IP65	170-275V	190V	>0.95	20-100m

Dedicated drivers

Easy middle connector

End-cap


Mounting clip

p*rstar
market

DRIVERS

156 EM002

156 EM001

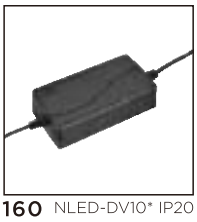
157 NLED-DV110* IP20

157 NLED-DV110* IP20

158 EM003

159 NLED-DV110* IP65

160 NLED-DV10* IP20



160 NLED-DV10* IP20

LED DRIVERS RANGE SUMMARY

Suit for the low-voltage strip or other emergency kits

	NLED EM00* PAGE 156	NLED-DV110*IP20 PAGE 157	NLED EM003 PAGE 158	NLED-DV110*IP65 PAGE 159	NLED-DV110*IP20 PAGE 160
WATTAGE					
2.4	√				
4			√		
5	√				
12					√
20				√	
24					√
30		√		√	
36					√
50		√			
60				√	√
72					√
80		√			
100		√		√	
150		√		√	
200		√		√	
240		√		√	
300		√			
350		√			
FEATURES	**NLED EM00***	**NLED-DV110*IP20**	**NLED EM003**	**NLED-DV110*IP65**	**NLED-DV110*IP20**
IP Rating	IP 20	IP 20	IP 20	IP 65	IP 20
Input Voltage	220-240V	110-240V	220-240V	110-240V	110-240V
Output Voltage	10-60V	12/24V	10-60V	24V	12/24V
Material	Steel	Metal	Plastic	Plastic	Plastic

NLED EM00 series

Emergency conversion kits suitable for use on almost any LED luminaire with a separate driver

EM002

EM001

220-240V

APPLICATIONS

- For use on a wide range of LED fittings to convert them from standard to maintained emergency operation
- The standard (mains powered) driver is retained in the circuit, so this unit is only suitable if access to the driver is available

CONSTRUCTION

- Steel housing
- NiCd batteries
- Test switch and charge indicator lamp fitted

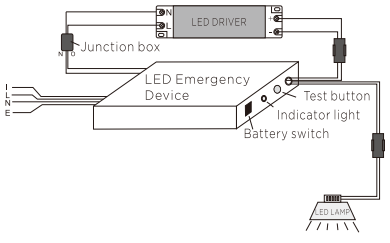
NOTE

A range of emergency kits to provide 1.5 or 3 hours of emergency lighting in the event of a mains power failure

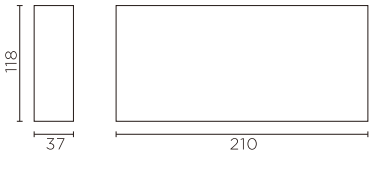
TECHNICAL DETAILS

- Available in two sizes, two wattages and two battery capacities:
  - Size: Choice of two, as pictured
  - Wattages: 5W or 2.4W
  - Battery capacity: Two options to give 180 or 90 minute duration
- Forward voltage: For use with LED products with a Vf of 10-60V
- When installed the fitting will work as normal on the standard driver. In the event of a power failure the LEDs will be driven at 2.5W or 5W for the designated period (1.5 or 3 hours) on battery power
- Rated to 500 charge/discharge cycles
- Charge time 24 hours

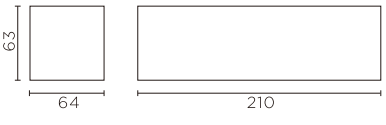
Wiring Diagram



Model	Output Voltage	Charge Time	Discharge Time
NLED EM001 5W 180mins	10-60V	24hrs	180mins
NLED EM001 5W 90mins	10-60V	24hrs	90mins
NLED EM001 2.4W 180mins	10-60V	24hrs	180mins
NLED EM001 2.4W 90mins	10-60V	24hrs	90mins
NLED EM002 5W 180mins	10-60V	24hrs	180mins
NLED EM002 5W 90mins	10-60V	24hrs	90mins
NLED EM002 2.4W 180mins	10-60V	24hrs	180mins
NLED EM002 2.4W 90mins	10-60V	24hrs	90mins

