LD10235 with E1 LED Light Engine

High Power Floor or Ceiling Mounted Spotlight

LD10235 is a high power floor or ceiling mounted spotlight. It has been designed for applications where a recessed fitting cannot be installed, and a surface mounted solution is required. The LD10235 features a deep recessed E1 LED engine, optional glare shields and a range of optics. The LD10235 has been designed specifically to produce low glare illumination to walls and columns. This is a very tough, high quality fitting, machined from high grade materials ensuring excellent thermal and light output performance. Ideal for interior and exterior applications, incorporating an integral anti-wicking barrier for added protection. The LD10235 is available with a choice of switched; 0-10V, DMX, Dali or Mains dimmable remote drivers.

Key Features

- E1 engine, featuring the CREE XHP35 LED with 2-step binning
- Optional 2nd channel LEDs for secondary lighting applications
- Range of beam angles, featuring an impressively narrow 10° spot for lighting columns and arches, or a 15°x 49° spreader lens, which is ideal for wall washing applications
- Single optic produces a very consistent beam with no multiple shadows
- LED and lens recessed in a matt black anodised body for reduced glare
- Optional glare shield accessories available
- Minimal aesthetic enabling it to fit into most project styles
- Body machined from a solid billet of aluminium
- Range of finishes available
- Built-in reverse polarity protection
- LD10235 is available with RGBW and Tunable White LED engines

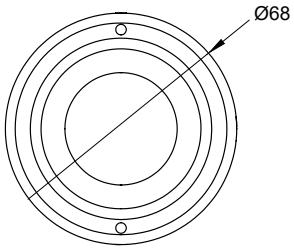
Specification

Applications						
Beam Angles	10°, 19°, 34°, 54°, 15°x 49°					
LED type	1 x E1 LED Engine with 2-step binning (LED data below)					
Colour temperature	2700K** / 3000K / 4000K			5000K		
Current	350mA	500mA	700mA	350mA	500mA	700mA
LED power (Max)	5W (4.4W)*	7W (6.3W)*	10W (9W)*	5W (4.4W)*	7W (6.4W)**	10W (9W)*
CRI (Typical)	85	85	85	80	80	80
Forward voltage ($V)_{100}$	14V	14V	14V	14V	14V	14V
Delivered lumens (L_{100})***	347	437	555	374	472	599
Lumens per circuit watt	69	62	55	75	67	59
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	3mm thick low iron glass					
Materials	Machined and anodized aluminium body, with a black anodised bezel					
Wiring	Comes pre-wired with a 1m lead, can be specified with up to 10m at extra cost					
IP rating	IP67					

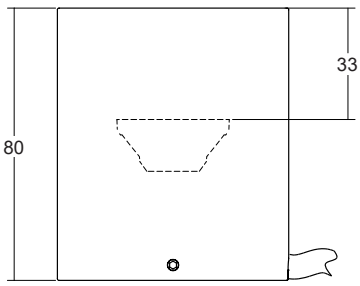
*indicates the nominal power for the LED run at that particular current and includes losses associated with using an 85% efficient driver
**2700K lumen output is 8% lower than the 3000K figure listed
***lumen output indicated is without the glare shield. Allow 30% less with the /GS glare shield.

Dimensions

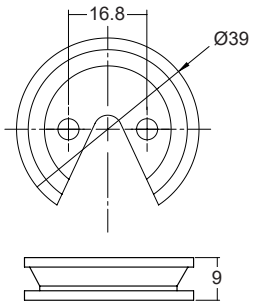
Top View



Side View



Mounting plate



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Glare Shields

LD10235 comes with a choice of glare control options to further reduce glare from the LED and optic. This does not reduce the light on the lit surface (wall) but will cut out some light onto the ceiling or floor.

/NGS
No glare shield. Deep recessed optic and matt black anodised optic holder aids in glare reduction.

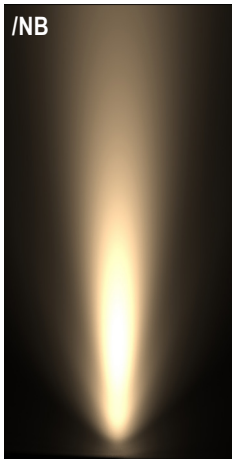
/GS
Standard glare shield provides an excellent balance between glare control and light output. This accessory works well in most applications.

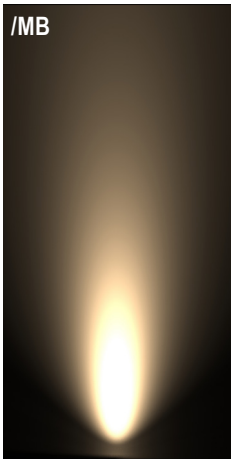
/GSHM
Half-moon glare shield for applications that require very low glare. Minimal loss of light on lit surface (wall) but overall lumen output typically reduced by 50-60%.

