

LD155



Adjustable Exterior Rated Recessed Low Glare LED Uplight

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The LD155 is an IP67 rated, high powered, adjustable uplight designed for internal and external use. The product features our new N1 light engine offering over 900lm output, and an innovative new ball joint design that houses the LED, optics and accessories, allowing 360 rotation and 25 tilt adjustment in any direction. The precision machined module not only offers smooth and easy adjustment, but also ensures the LED operates at optimum temperatures by enabling the thermal transfer of heat throughout the body of the fitting. Quick on-site focussing is achieved with a removable inner bezel allowing all adjustments to be done from the front with no requirement to remove the product from the mounting surface. This is a very tough and versatile fitting, machined from high grade materials ensuring excellent thermal and light output performance.

Key Features

- Innovative ball joint design for multi-directional 25° tilt and 360° rotation
- Quick on-site focussing with removable inner bezel and supplied adjustment tool
- 3D printed tool allows fine adjustment of the tilt angle at set increments
- Interchangeable optics and accessories including a honeycomb louvre
- High quality machined stainless steel 316 and anodised aluminium components
- E1 LED engine, producing up to 617 lumens in 3000K
- N1 LED engine, producing up to 932 lumens in 3000K
- Single optic produces a very consistent beam, no multiple shadows
- Compact design with excellent thermal and light output performance
- Available with Switch, 0-10V, DMX, Dali or Mains dimmable drivers



Specification

	LD155 E1 (Max 617 Lumens)						LD155 N1 (Max 932 Lumens)					
Applications												
Beam Angles	10°, 19°, 34°, 70°, 15° x 49°						20°, 35°, 46°, 64°, 23° x 43°					
LED type	1 x E1 LED Engine (Cree XHP35) with 2-step binning						1 x N1 LED Engine (Cree CXB1310) with 2-step binning					
Colour temperature	2700K*** / 3000K / 4000K			5000K			2200K** / 2700K / 3000K / 4000K			5000K		
Current	350mA	500mA	700mA	350mA	500mA	700mA	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)*	7W (6.6W)*	10W (9.4W)*	14W (13.3W)*	7W (6.6W)*	10W (9.4W)*	14W (13.3W)*
CRI (Min)	85	85	85	80	80	80	93	93	93	80	80	80
Forward voltage (V) ₁₀₀	14V	14V	14V	14V	14V	14V	18V	18V	18V	18V	18V	18V
Delivered lumens (L ₁₀₀)****	349	437	617	377	471	667	487	701	932	611	879	1169
Lumens per circuit watt	70	62	62	75	67	67	70	70	67	87	88	84
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	6mm thick low iron glass											
Materials	Black anodised aluminium body, machine finish 316 stainless steel bezel (other options available) Sleeve - Black Acetal											
Wiring	Comes pre-wired with 250mm, 2 core cable. 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.

**2200K lumen output is 7% lower than the 3000K figure listed.

***2700K lumen output is 8% lower than the 3000K figure listed.

****lumen output indicated is without the honeycomb louvre.

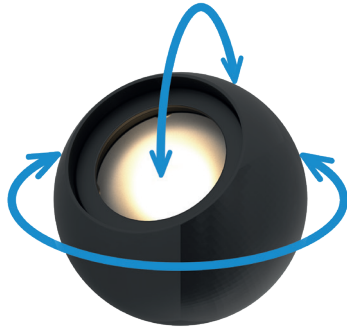
LD155



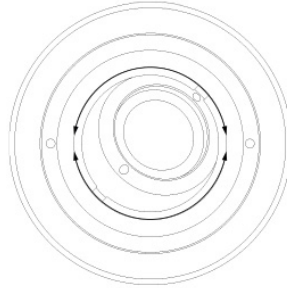
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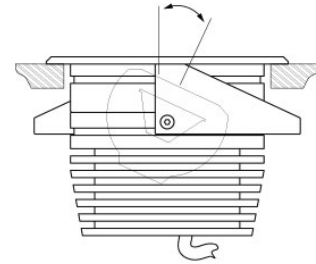
Adjustability