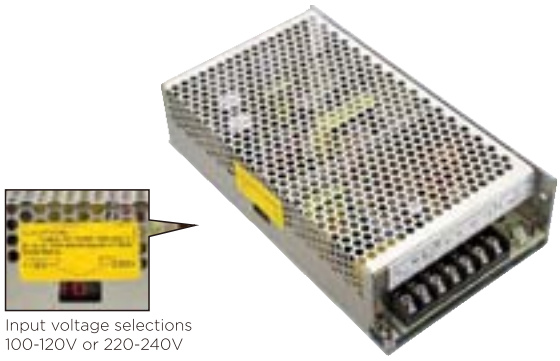


NLED EM001 Cut-out Ø128



NLED EM002 Cut-out Ø92

NLED-DV100 IP20 series

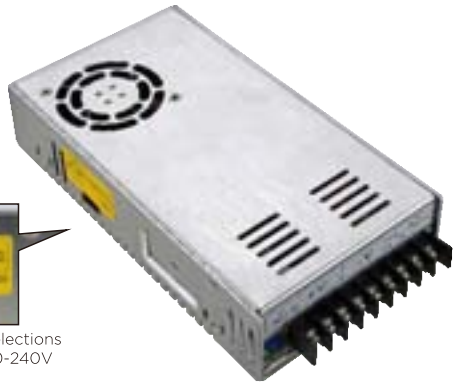


Input voltage selections
100-120V or 220-240V

150W -200W - 240W

30W -36W - 50W -
60W -80W -100W

Input voltage selections
100-120V or 220-240V



300W - 350W

110-240V

CONSTRUCTION

- Metal housing

OPTIONS

- Choices of five sizes:
  - 110mmx78mmx35mm (30W 12V, 36W 24V)
  - 129mmx97mmx38mm (50W 12V, 60W 24V)
  - 159mmx97mmx38mm (80W 12V/24V, 100W 12V/24V)
  - 200mmx110mmx50mm (150W 12V/24V, 240W 12V/24V)
  - 215mmx115mmx50mm (300W12V/24V, 350W 12V/24V)

APPLICATIONS

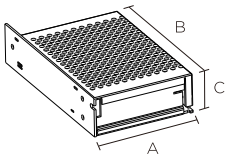
- For low voltage indoor LED fittings

TECHNICAL DETAILS

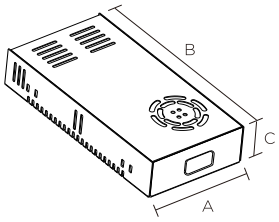
12V DC output
- PF >0.5
- Choices of eight wattages:
- Input voltage 110-240V
  - 30W 2.5A, 50W 4.17A, 80W 6.67A
- Input voltage 100-120V or 220-240V
  - 100W 8.5A, 150W 12.5A, 200W 16.7A, 300W 25A, 350W 30A

24V DC output
- PF >0.5
- Choices of eight wattages:
- Input voltage 110-240V
  - 36W 1.5A, 60W 2.5A, 80W 3.3A
- Input voltage 100-120V or 220-240V
  - 100W 4.2A, 150W 6.3A, 200W 10A, 300W 12.5A, 350W 15A

Model	watts	Input voltage
NLED-DV1001-30W-DC12V/2.5A	30W	110-240V
NLED-DV1002-50W-DC12V/4.17A	50W	110-240V
NLED-DV1003-80W-DC12V/6.67A	80W	110-240V
NLED-DV1004-100W-DC12V/8.5A	100W	100-120V/220-240V
NLED-DV1005-150W-DC12V/12.5A	150W	100-120V/220-240V
NLED-DV1006-200W-DC12V/16.7A	200W	100-120V/220-240V
NLED-DV1007-300W-DC12V/25A	300W	100-120V/220-240V
NLED-DV1008-350W-DC12V/30A	350W	100-120V/220-240V
NLED-DV1001-36W-DC24V/1.5A	36W	110-240V
NLED-DV1002-60W-DC24V/2.5A	60W	110-240V
NLED-DV1003-80W-DC24V/3.3A	80W	110-240V
NLED-DV1004-100W-DC24V/4.2A	100W	100-120V/220-240V
NLED-DV1005-150W-DC24V/6.3A	150W	100-120V/220-240V
NLED-DV1006-240W-DC24V/10A	240W	100-120V/220-240V
NLED-DV1007-300W-DC24V/12.5A	300W	100-120V/220-240V
NLED-DV1008-350W-DC24V-15A	350W	100-120V/220-240V



30W - 240W



300W - 350W

Watts	A	B	C	Cut-out
30W/130W	97	110	35	Ø105
50W/60W	97	129	38	Ø110
80W/100W	97	159	38	Ø110
150W/200W	110	200	50	Ø110
240W	110	200	50	Ø125
300W/350W	115	215	50	Ø130

NLED EM003

Emergency conversion kits suitable for use on almost any LED luminaire with a separate driver.