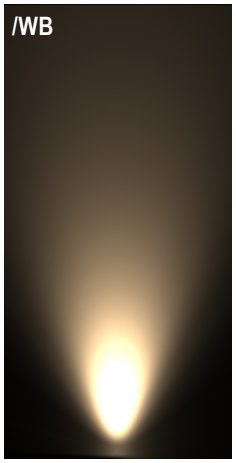
Please refer to our photometric files for lumen data. These are available to download from the website.

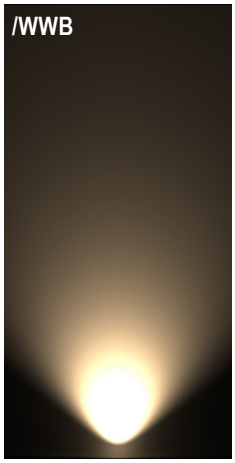
Cone Diagrams

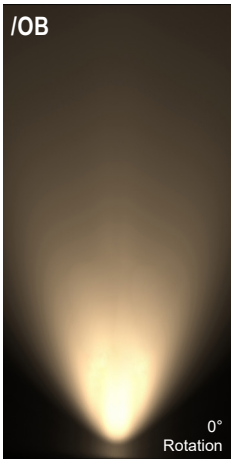
Cone diagrams below are based on a 3000K E1 LED engine run at maximum output 700mA, 10W. Images below represents beam outputs when wall washing a 3m wall, spaced 125mm away from the lit surface.

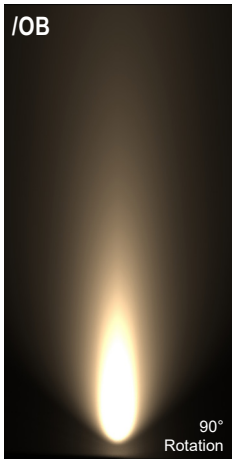












Narrow Beam
700mA using a 10° optic

Distance (m)		Luminance (lx)
3.0	0.62	750
2.5	0.52	1080
2.0	0.41	1688
1.5	0.31	3000
1.0	0.21	6751
0.5	0.10	27002

Cone Width (m)

Medium Beam
700mA using a 19° optic

Distance (m)		Luminance (lx)
3.0	1.06	346
2.5	0.88	498
2.0	0.71	779
1.5	0.53	1384
1.0	0.35	3114
0.5	0.18	12456

Cone Width (m)

Wide Beam
700mA using a 34° optic

Distance (m)		Luminance (lx)
3.0	1.97	114
2.5	1.64	164
2.0	1.32	256
1.5	0.99	455
1.0	0.66	1024
0.5	0.33	4095

Cone Width (m)

Extra Wide Beam
700mA using a 54° optic

Distance (m)		Luminance (lx)
3.0	3.06	55
2.5	2.55	79
2.0	2.04	124
1.5	1.53	220
1.0	1.02	496
0.5	0.51	1984

Cone Width (m)

Oval Beam
700mA using a 15° X 49° optic

Distance (m)		Luminance (lx)
3.0	2.70 / 0.74	190
2.5	2.25 / 0.61	274
2.0	1.80 / 0.49	428
1.5	1.35 / 0.37	761
1.0	0.90 / 0.25	1712
0.5	0.45 / 0.12	6846

Cone Width (m)

Photometric files (LDT) are included in the design pack which can be downloaded from the LD10235 product page on the website.