360° Rotation



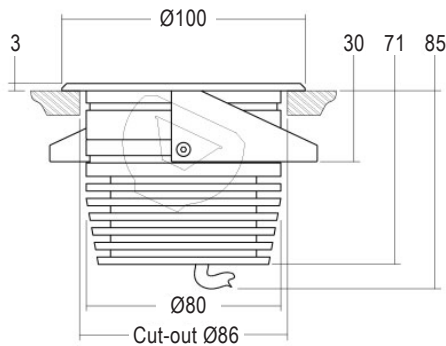
25° Tilt



Fixing Options

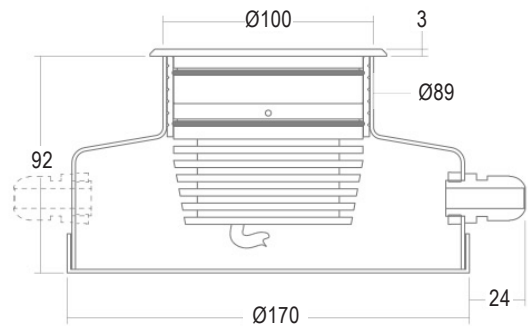
/SC - Spring Clips

Suitable for use in surfaces with a thickness of 1mm – 25mm, the LD155's spring clips can provide a simple, single fix mounting method. We recommend the spring clips are only used in non-walkover applications



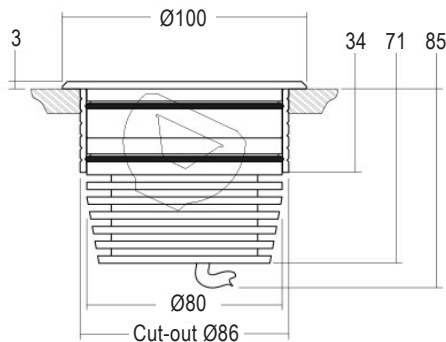
/485N or /485N-2 - Concrete Housing

The aluminium housing aids in keeping the LED fitting cool, as it helps with thermal transfer of the heat within the can to the surrounding concrete.



/485S - Fixing Sleeve and O-rings

Acetal sleeve is bonded into the mounting surface, with the fitting held in with O-rings. Recommended mounting for exterior in-ground applications.



/485N - Concrete housing with 1x PG9 IP67 gland



/485N-2 - Concrete housing with 2x PG9 IP67 gland

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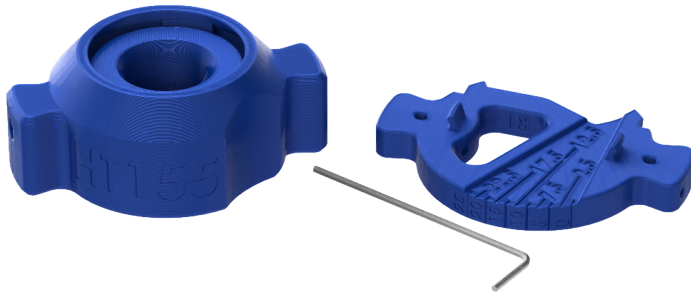
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Accessories

/HT155 - Hand tool.

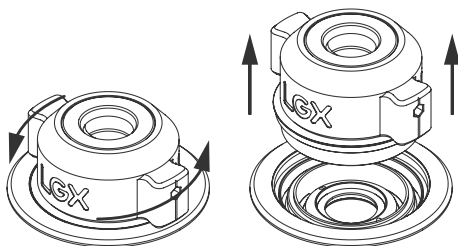
/HL - Honeycombe louvre for reduced glare.



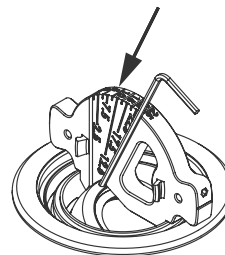
HT155 is required to open and adjust the LD155. This tool is unique to the LD155, allowing you to open the bezel, rotate and angle the LED module into the desired position. Angle adjustments are made either freehand, or with the supplied angle guide, working in increments of 2.5° (from 0° up to 25°). The hand tool is completely plastic to prevent accidental scratches when opening and making adjustments. If commissioning a large group, then more than one tool may be required to allow multiple people to make adjustments at the same time.

How to use the Hand Tool

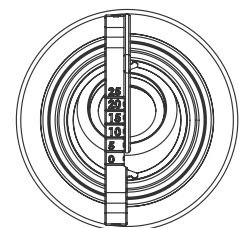
1 Pull apart the top half of the HT155 and fit into the corresponding holes on the top of the fitting. Press palm down on top of the tool, grip, and begin to unscrew the inner bezel.