220-240V

APPLICATIONS

- For use on a wide range of LED fittings to convert them from standard to maintained emergency operation
- The standard (mains powered) driver is retained in the circuit, so this unit is only suitable if access to the driver is available

CONSTRUCTION

- Plastic housing
- Batteries included
- Test switch and charge indicator

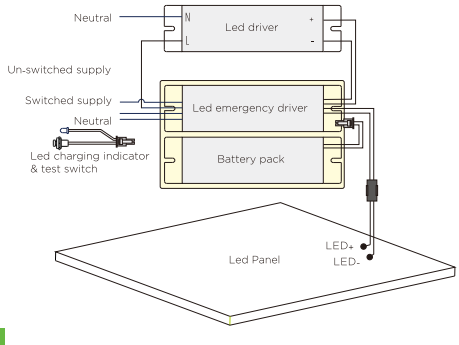
NOTE

This emergency kit provides three hours of emergency lighting in the event of a mains power failure

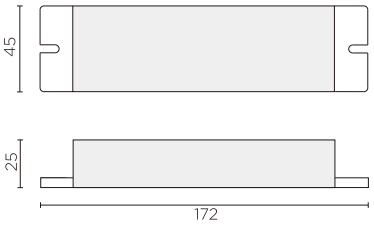
TECHNICAL DETAILS

- Available in one size, four wattage DC10...60V (3-20 LEDs) constant power output
- Forward voltage for use with LED products with a Vf 10-60V
  Battery capacity:
  LiFePO4 6.4V 3000mAH
- When installed the fitting will work as normal on the standard driver
  In the event of a power failure the LEDs will be driven at 4W for three hours on battery power
- Rated to 500 charge/discharge cycles
- Charge time 24hours

Wiring diagram



Model	Output Voltage	Charge Time	Discharge Time
NLED EM003 4W 180mins	10-60V	24hrs	180mins



Emergency kit & battery pack

Cut-out Ø55

NLED-DV110 IP65 series

IP65 LED driver

Class II

Class I

Class II

110-240V

APPLICATIONS

- For low voltage outdoor LED fittings

TECHNICAL DETAILS

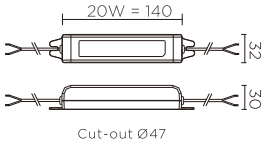
- **Input voltage:** 110-240V
- **Output voltage:** 24V DC

CONSTRUCTION

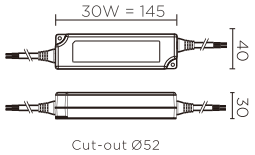
- Flame resistant PC housing (20W, 30W)
- Aluminium housing (60W, 100W, 150W, 200W, 240W)
- Rubber insulated cable
- Silicone filled

OPTIONS

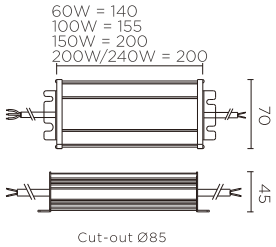
- Choices of six sizes:
  - 140mmx32mmx30mm (20W)
  - 145mmx40mmx30mm (30W)
  - 140mmx70mmx45mm (60W)
  - 155mmx70mmx45mm (100W)
  - 200mmx70mmx45mm (150W, 200W)
  - 220mmx70mmx45mm (240W)



Cut-out Ø47



Cut-out Ø52



Cut-out Ø85

Model	Output voltage	watts	PF
NLED-DV1101	24V	20W	0.5
NLED-DV1102	24V	30W	0.5
NLED-DV1103	24V	60W	0.95
NLED-DV1104	24V	100W	0.95
NLED-DV1105	24V	150W	0.95
NLED-DV1106	24V	200W	0.95
NLED-DV1106	24V	240W	0.95

