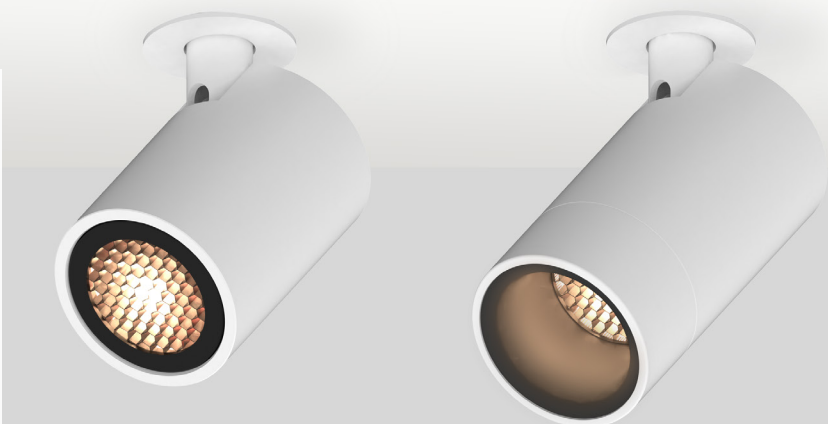


## LD233 COMPACT SURFACE MOUNTED INTERIOR LED SPOTLIGHT



The LD233 is a discreet surface mounted spotlight that is very compact in size but offers a powerful output and large range of features. There are 2 LED engine options available. The E3 engine provides the ability to achieve a high output whilst the F1 offers a super warm colour temperature of 2200K. It features a single optic for superior beam quality and is available with a full cowl for low glare. With a choice of fixing options, including track mounting or a surface mounted base, the versatile LD233 can be used in a range of interior applications.

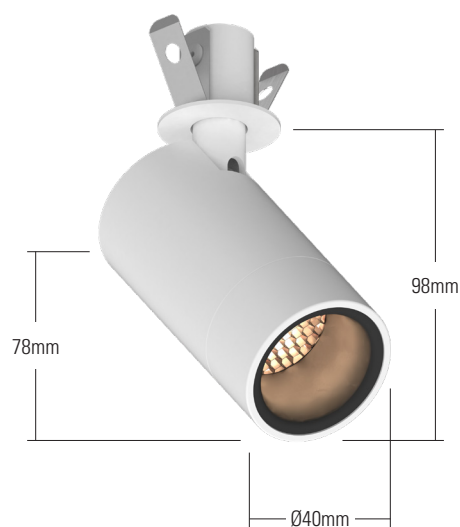


## KEY FEATURES

- > Compact interior spotlight with 90° head tilt adjustment and 350° rotation
- > High-power E3 engine featuring NICHIA LED delivering up to 510lm at 500mA
- > F1 LED engine featuring CREE COB with 2200K colour temperature option
- > Machined aluminium fitting, paint finishes include: White (RAL 9016), Silver, Anthracite Grey (RAL 7016), Black (RAL 9005), Antique Bronze, Satin Antique Brass, Satin Brass or any RAL finish
- > Range of beam angles including 12°, 26°, 34°, 54°, 15° x 49°
- > Single light source and optic produces a consistent beam removing multiple shadows
- > Recessed LED lens assembly with optional anti-glare full cowl and honeycomb louvre for low-glare
- > Wide range of fixing options including PL1, surface mounted base and track
- > Switched, 0-10V, Casambi, DMX, DALI, or Mains dimmable drivers available

## DIMENSIONS

For fixing dimensions please go to page 4.



## WHITE LED ENGINE SPECIFICATION

Engine	⊕ E3		⊙ F1		
Beam angles	12°, 19°, 34°, 54°, 15° x 49°		21°, 37°, 55°, 18° x 49°		
LED manufacturer	NICHIA		CREE		
Colour temperature*	2700K, 3000K, 4000K, 5000K		2200K, 2700K, 3000K, 4000K, 5000K		
Current	350mA	500mA	350mA	500mA	700mA
LED power (Max)	4.2 (5W**)	6.0 (7W**)	3.2 (3.5W**)	4.5 (5W**)	6.3 (7W**)
Delivered lumens (L <sub>100</sub> )	391	510	289	380	535
Lumens per circuit watt	93	85	91	85	85
CRI (Typ)	85		90		
Forward voltage (V <sub>100</sub> )	14V		9V		
Colour consistency	2SCDM		3SCDM		
Peak intensity	4921 cd		1774 cd		
LED Lumens	596		623		
LOR	0.86		0.86		
TM30	RF88	RG99	RF93	RG99	
LED lifetime	L90B5 at 90,000hrs		L90B5 at 90,000hrs		
Applications					