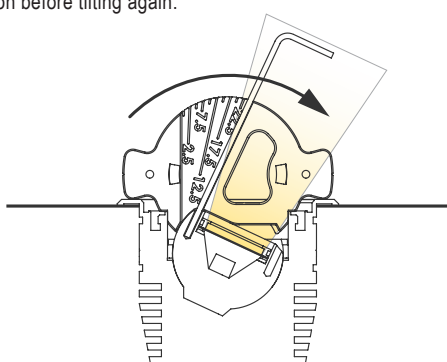
2 The LED can now either be focussed by hand, or by using the tool supplied. Place the LED Angle Adjustment tool inside the fitting, along with the provided allen key.



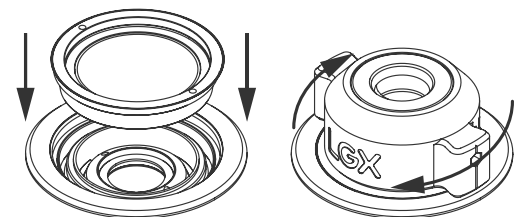
LIT SURFACE



3 Always start in the level & upright position. Push towards the desired lit surface. If you overshoot, bring the LED back to the starting position before tilting again.



4 Make sure inner bezel is clean before refitting. Ensure inner bezel is flush with the outer bezel.



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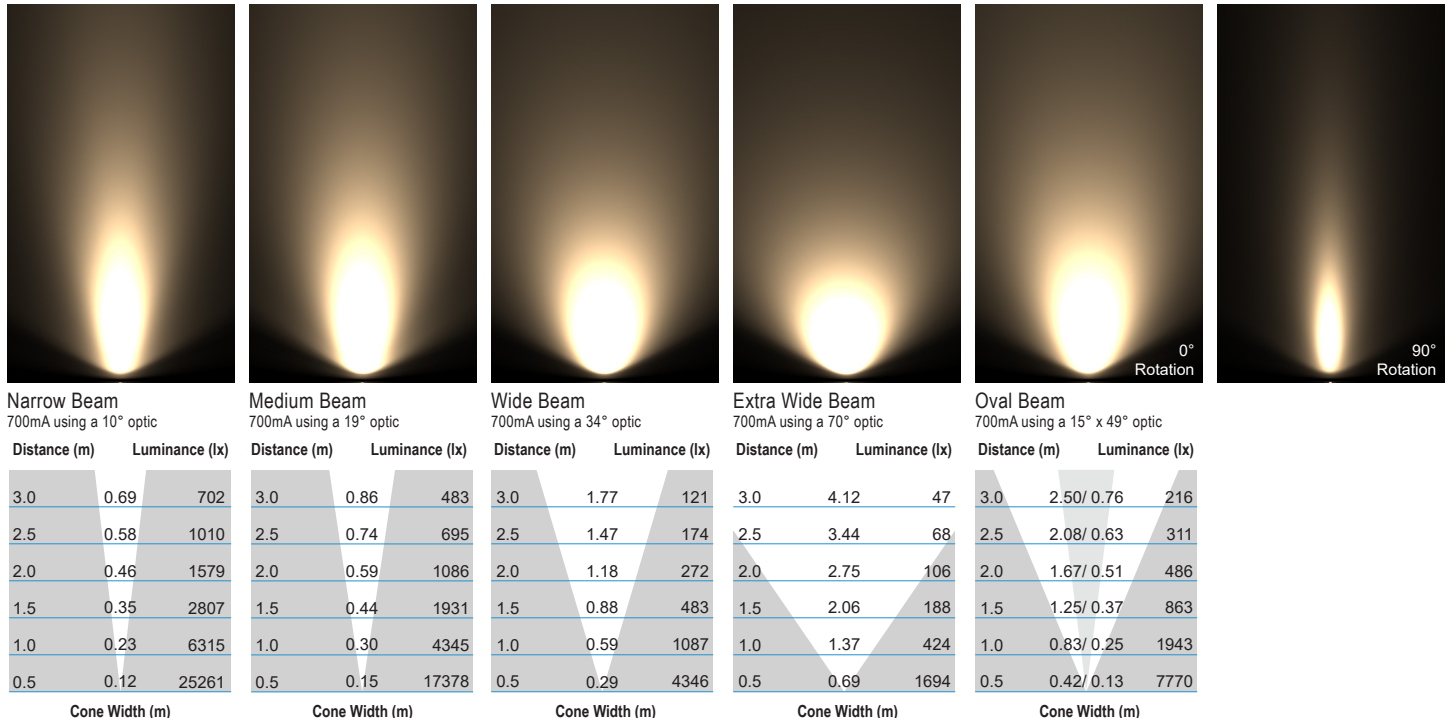