NLED-DV100 IP20 series

IP20 LED driver

Supplied with DC connector

Available on request with screw-fixing feature

110-240V

APPLICATIONS

- For low voltage indoor LED fittings

CONSTRUCTION

- Plastic housing

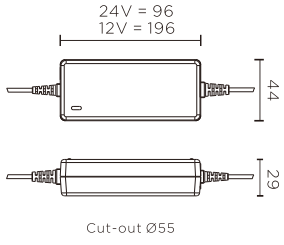
OPTIONS

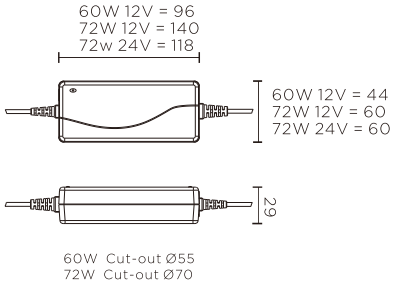
- Choices of five sizes:
  - 96mmx44mmx29mm (24W/36W 24V)
  - 96mmx44mmx29mm (12W/24W/36W 12V)
  - 96mmx44mmx29mm (60W 12V)
  - 118mmx60mmx36mm (60W/72W 24V)
  - 140mmx60mmx36mm (72W 12V)

TECHNICAL DETAILS

- **Input voltage:** 110-240V, 50/60Hz
- **Output voltage:** 12V, DC/24V DC

Model	Output voltage	watts	PF
NLED-DV1001-12W-DC12V/1A	12V	12W	0.5
NLED-DV1002-24W-DC12V/2A	12V	24W	0.5
NLED-DV1003-36W-DC12V/3A	12V	36W	0.5
NLED-DV1011-24W-DC24V/1A	24V	24W	0.5
NLED-DV1012-36W-DC24V/1.5A	24V	36W	0.5
NLED-DV1004-60W-DC12V/5A	12V	60W	0.5
NLED-DV1005-72W-DC12V/6A	12V	72W	0.5
NLED-DV1013-60W-DC24V/2.5A	24V	60W	0.5
NLED-DV1014-72W-DC24V/3A	24V	72W	0.5





Global Quality Approvals & Symbol Keys

This mark is a declaration that the product in question meets the requirements of the applicable EU directives. In the case of lighting products this means that they comply with the Low Voltage Directive (LVD), the Electromagnetic Compatibility (EMC) Directive and the Restrictions of the Use of Certain Hazardous Substances Directive (RoHS). It is the responsibility of the lighting manufacturer to ensure that all their products that are sold in the European Economic Area carry the CE mark.

Class I. The product is provided with basic insulation and all exposed conductive parts are connected to an earth terminal

Class II. Basic and supplementary insulation in accordance with BS EN60598. No provision for an earth connection.

Class III. Separated extra-low voltage. No voltages higher than 50v AC or 120v DC are generated.

Mains voltage 12V AC/DC

Mains voltage 100-240V AC

Mains voltage 220V AC

Mains voltage220-240V AC

IP rating. All fittings are IP20 unless otherwise stated. A table of Ingress Protection values is to be found on page 136.

Rated life of a product, "h" is short for hour.
-Fittings must be installed in accordance with instructions and specifically not in an ambient temperature that ever exceeds 25.
-Consumable items, such as fuses, batteries and lamp are excluded.
-Lumen depreciation to 70% of initial lumens (L70) can occur within the stated lifetime and will not constitute a valid after service claim.

It can not be dimmed.

Mains dimming. The fitting can be dimmed with mains dimming function.

Analogue dimming. The fitting can be dimmed with analogue dimming.

Digital dimming. The fitting can be dimmed with DALI, switch dim and corridor function.

Step dimming. The fitting can be dimmed with step dimming.

Beam angle. The angle of the beam dictates the size of the area to be covered in light.

Fresh light. Luminaire suitable for applications where natual colour is required.

Glossary of the Most Important Lighting Terms

As with any technical or scientific discipline, lighting technology has its own special terms and concepts for defining the characteristics of lamps and luminaires and for standardizing the units of measurement.

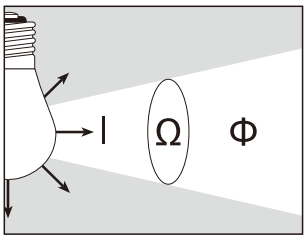
The most important of these are described here.

