

LD1090



Shallow Recessed Low Glare Adjustable LED Downlight

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The LD1090 is part of a new range of ultra shallow, high power downlights designed to fit into ceilings with a minimal recess depth. The adjustable, compact, high quality downlight delivers in excess of 900lm light output making it ideal for general downlighting, as well as wall washing and column lighting applications. This fitting is rated at IP40 as standard, but can be specified as IP65 for wet/humid areas including bathrooms and spas. Careful LED selection and extensive thermal testing and development time has resulted in a product that offers huge light output, from a very compact, shallow fitting. A minimalistic design ensures it complements most interior project styles.

Key Features

- Specially designed for ceilings with minimal recess depth - only a 70mm recess
- Adjustable with a 25° tilt
- High power 900lm output
- 93 CRI Cree LED
- Recessed LED and optic for reduced glare
- Single optic produces a very consistent beam with no multiple shadows
- High quality, machined, anodised aluminium components
- Compact design ensures it fits into most project styles
- IP65 option for wet areas including bathrooms and spas
- Constant force springs make this fitting suitable for delicate mounting surfaces
- Available with Switch, 0-10V, DMX, Dali or Mains dimmable drivers

Specification

Applications



Beam Angles

19°, 28°, 41°

LED type

1 x Cree CXB 1310 COB LED Engine

Colour temperature

2700K** / 3000K

5000K

Current	2700K** / 3000K			5000K		
	350mA	500mA	700mA	350mA	500mA	700mA
LED power (Max)	7W	10W	14W	7W	10W	14W
(Typical)	(6.6W)*	(9.4W)*	(13.3W)*	(6.6W)*	(9.4W)*	(13.3W)*
CRI (Min)	93	93	93	80	80	80
Forward voltage (V) ₁₀₀	18V	18V	18V	18V	18V	18V
Delivered lumens (L ₁₀₀)**	496	677	901	611	824	1107
Lumens per circuit watt***	75	72	68	93	88	83

LED lifetime (to 70% lumen maintenance)

50,000hrs at a max ambient temperature of 35°C (if higher ambient then run at 500mA up to 45°C)

Glass

IP65 version uses a 1mm thick low iron glass

Materials

Anodised aluminium, stainless steel constant force springs

Wiring

Comes pre-wired with 2 core 350mm lead, can be specified with up to 10m at extra cost

IP rating

IP40 & IP65

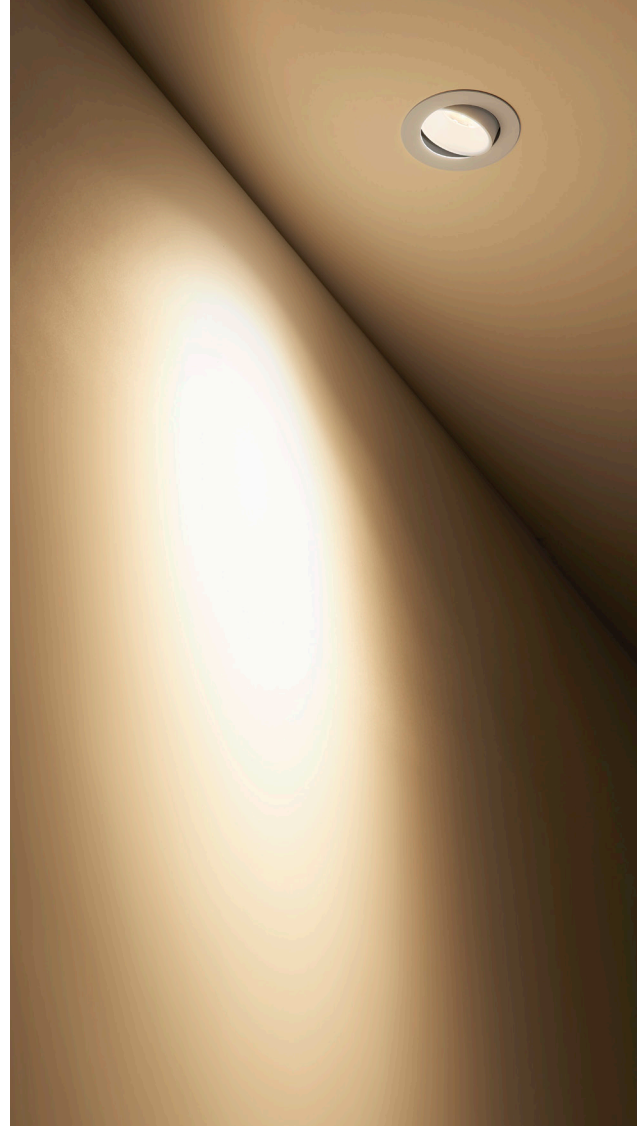
*indicates the nominal power for the LED run at that particular current and includes losses associated with using an 85% efficient driver