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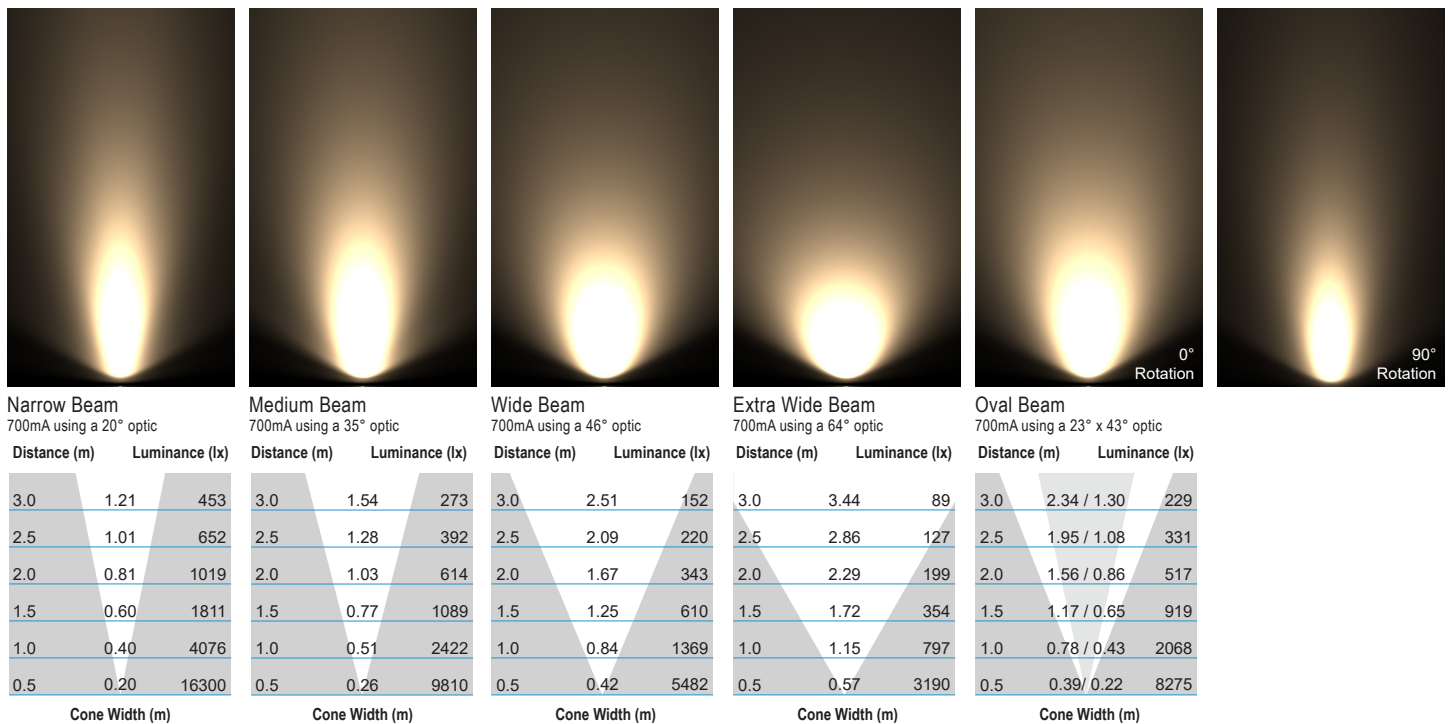
E1 Cone Diagrams

Cone diagrams below are based on a 3000K E1 LED engine run at maximum output 700mA, 10W. Images below are indicative beam outputs only with the LED spaced 125mm away from the lit surface.



N1 Cone Diagrams

Cone diagrams below are based on a 3000K N1 LED engine run at maximum output 700mA, 10W. Images below are indicative beam outputs only with the LED spaced 125mm away from the lit surface.



Photometric files (LDT) are included in the design pack which can be downloaded from the LD155 product page on the website.