Light and radiation

Light is taken to mean the electromagnetic radiation that the human eye perceives as brightness, in other words that part of the spectrum that can be seen. This is the radiation between 360 and 830 nm, a tiny fraction of the known spectrum of electromagnetic radiation.

Luminous flux Ø

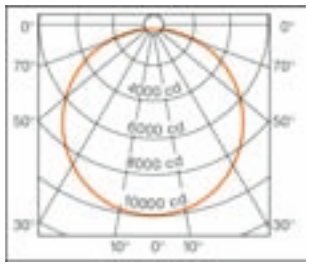
Unit of measurement: lumen [lm].Luminous flux F is all the radiated power emitted by a light source evaluated with the spectral sensitivity of the eye and the photometric radiation equivalent km.



Luminous flux Ø Luminous intensity I is a measure of the luminous flux Ω emitted in solid angle Φ.

Luminous intensity I

Unit of measurement: candela [cd].Generally speaking, a light source emits its luminous flux Ø in different directions and at different intensities.
Luminous intensity is the luminous flux radiated in a particular direction (solid angle Ω).

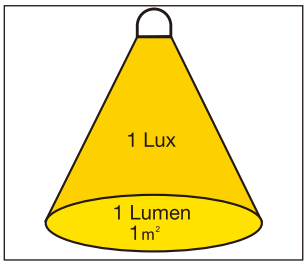


Polar diagram

Illuminanc E

Unit of measurement: lux [lx].Illuminance E is the ratio between the luminous flux and the area being illuminated.

An illuminance of 1 lx occurs when a luminous flux of 1 lm is evenly distributed over an area of 1 m^2.



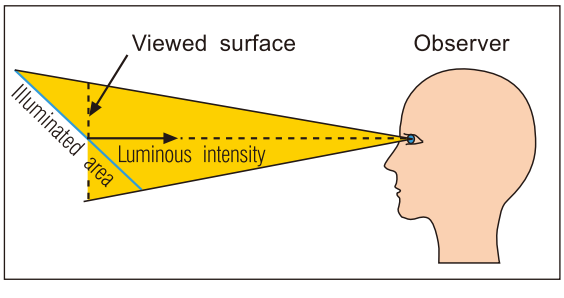
Illuminance E

Luminance L

Unit of measurement: candela per square meter [cd/m^2].

The luminance L of a light source or an illuminated area is a measure of the impression of brightness.

Luminance L



The most important photometric formulae:

Luminous intensity [cd]	I	$\frac{\text{Luminous flux}}{\text{Solid angle } \Omega \text{ [sr]}}$	Luminance [cd/m^2]	L	$\frac{\text{Luminous intensity [cd]}}{\text{Viewed luminous area [m}^2\text{]}}$
Illuminance[lx]	E	$\frac{\text{Luminous flux falling on area [lm]}}{\text{Illuminated area [m}^2\text{]}}$	Lum. efficacy [lm/W]	h	$\frac{\text{Generated luminous flux [lm]}}{\text{Electrical power consumed [W]}}$

IP Rating

Luminaires are rated according to their resistance to the ingress of both liquids and solids by the code defining their Index of Protection (explained below)-often known as an "IP" Rating which you will find next to every product in this catalogue.

IP ratings explained

"IP" ("Ingress Protection") Rating

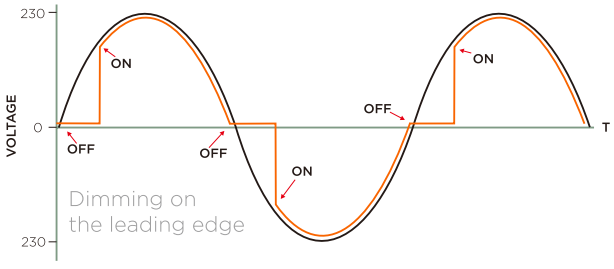
First digit
Protection against ingress of foreign bodies e.g. tools, dust, fingers, etc.
Second digit
Protection against ingress of liquids