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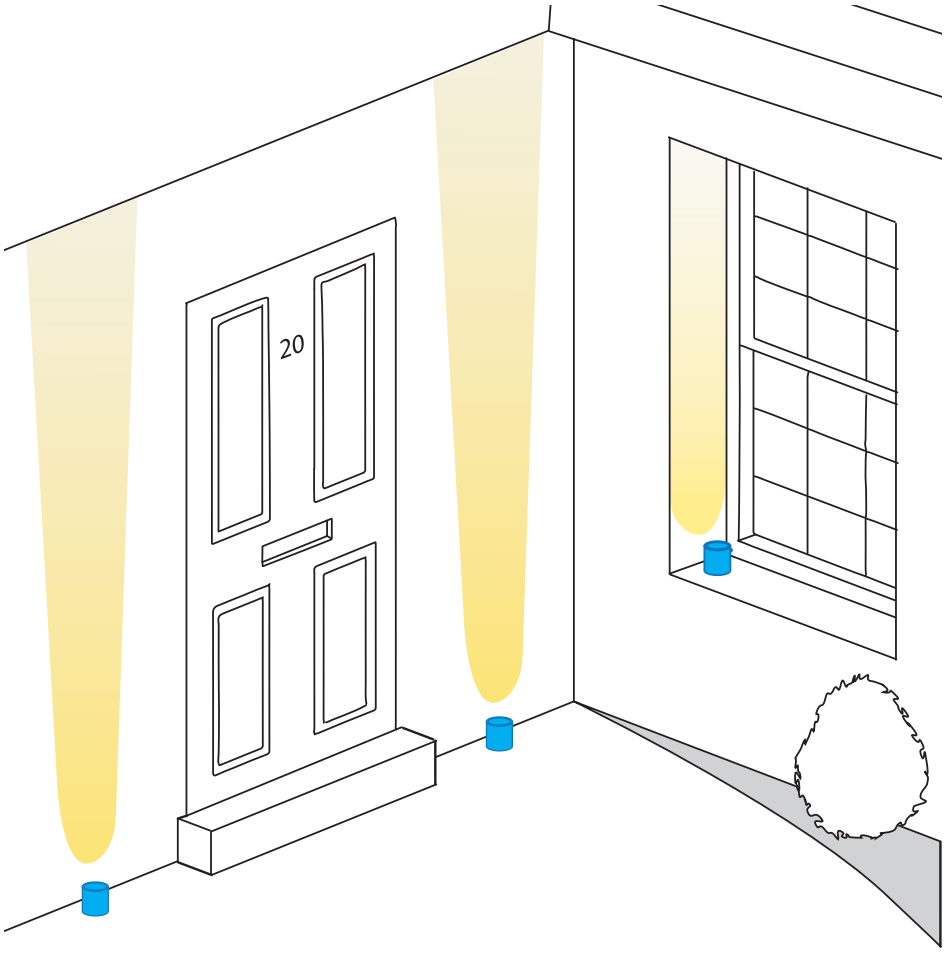
Applications

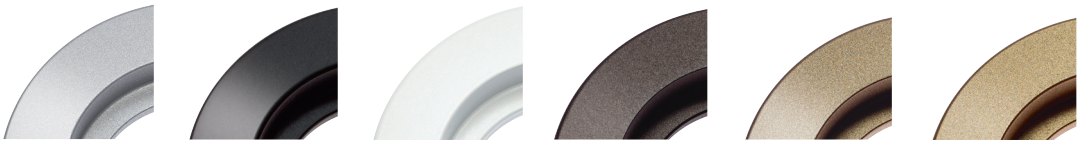
LD10235 is incredibly versatile, allowing it to be used in a variety of applications from lighting window reveals to wall and floor washing.



Finish Options

A range of finishes are available, as shown below. Silver anodized and painted finishes are suitable for both interior and exterior applications. However for harsh environments, anodizing is harder wearing. Please refer to our finishes guide for more information.

Silver Anodized | Paint Finish Black | Paint Finish White | Paint Finish Antique Bronze | Paint Finish Satin Antique Brass | Paint Finish Satin Brass



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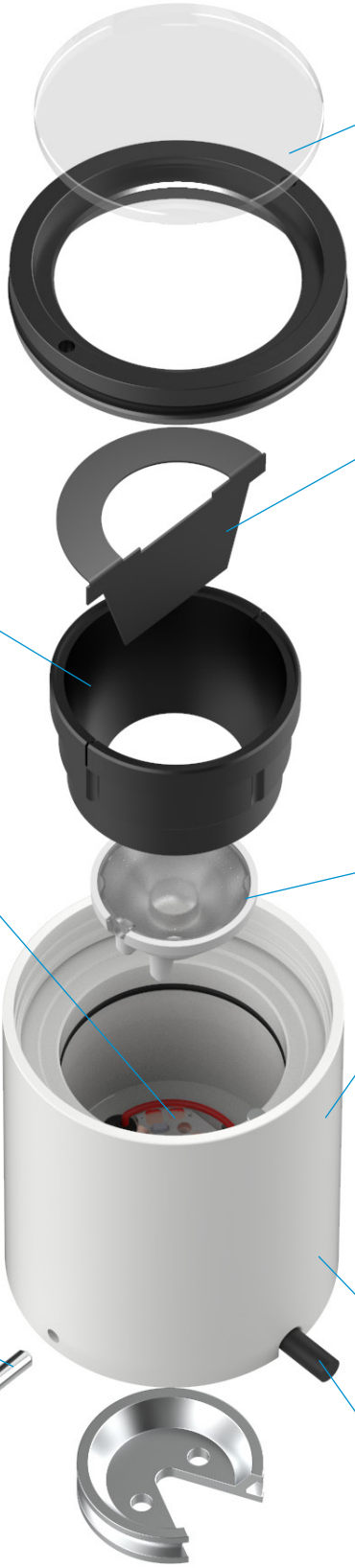
Product Parts



GLASS
3mm thick, low iron glass

GLARE SHIELD
Optional glare shield to reduce glare but not affect output on lit surface. With choices between our standard glare shield or a half moon glare shield design.