LD155

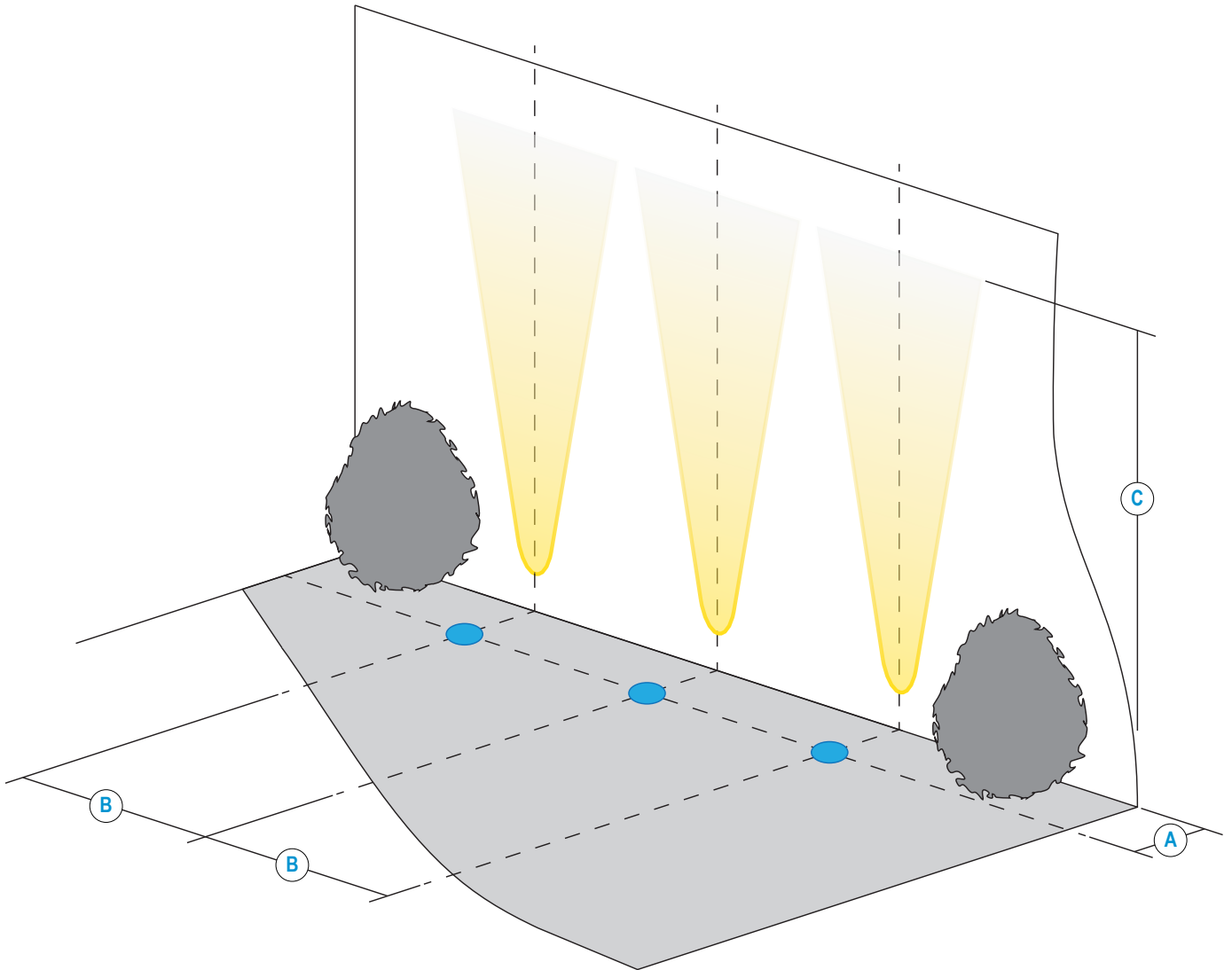


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Installation Guide

Below is a luminaire positioning guide for white LEDs. Every project and lighting scenario will be different; the table below is to be used as a starting point for any wall wash design. Please use our photometric files to further test the desired effect for your application. Files are available on our LD155 product page on our website.



LD155-E1	/NB	/MB	/WB	/WWB	/OB
A Distance from the centre of the fitting to the lit surface	125mm				
B Spacing for an even wash	250mm*	350mm	400mm	500mm	500mm
C 700mA Lit distance	20m	18m	8m	8m	13m

LD155-N1	/NB	/MB	/WB	/WWB	/OB
A Distance from the centre of the fitting to the lit surface	250mm				
B Spacing for an even wash	250mm*	500mm	750mm	1000mm	750mm
C 700mA Lit distance	27m	22m	17m	14m	21m

*Wall washing using narrow beam optics should only be used if the designer requires long distance lighting up the lit surface.