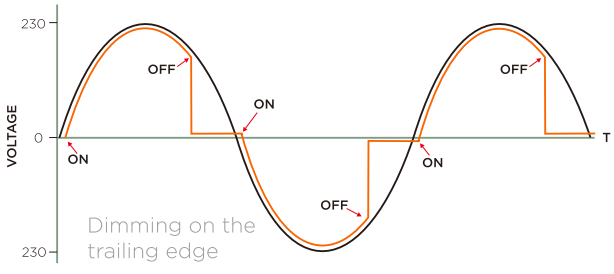
	Foreign Bodies First digit		Liquids Second digit
IP0X	No-protection	IPX0	No-protection
IP1X	Protected against solid objects greater than 50mm (e.g.accidental touch by hands)	IPX1	Protected against vertically falling drops of water (e.g.condensation)
IP2X	Protected against solid objects up to 12mm (e.g.fingers)	IPX2	Protected against direct sprays of water up to 15 degrees from vertical
IP3X	Protected against solid objects greater than 2.5mm (e.g. tools and wires)	IPX3	Protected against direct sprays of water up to 60 degrees from vertical
IP4X	Protected against solid objects greater than 1mm (e.g. small tools and wires)	IPX4	Protected against water sprays from all directions-limited ingress permitted
IP5X	Protected against dust,limited ingress (e.g.no harmful deposit)	IPX5	Protected against low pressure jets of water from all directions-limited ingress permitted
IP6X	Totally protected against dust	IPX6	Protected against high pressure jets of water (use on ship deck)-limited ingress permitted
		IPX7	Protected against the effects of immersion between 15cm and 1m
		IPX8	Protected against long periods of immersion under pressure

Dimming

MAINS DIMMING

Fluorescent fittings and many LED fittings cannot be dimmed with 50Hz (phase) dimmers. Whether these are leading or trailing edge dimmers, the control gear or driver cannot operate correctly if it is switched off for a variable period twice in every mains cycle (which is how a mains dimmer works, see diagrams below). If mains dimming (abbreviated to MD) is not mentioned on any page in this catalogue it should be assumed that the fitting in question is not mains dimmable.





HF DIMMING

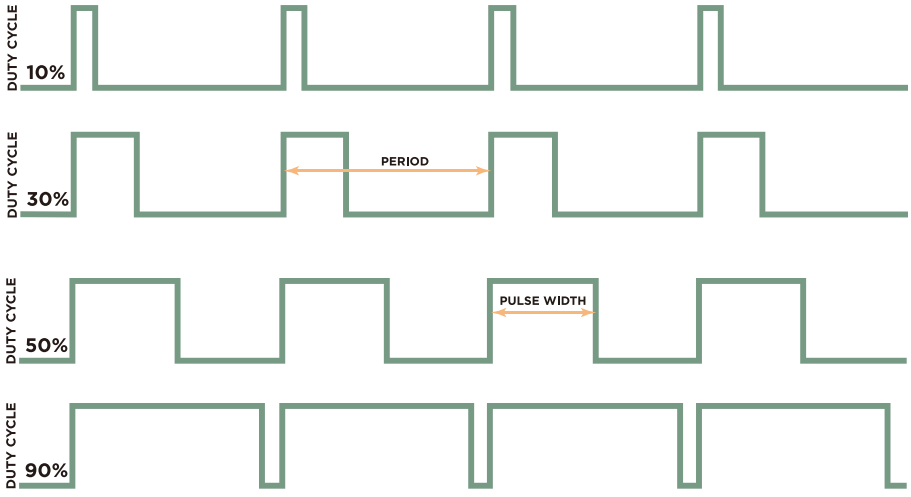
Many fittings can be dimmed if the correct driver is used. To do this the driver is permanently connected to mains power but also receives a dimming control signal, instructing it to increase or lower the light output.

On receipt of a dimming control signal a driver will dim the fittings by use of pulse width modulation, amplitude modulation or sometimes a combination of them both.