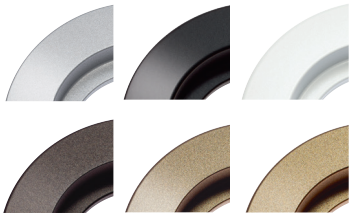
OPTIC HOLDER
Matt black anodised for low glare

LED

- E1 LED engine
- E1 LED engine, with the optional 2nd channel
- TW Tunable White LED engine
- RGBW LED engine with colour mix lens
- CLR Colour LED engine

OPTIC
High efficiency optics with a range of beam angles to create the perfect effect

FINISH
Silver anodized and in paint finish white (RAL 9016)/ black / RAL. Other paint finishes available, please contact the sales team



FIXING
M4 grub screws clamp down on the bracket to secure the fitting to the mounting surface

BODY
Machined and anodized body. 6000 series chosen for its thermal characteristics and resistance to corrosion

CABLE
Either horizontal or vertical cable exit (1m standard)

LD10235 with E1 LED Light Engine

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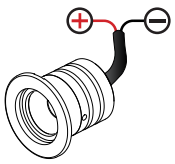
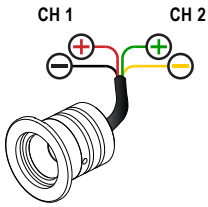
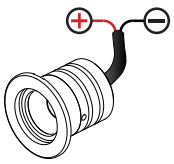
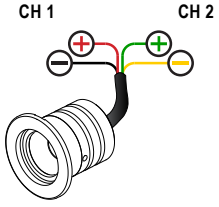
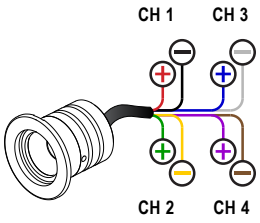
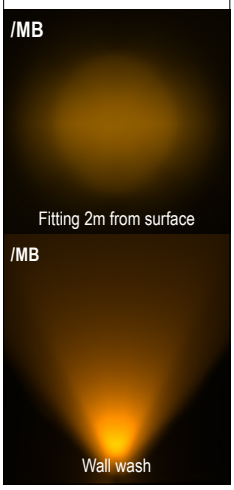
LED Options and Technology

LED Options

LD10235 is now available with a choice of light engines which feature an all copper board for increased thermal transfer. The E1 light engine for white light applications uses the Cree XHP35 LED and features on board polarity protection. This smaller LED chip has enabled a wider range of beam angles to be offered, coupled with increased efficiencies. This engine is also available with two extra LEDs on a second channel, for night lighting and marine navigation applications. The new tunable white engine offers a choice of dynamic colour options.

	E1 Light Engine (White light)	E1-2CH 2nd channel board	CLR - Colour	TW - Tunable White	RGBW
LED Board					
LED type	Cree XHP35	Cree XHP35 + XQEs	Cree XQEs	Cree XQEs	Cree XML
Key Features	- Available in 2700K, 3000K, 4000K and 5000K - Very small chip size - Tighter narrow beams - Wider range of beam angles - 2 step binning - Brighter more efficient LED - On board polarity protection - All copper LED board for increased thermal transfer	- Main white LED with optional 2nd channel for night lighting or marine navigation appli-cations - 2nd channel comprises of 2 XQE LEDs mounted next to the XHP35 - Beam shape from the XQE's is different from the main LED as they are mounted to the sides of the optic - 2 driver circuits required - All copper LED board	- 4 colour XQE LEDs mounted under a single optic - All copper LED board - Red, Blue, Green and Amber colour LED options - Single LED circuit	- 4 XQE LEDs mounted under a single optic - 2 LEDs per colour - Excellent dynamic white mixing from a range of optics - All copper LED board - 2 driver circuits required	- RGBW LEDs mounted under a single 26deg optic for superb colour mixing - White LED is 4000K - All copper LED board - 4 LED circuits required
Cables					
Lumen output	See page 1	See page 1		See table below	

2nd Channel Light Output



Tunable white lumen output data		
Colour temperature	Warm White 2700K or 3000K	Cool White 4000K or 5000K
Current	500mA	500mA
LED power (Max) All channels in use	7W (6.3W) 3.5W per channel	
CRI (Min)	85	
Delivered lumens (L_{100})	148lm	188lm
Lumens per circuit watt	42	54

Industry Leading LED Thermal Management

High quality, embedded copper PCB, with direct contact cooling for the LEDs providing industry leading thermal managment of the LED. Guaranteeing long life and minimal colour shift.