This data is based on LD233-E3-500-NB and LD233-F1-700-MSB-LW30

\*Lumen output data applies to all E3 colour temperatures, for F1, please see lumen variance table to the right

\*\*Indicates the nominal power for the LED run at that particular current and includes losses associated with using an 85% efficient driver

Lumen variance by CCT	
2700K	+/- 0%
4000K	+7%
5000K	+16%

## MECHANICAL

Ambient temperature	E3	-20° to 45° (350mA) or -20° to 35° (500mA)
	F1	-20° to 45° (350mA) or -20° to 35° (500mA) or -20° to 25° (700mA)
Materials	Anodised aluminium body	
Weight of product	0.198KG	
IP rating	IP40	
Wiring	In-series constant current wiring (pre-wired with cables at a length of 200mm)	

## ENVIRONMENTAL

TM65	Available on request
TM66	2.7

## AVAILABLE FINISHES

*Please refer to our finishes guide for full details*

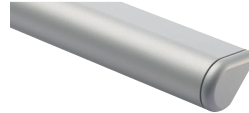
The LD233 body is machined from aluminium and painted in-house at LightGraphix. Wet spray paint finishes are suitable for interior and exterior use on surface mounted products. Our standard colours are below but we can accommodate any RAL request. Please view our full finishes guide online for more information.



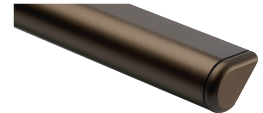
**WHITE**  
(RAL 9016)



**BLACK**  
(RAL 9005)



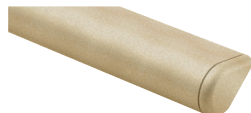
**SILVER ANODISED**



**ANTIQUÉ BRONZE**



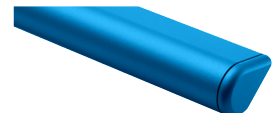
**SATIN ANTIQUÉ BRASS**



**SATIN BRASS**



**ANTHRACITE GREY**  
(RAL 7016)



**RAL COLOURS**

## 2-TONE PAINTING (BLACK BAFFLE FINISH OPTIONS)

As standard, the inner anti-glare baffle is supplied in a low glare matt black textured finish but can also be painted in a colour of choice to offer complete design scheme flexibility. When specifying your order codes and options, please indicate a bezel finish as well as inner baffle colour.

### Matt black finish (standard baffle)



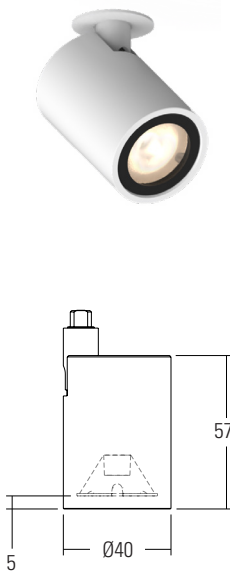
### Any RAL colour finish



## GLARE CONTROL OPTIONS

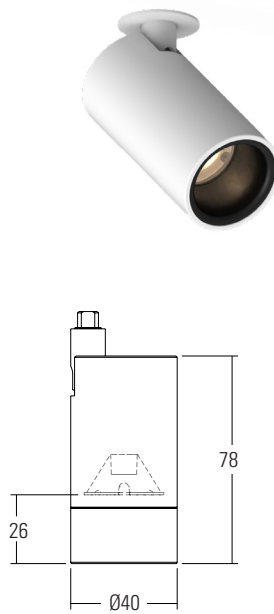
### /NC No Cowl

The LD233 has been designed with optics recessed 5mm into the body for low glare and is suitable for use without a cowl.



### /FC Anti-glare full cowl

A full cowl will reduce glare from all angles.



### /HL Honeycomb louvre

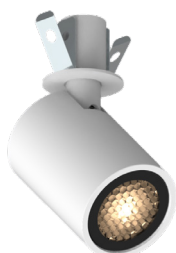
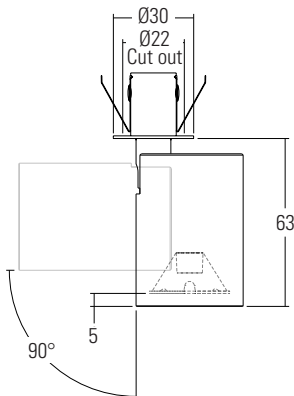
The honeycomb louvre reduces glare from all angles without adding length to the luminaire.