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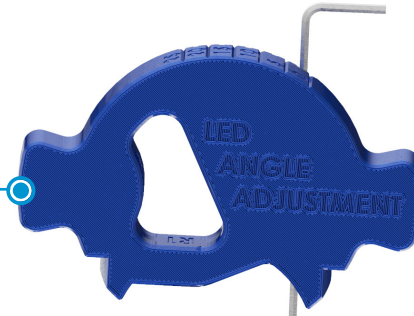
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Product Features

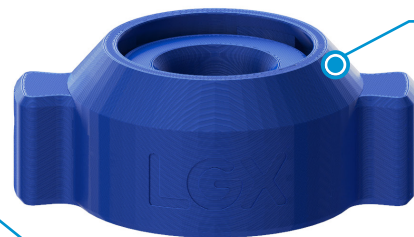
HAND TOOL - TILT ANGLE GUIDE

The tilt angle guide comes with an allen key. Designed to fit around the light engine and offers 2.5° of incremental adjustment, offering quick and easy on-site focussing.



HAND TOOL - BEZEL REMOVAL

Nylon pins designed to fit into the bezel apertures allow for easy, scratch-free access into the fitting.



REMOVABLE INNER BEZEL WITH GLASS

Inner bezel removal allows focusing and the changing of accessories and optics. The glass is 6mm thick low iron glass, suitable for walkover applications.



OPTIC AND ACCESSORY RING HOLDER

Clip-in ring allows for interchangeable accessories and optics



ACCESSORIES

Additional /HL - Honeycombe louvre for reduced glare.

OPTIC

High efficiency optics with a new range of beam angles to create the ideal lit effect.

E1 beam angles

- NB - 10°
- MB - 19°
- WB - 34°
- WWB - 70°
- OB - 15° x 49°

N1 beam angles

- NB - 20°
- MB - 35°
- WB - 46°
- WWB - 64°
- OB - 23° x 43°

BEZEL

High quality machined bezel available in 316 stainless steel, polished and passivated stainless steel, paint finish white (RAL 9016) / black / RAL. Other paint finishes available, for more information please contact our sales team.



BODY

Machined and anodised body. 6000 series aluminium chosen for its thermal characteristics and resistance to corrosion.



FIXING ACCESSORIES

Choose between our fixing sleeve, concrete housing or spring clips.



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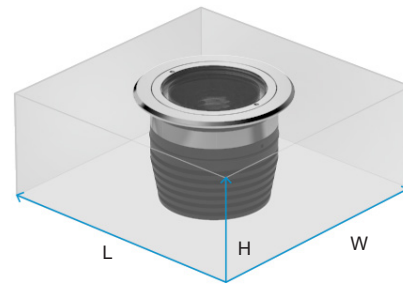
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Installation Requirements

Installation requirements can vary but the minimum installation volume requirements must be adhered to. The volume of air or concrete is to ensure that the thermal performance of the product is not compromised, and ensures the proper cooling of the LED. The minimum possible recess depth is 85mm. The volumes below are presented as L x W x H.

Mounting in surface with air void underneath - /SC Spring Clip and /485S Sleeve

If installing into a surface where there will be air around the base of the fitting, these are the minimum space requirements around the fixture. For example, a floating floor. The fixture can be installed into a solid floor but the minimum air volume requirements need to be adhered to.



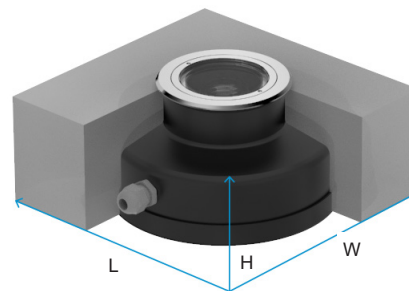
E1 LED			
Output current	Minimum void dimension requirements (Lmm x Wmm x Hmm)	Minimum void volume	
		cm ³	Litre(s)
LD155-E1-350	120 x 120 x 85	1,200cm ³	1.2
LD155-E1-500	160 x 160 x 85	2,200cm ³	2.2
LD155-E1-700	220 x 220 x 85	4,000cm ³	4.0