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Order Codes and Options

White LED Options - E1 Light Engine

Product code	LED colour	Beam angle	Glare shield	Finish
LD10235-E1 - 350 - 500 - 700				

Example: LD10235-E1-350 / LW30 / NB / NGS / White

Product codes with output options

5W LED at 350mA	**LD10235-E1-350**
7W LED at 500mA	**LD10235-E1-500**
10W LED at 700mA	**LD10235-E1-700**

LED colour options

	Suffix
Extra Warm White (2700K)	/LW27
Warm White (3000K)	/LW30
White (4000K) - on request	/LW40
Cool White (5000K)	/LW50
With 2nd channel (red for navigation or amber night lighting) LD10235-E1-2CH	/LW**+L*
For other single colour options, please discuss with the sales team	

Beam / lens angle options

10° narrow spot	/NB
19° medium	/MB
34° wide	/WB
54° extra wide	/WWB
15° x 49° oval	/OB

Glare shield

No glare shield	/NGS
Standard glare shield	/GS
Half-moon glare shield	/GSHM

Body finish options

Silver Anodised

Paint finish white/ black / RAL

For marine environments specify powder coat

Use with 350mA, 500mA & 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 1-4 LD10235-E1-350 in series use a TXDEL350D (0-10V dimmable)
To run 1-4 LD10235-E1-500 in series use a TXDEL500D (0-10V dimmable)
To run 1-3 LD10235-E1-700 in series use a TXDEL700D (0-10V dimmable)

Colour LED Options - CLR Light Engine

Example: LD10235-CLR-500 / LR / MB / NGS / White / 484N

LED colour options (max 500mA)	Suffix
Red	/LR
Green	/LB
Blue	/LG
Amber	/LA
Driver requirements identical to E1 engine, beam angles identical to TW engine	

Tunable White Options - TW Light Engine

Product code	LED colour	Beam angle	Glare shield	Finish
LD10235-TW - 350 - 500				

Example: LD10235-TW-350 / LW27 + LW40 / NB / NGS / White

Product codes with output options

5W LED at 350mA - 2 channels of 2 x 1.2W	**LD10235-TW-350**
7W LED at 500mA - 2 channels of 2 x 1.7W	**LD10235-TW-350**

LED colour options

	Suffix
Tunable White 2700K & 4000K (standard option)	/LW27 + LW40
Tunable White 2700K & 5000K	/LW27 + LW50
Custom	/LW** + LW**

Fitting comprised of 2x LEDs in one colour temperature & 2x LEDs in another.
Other white colour options available on request, please discuss with our sales team.

Beam / lens angle options

Narrow spot not available due to poor colour mixing

24° medium	/MB
38° wide	/WB
54° extra wide	/WWB
20° x 46° oval	/OB

Beam, and Glare shield options

Same as White LED options using the E1 Light Engine

Finish options

Same as White LED options using the E1 Light Engine

Use with 350mA & 500mA 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 1-7 LD10235-TW-350 in series use 2x TXDEL350D (0-10V dimmable)
To run 1-7 LD10235-TW-500 in series use 2x TXDEL500D (0-10V dimmable)

Colour Change RGBW Options - RGBW Light Engine

Product code	Glare shield	Finish	Accessories
LD10235-RGBW - 350 - 500			

Example: LD10235-RGBW-500 / White / NGS / 484N

Product codes with output options

5W LED at 350mA (4x 1.2W LEDs)	**LD10235-RGBW-350**
7W LED at 500mA (4x 1.7W LEDs)	**LD10235-RGBW-500**

RGBW features a 4000K white LED for creating hues

Beam / lens angle options

38° colour mix lens

Glare shield and finish options

Same as White LED options using the E1 Light Engine

Use with 350mA & 500mA constant current LED drivers

We have a range of dimmable LED drivers DMX and DALI compatible. Please see the downloads section on our website:
To run 2-13 LD10235-RGBW-350 in series use a TXDEL4A350DMX or TXDEL4A350DALI
To run 2-13 LD10235-RGBW-500 in series use a TXDEL4A500DMX or TXDEL4A500DALI