## DIMENSIONS & FIXING OPTIONS

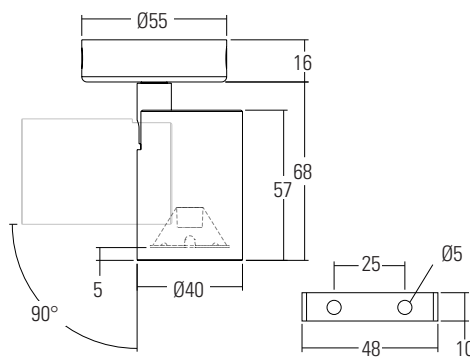
### /PL1

The PL1 with spring clips is a very discreet method of mounting a single spotlight into a ceiling. Cable length: 200mm Weight: 0.38kg



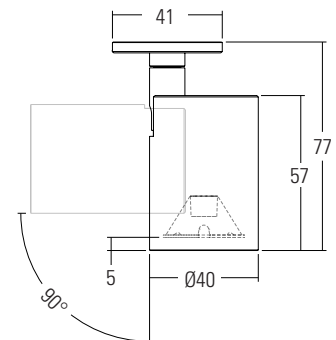
### /SMB Surface mounted base

The surface mount base offers hidden wiring and a machined pivot arm with lockable tilt and rotation of the fitting. Cable length: 200mm Weight: 0.61kg



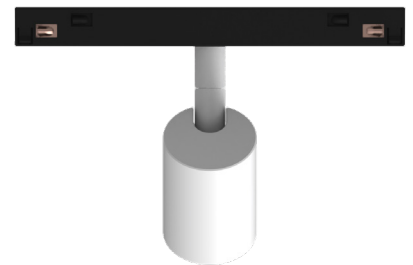
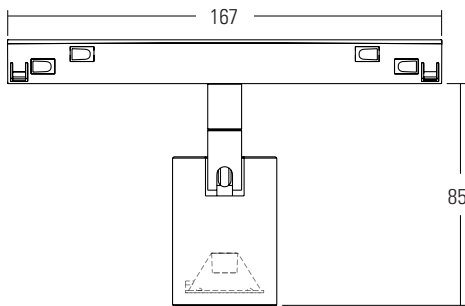
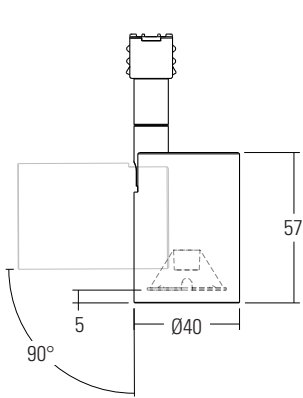
### /MP Mount plate

The surface mount plate is suited to applications where there is no access to the underside of the mounting surface. Cable length: 200mm Weight: 0.34kg



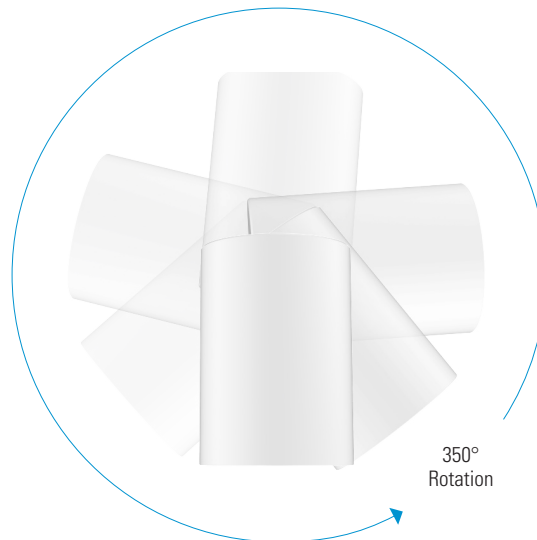
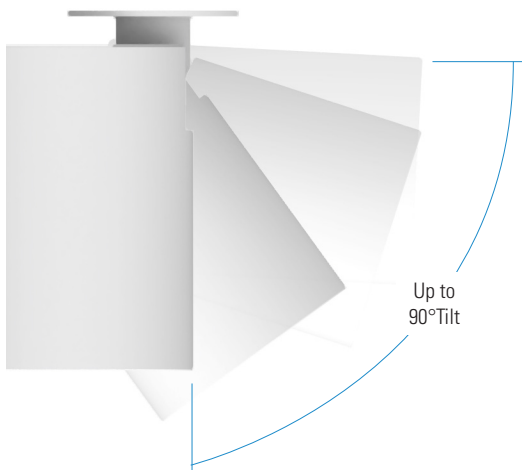
**TA233 Track adapter**

LD233 can be supplied with a low voltage track adapter which is compatible with both Stucchi and EUTRAC low track systems. The Track adapter houses an EldoLED solodrive LED driver with DALI compatibility.