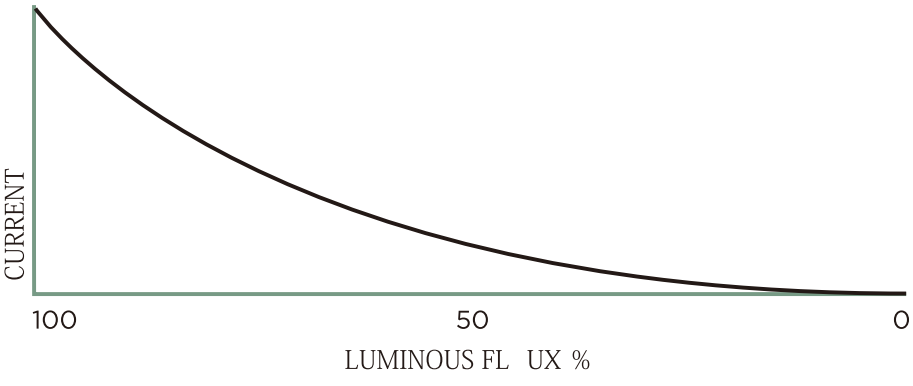
Pulse width modulation (PWM) entails turning the LEDs on and off. The % “on” time is the duty cycle. The higher the duty cycle the brighter the light appears to be to the human eye. PWM has many advantages as a dimming method (efficiency, simplicity of implementation and low cost), but it has disadvantages too, one of which is the risk of discernible flicker and stroboscopic effects.

Amplitude modulation (AM) involves the gradual reduction of the drive current to bring about a reduction in light output. This method of dimming avoids the risk of visible flicker but it lacks the simplicity and efficiency of PWM.

Some driver manufacturers use a combination of PWM and AM to achieve the best possible performance.



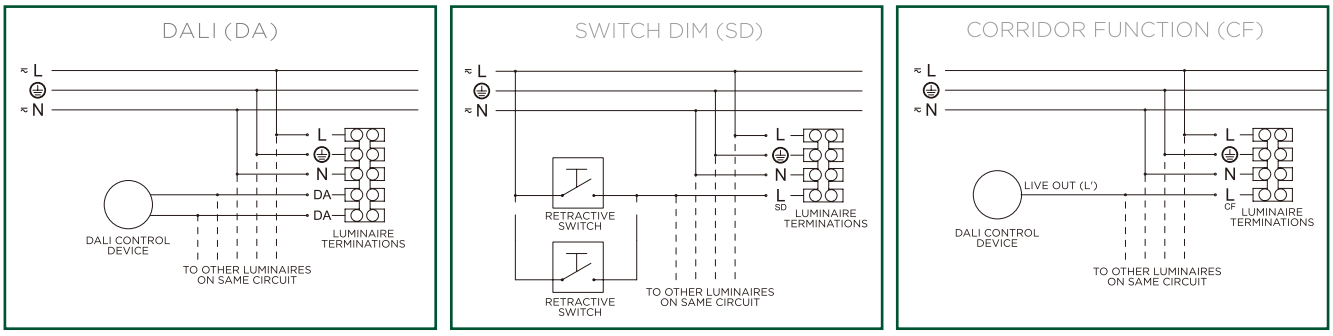
Pulse Width Modulation



Amplitude Modulation

DIMMING CONTROL SIGNALS

There are three types of dimming control signal that we offer as standard options and it may be helpful to think of them as languages – a means by which the driver is told what to do. The three types of dimming control signal we offer are as follows:



DALI

Typically, a DALI control signal will be generated by a sensor or a lighting control system. Manually operated rotary knobs that generate a DALI control signal are available (at some cost), but if pure manual control is required we would usually recommend switch dim as the simpler and more economical solution.

SWITCH DIM

Switch dim is a means of controlling a luminaire via a retractive switch. It is a low-cost, intuitive and easy-toinstall approach to providing manual dimming control.

CORRIDOR FUNCTION

Corridor function can be operated by an occupancy sensor, time switch or manual switch. When the switch contact is "made" the light output will be 100%; when the contact is broken the light output will be 10%, or some other value that may be programmed in the driver or control gear.

Other dimming control options are available, including 1-10v (analogue dimming) and DSI (digital serial interface). If one these is needed, please check availability and lead-time before ordering.

FLICKER

Almost all LEDs flicker to some extent and this is often increased during dimming. Flicker is caused by Ripple Current - a regular fluctuation of the output of the driver. The best drivers have current ripple of less than 10%, but on others the ripple can be several times this.

The frequency of flicker varies greatly from product to product, but with LEDs it is generally in the range of 100 – 1,000Hz. By comparison, mains flicker (as with switch-start products) is 50Hz and fluorescent Hf products are operating typically at 40,000-60,000Hz.