N1 LED			
Output current	Minimum void dimension requirements (Lmm x Wmm x Hmm)	Minimum void volume	
		cm ³	Litre(s)
LD155-N1-350	150 x 150 x 85	1,900cm ³	1.9
LD155-N1-500	180 x 180 x 85	2,700cm ³	2.7
LD155-N1-700*	240 x 240 x 85	4,900cm ³	4.9

* Max 25°C ambient

Mounting into solid concrete with the 485N Concrete Housing

Concrete is great for absorbing heat so the LD155 with the concrete housing performs very well. The below figures detail the minimum volume of concrete that should be used around the housing. This is not an issue if installed into a concrete floor, but can be if the housing is being used in lawn or soil applications where the housing is fixed at the base with a small amount of concrete.



E1 LED			
Output current	Minimum void dimension requirements (Lmm x Wmm x Hmm)	Minimum volume of concrete	
		cm ³	Litre(s)
LD155-E1-350	300 x 300 x 180	18000cm ³	18
LD155-E1-500			
LD155-E1-700	400 x 400 x 200	32000cm ³	32

N1 LED			
Output current	Minimum void dimension requirements (Lmm x Wmm x Hmm)	Minimum volume of concrete	
		cm ³	Litre(s)
LD155-N1-350	300 x 300 x 180	18000cm ³	18
LD155-N1-500			
LD155-N1-700	400 x 400 x 200	32000cm ³	32

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Order Codes and Options

E1 LED Engine - Up to 617 lumens



N1 LED Engine - Up to 932 lumens



Product code	LED colour	Beam angle	Accessory	Finish	Fixing
LD155-E1 - 350 - 500 - 700					

Example: LD155-E1-700 / LW30 / NB / HL / Stainless Steel / 485N

Product codes with output options

5W LED at 350mA	LD155-E1-350
7W LED at 500mA	LD155-E1-500
10W LED at 700mA	LD155-E1-700

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

10° narrow spot	/NB
19° medium	/MB
34° wide	/WB
70° extra wide	/WWB
15° x 49° oval	/OB

Accessory

Honeycombe louvre	/HL
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Bezel finish options

Stainless steel 316
 Polished and passivated stainless steel (for marine environments)
 Paint finish white / black / RAL (not suitable for high traffic areas)

*See our finishes guide for other options

Fixing accessories

Spring clips	/SC
First fix sleeve	/485S
Concrete housing 1x PG9 glands	/485N
Concrete housing 2x PG9 glands	/485N-2

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 1-4 LD155-E1-350 in series use a TXDEL350D (0-10V dimmable)

To run 1-4 LD155-E1-500 in series use a TXDEL500D (0-10V dimmable)

To run 1-3 LD155-E1-700 in series use a TXDEL700D (0-10V dimmable)

Product code	LED colour	Beam angle	Accessory	Finish	Fixing
LD155-N1 - 350 - 500 - 700					

Example: LD155-N1-700 / LW30 / MB / HL / Stainless Steel / 485N

Product codes with output options

7W LED at 350mA	LD155-N1-350
10W LED at 500mA	LD155-N1-500
14W LED at 700mA	LD155-N1-700

LED colour options

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

Beam / lens angle options

20° narrow spot	/NB
35° medium	/MB
46° wide	/WB
64° extra wide	/WWB
23° x 43° oval	/OB

Accessory

Honeycombe louvre	/HL
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Bezel finish options

Stainless steel 316
 Polished and passivated stainless steel (for marine environments)
 Paint finish white / black / RAL (not suitable for high traffic areas)

*See our finishes guide for other options

Fixing accessories

Spring clips	/SC
First fix sleeve	/485S
Concrete housing 1x PG9 glands	/485N
Concrete housing 2x PG9 glands	/485N-2

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 LD155-N1-350 in series use a TXDEL350D (0-10V dimmable)

To run 1-2 LD155-N1-500 in series use a TXDEL500D (0-10V dimmable)

To run 1-2 LD155-N1-700 in series use a TXDEL700D (0-10V dimmable)

HT155 - LD155 Hand Tool

Product code

LD155 Hand Tool	/HT155
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HT155 is required to open and adjust the LD155. One hand tool is enough to adjust a group of LD155s. If commissioning a large group, then more than one tool will be required to allow multiple people to make adjustments at the same time.