**ADJUSTABILITY**

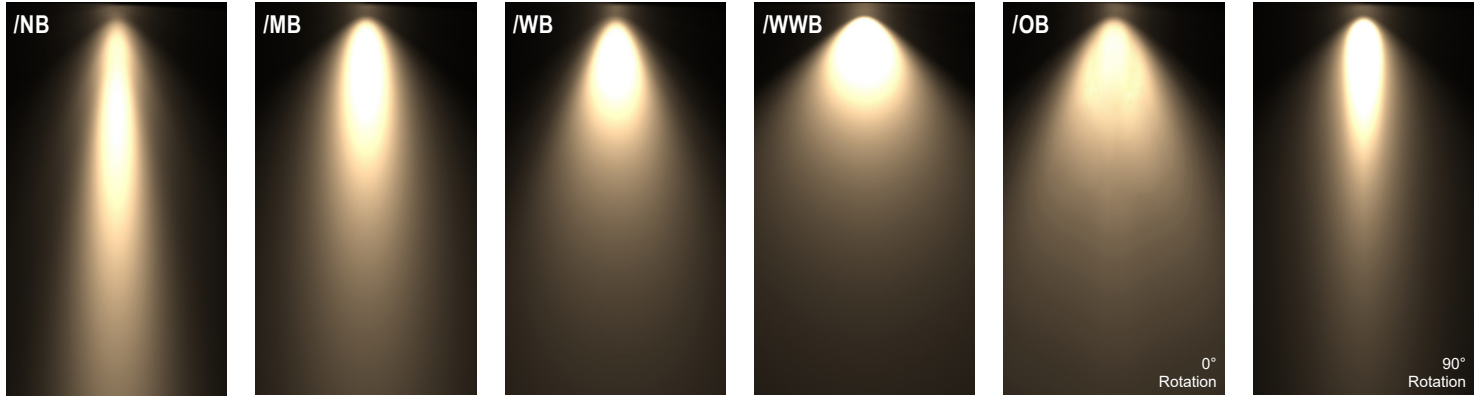
The LD233 has a tilt of 90° and can be rotated 350° across all fixing options.



CONE DIAGRAMS

E3 LED Engine

Cone diagrams below are based on a 3000K E3 LED engine run at maximum output 500mA, 7W. Images below represent beam outputs when wall washing a 3m wall, spaced 125mm away from the lit surface. Photometric files (LDT) are included in the design pack which can be downloaded from the LD233 product page on the website.



Narrow Beam  
500mA using a 12° optic

Distance (m)	Luminance (lx)	
0.5	0.13	19622
1.0	0.26	4906
1.5	0.39	2180
2.0	0.52	1226
2.5	0.65	785
3.0	0.78	545

Cone Width (m)

Medium Beam  
500mA using a 19° optic

Distance (m)	Luminance (lx)	
0.5	0.17	13955
1.0	0.33	3489
1.5	0.50	1551
2.0	0.66	872
2.5	0.83	558
3.0	0.99	388

Cone Width (m)

Wide Beam  
500mA using a 34° optic

Distance (m)	Luminance (lx)	
0.5	0.30	4017
1.0	0.60	1004
1.5	0.91	446
2.0	1.21	251
2.5	1.51	161
3.0	1.81	112

Cone Width (m)

Extra Wide Beam  
500mA using a 54° optic

Distance (m)	Luminance (lx)	
0.5	0.55	1992
1.0	1.09	498
1.5	1.64	221
2.0	2.18	124
2.5	2.73	80
3.0	3.27	55

Cone Width (m)

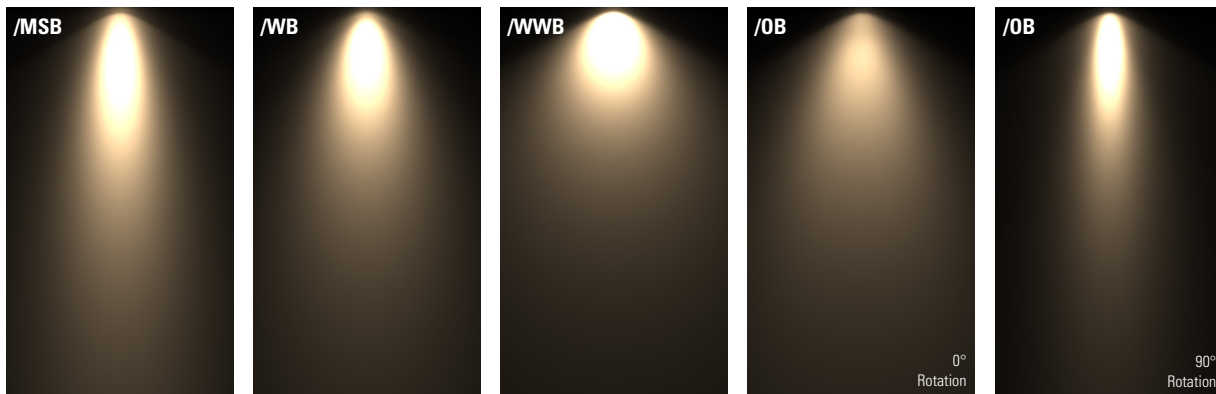
Oval Beam  
500mA using a 15° X 49° optic