** lumen data is based on a medium beam using the IP40 version of the fitting

2700K lumen output is 12% lower than the 3000K figure listed

4000K lumen output is 14% higher than the 3000K figure listed (80 CRI)

***data shown is based on typical wattage



LD1090

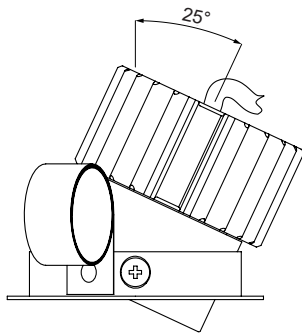
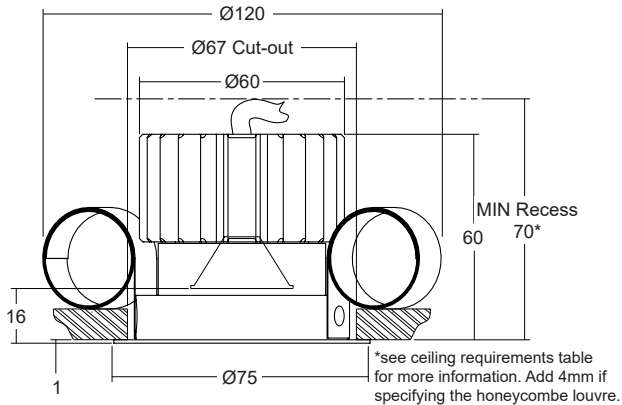


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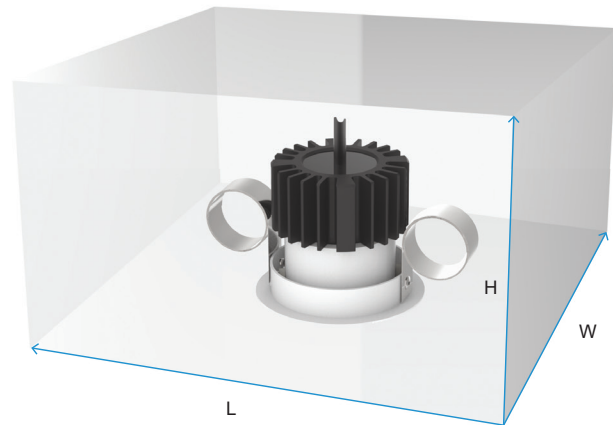
Dimensions and Fixing Options

Supplied as standard with constant force springs which are suitable for the majority of installations. They are particularly well suited to delicate surfaces.



Ceiling Requirements

Ceiling requirements can vary but the minimum ceiling void volume must be adhered to. The minimum possible ceiling depth is 70mm. The volumes below are presented as L x W x H.



Output current	Minimum ceiling void dimension requirements (Lmm x Wmm x Hmm)	Minimum Ceiling void volume	
		cm ³	Litre(s)
LD1090-350	120 x 120 x 70 (74 with /HL)	1008cm ³	1
LD1090-500	140 x 140 x 70 (74 with /HL)	1372cm ³	1.3
LD1090-700	200 x 200 x 70 (74 with /HL)	2800cm ³	2.8

Note: At 700mA the minimum dimension between a wall, within the ceiling void and the edge of the fitting must be 70mm.

Design



IP65 rated version

/IP65 - For wet areas including spas, bathrooms and showers the LD1090 can be specified as IP65. This comes with an additional glass and all parts are anodised.

Accessories

/HL - Honeycombe louvre for reduced glare. Please note this will increase the height of the fitting by 4mm.