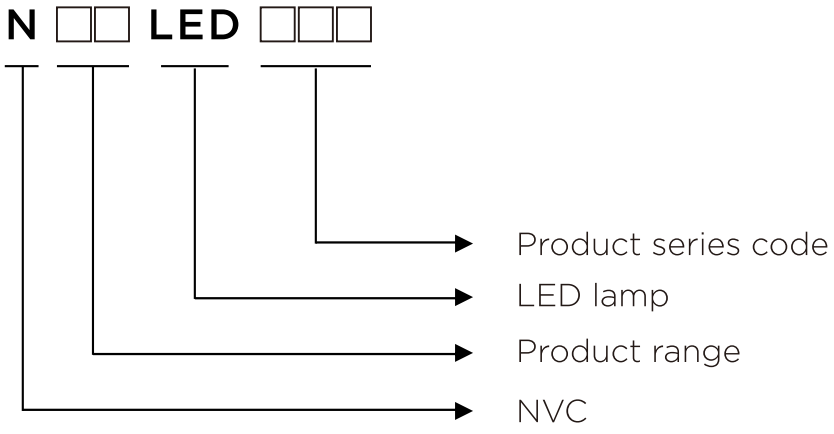
The extent of flicker is measured in two ways, Percent Flicker and Flicker Index. In both cases a low figure indicates better performance. A poor LED fitting might have a percent flicker of 50 and a flicker index of 0.3. A better fitting might have a percent flicker of 17.5 and a flicker index of 0.05.

Frequency effects our perception of flicker; a flicker index of 0.2 might be deemed unacceptable at 100Hz, but acceptable at 300Hz. It is therefore not helpful for a manufacturer to claim "My flicker index is better than yours." The extent to which flicker matters (or not) is a function of the extent of the flicker and the frequency

Can we see flicker? Generally we cannot see flicker, but some people are sensitive to it and for them it can cause headaches, as was the case with people working under some old fluorescent fittings operating at 50Hz.

A digital camera is not the best way to judge flicker. What you see through a digital camera is a function of LED flicker and the camera's frequency of operation.

Product Numbering



Naming Rule: / Product Range:	NVC	Abbreviation	LED	Series Code	Example
LED Spot Light	N	SP (Spot Light)	LED	*	NSPLED113D
LED Down Lights	N	DL (Down Light)	LED	*	NDLLED9610
LED Track Lights	N	TR (Track Light)	LED	*	NTRLED320A
LED Multiple Lights	N	MT (Multiple Light)	LED	*	NMTLED5821A
Troffer Lights (Back-Lit/Recessed modular)	N	TF (Troffer Light)	LED	*	NTFLED412
Panel Lights (Side-Lit)	N	PN (Panel Light)	LED	*	NPNLED4502
LED Linear Lights	N	LI (Linear Light)	LED	*	NLILED495
LED Batten Lights	N	BT (Batten Light)	LED	*	NBTLEDT5P
LED Ceiling Lights	N	CL (Ceiling Light)	LED	*	NCLLED1009
LED Wall Lights	N	WA (Wall Light)	LED	*	NWALED1002
LED Flexible Strips	N	FS (LED Flexible strips)	LED	*	NFSLED2835/5050
LED Neon Strips	N	NE (LED Neon strips)	LED	*	NNELED2835/5050
Driver	N	DR (Drivers)	LED	*	NDRLEDDV1101

LED Lamps	Naming Rule:	LED Lamps	Naming Rule:
1. Gu10 LED Lamp	LED GU10	2. G5.3 LED Lamp	LED MR16
3. Par20/30/38 Lamp	LED PAR20/30/38	4. QR111 LED Lamp	LED QR111
5. LED Mushroom bulb	LED R63/68	6. T8 LED tube	LED T8
7. LED Bulb	LED A45/60/65/70	8. Candle LED lamp	LED CLE/CLLE
9. G9/4 LED Lamp	LED G9/4		

* can be numbers or letters

Our sales & support network

Regional offices

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2. Middle East
3. Singapore
4. UK

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2. Oman
3. Qatar
4. Saudi Arabia
5. U.A.E
6. Indonesia

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2. Denmark
3. Finland
4. Sweden
5. Pakistan
6. Sri Lanka
7. Italy
8. Hungary
9. Cambodia
10. Vietnam

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Web:www.nvc-lighting.com.br

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