Distance (m)	Luminance (lx)	
0.5	0.46 / 0.13	6723
1.0	0.92 / 0.26	2539
1.5	1.37 / 0.39	747
2.0	1.83 / 0.52	420
2.5	2.29 / 0.65	269
3.0	2.75 / 0.78	187

Cone Width (m)

F1 LED Engine

Cone diagrams below are based on a 3000K F1 LED engine run at maximum output 700mA, 7W. Images below represent beam outputs when wall washing a 3m wall, spaced 125mm away from the lit surface. Photometric files (LDT) are included in the design pack which can be downloaded from the LD233 product page on the website.



Medium Spot Beam  
700mA using a 21° optic

Distance (m)	Luminance (lx)	
0.5	0.19	10583
1.0	0.38	2646
1.5	0.57	1176
2.0	0.76	661
2.5	0.95	423
3.0	1.14	294

Cone Width (m)

Wide Beam  
700mA using a 37° optic

Distance (m)	Luminance (lx)	
0.5	0.33	3148
1.0	0.67	787
1.5	1.00	350
2.0	1.33	197
2.5	1.66	126
3.0	2.00	87

Cone Width (m)

Extra Wide Beam  
700mA using a 55° optic

Distance (m)	Luminance (lx)	
0.5	0.51	2024
1.0	1.03	506
1.5	1.54	225
2.0	2.06	126
2.5	2.57	81
3.0	3.08	58

Cone Width (m)

Oval Beam  
700mA using a 18° X 49° optic

Distance (m)	Luminance (lx)	
0.5	0.46 / 0.16	5511
1.0	0.92 / 0.31	1378
1.5	1.37 / 0.47	612
2.0	1.83 / 0.63	344
2.5	2.29 / 0.78	220
3.0	2.75 / 0.94	153

Cone Width (m)

ORDER CODES & OPTIONS

Example: LD233-E3-500 / LW30 / OB / FC / White / Matt Black / PL1

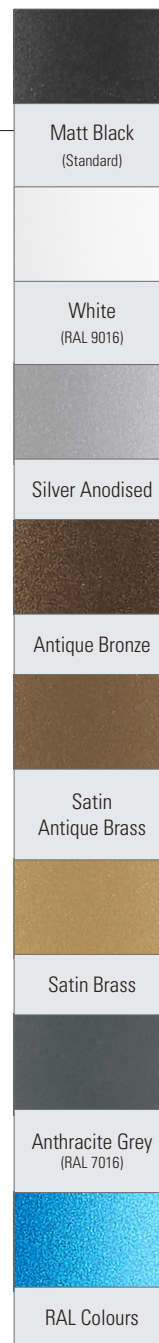
Light engine & drive current / LED colour / Beam angle / Glare control / Finish / Baffle finish / Fixing

**E3**

5W LED at 350mA	LD233-E3-350
7W LED at 500mA	LD233-E3-500

Extra Warm White (2700K)	/LW27
Warm White (3000K)	/LW30
White (4000K) - on request	/LW40
Cool White (5000K)	/LW50

12° Narrow	/NB
19° Medium	/MB
34° Wide	/WB
54° Extra Wide	/WWB
15° x 49° Oval	/OB



**F1**

3.5W LED at 350mA	LD233-F1-350
5W LED at 500mA	LD233-F1-500
7W LED at 700mA	LD233-F1-700

Super Warm White (2200K)	/LW22
Extra Warm White (2700K)	/LW27
Warm White (3000K)	/LW30
White (4000K) - on request	/LW40
Cool White (5000K)	/LW50

21° Medium spot	/MSB
37° Wide	/WB
55° Extra Wide	/WWB
18° x 49° Oval	/OB

**Drivers**  
Use with 350mA, 500mA and 700mA constant current LED drivers  
We have a range of dimmable LED drivers including DMX and DALI compatible. Please see the downloads section on our website.