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Cone Diagrams

Cone diagrams below are based on a 3000K LED run at maximum output 700mA, 14W.

Narrow Beam

700mA using a 19° optic

Distance (m)	Cone Width (m)	Luminance (lx)
0.5	0.20	22020
1.0	0.40	5499
1.5	0.55	2447
2.0	0.70	1376
2.5	0.90	881
3.0	1.10	611

Medium Beam

700mA using a 28° optic

Distance (m)	Cone Width (m)	Luminance (lx)
0.5	0.25	11416
1.0	0.50	2854
1.5	0.75	1268
2.0	1.00	713
2.5	1.25	457
3.0	1.50	317

Wide Beam

700mA using a 41° optic

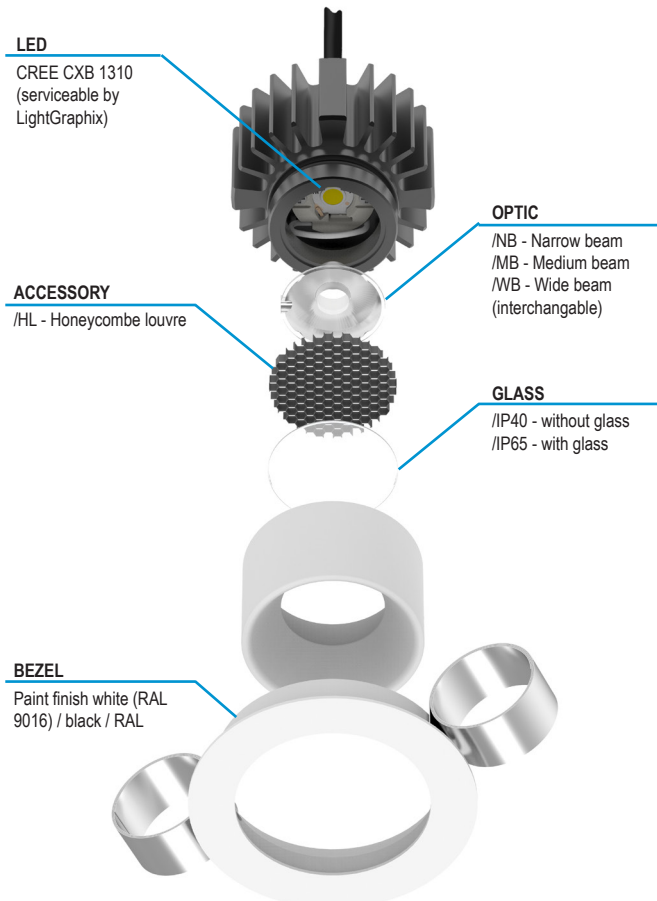
Distance (m)	Cone Width (m)	Luminance (lx)
0.5	0.45	5704
1.0	0.70	1426
1.5	1.10	634
2.0	1.50	357
2.5	1.85	228
3.0	2.20	158

Photometric files (LDT) are included in the design pack which can be downloaded from the LD1090 product page on the website.

Order Codes and Options

Product code	LED colour	Beam angle	IP rating	Accessory	Finish
LD1090 - 350 - 500 - 700	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Example: LD1090-500 / LW30 / WB / IP40 / HL / White



Product codes with output options

7W LED at 350mA	LD1090-350
10W LED at 500mA	LD1090-500
14W LED at 700mA	LD1090-700

LED colour options

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

Beam / lens angle options

19° narrow spot	/NB
28° medium	/MB
41° wide	/WB

IP rating

IP40	/IP40
IP65	/IP65

Accessory

Honeycombe louvre	/HL
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Finish options

Paint finish silver / black / white (RAL 9016) / antique bronze / satin antique brass / satin brass / RAL finish

Use with 350mA, 500mA and 700mA constant current LED drivers

We have a wide range of dimmable LED drivers, 0-10V, DMX, DALI and Mains dimmable.

Please see the downloads section on our website:

To run 1-2 LD1090-350 in series use a TXDEL350D (0-10V dimmable)

To run 1-2 LD1090-500 in series use a TXDEL500D (0-10V dimmable)

To run 1-2 LD1090-700 in series use a TXDEL700D (0-10V dimmable)