

LD155

In-Ground Adjustable LED Uplighter



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SPECIFICATION

LED surfaced mounted luminaires are class III for Safety Extra Low Voltage **DC** supply. The product should only be used with a supplied or LightGraphix approved **350mA, 500mA or 700mA** constant current driver.

Suitable for mounting on normally flammable surfaces.

Lamp: **E3, F1 or N1 LED Engine.**

This fitting is **IP67.**

Lumen Maintenance: L90B5 at 90,000hrs.

LD155 - E3			
Product & LED Output Code	Power Output	Max Ambient	Energy Class
LD155-E3-350	350mA 5W	-20°C to 50°C	D
LD155-E3-500	500mA 7W		E
LD155-E3-700	700mA 10W		E

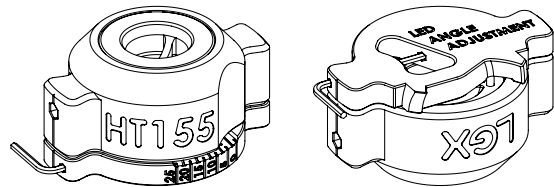
LD155 - N1			
Product & LED Output Code	Power Output	Max Ambient	Energy Class
LD155-N1-350	350mA 7W	-20°C to 50°C	G
LD155-N1-500	500mA 10W		
LD155-N1-700	700mA 14W		

LD155 - F1			
Product & LED Output Code	Power Output	Max Ambient	Energy Class
LD155-F1-350	350mA 3W	-20°C to 50°C	G
LD155-F1-500	500mA 5W		
LD155-F1-700	700mA 7W		

/HT155

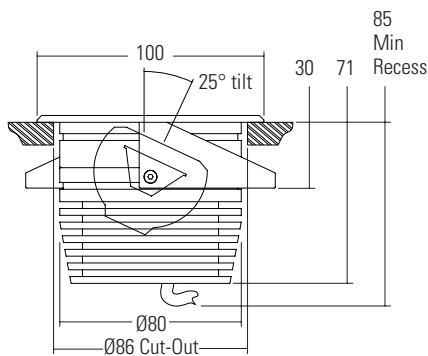
Adjustment hand tool for the LD155.

Included: 3D printed hand tool, LED angle tool & 2.5mm allen key.



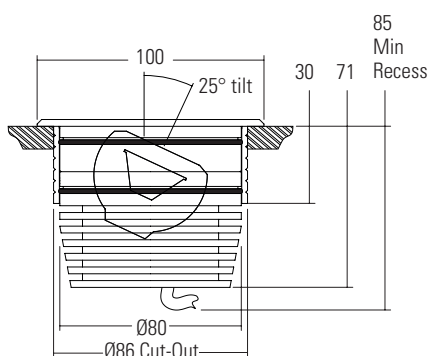
/SC

Spring Clips



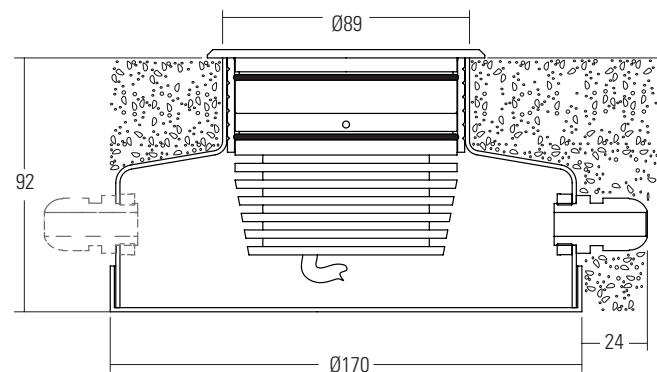
/485S

Mounting Sleeve



/485N OR /485N-2

Concrete Can



LD155

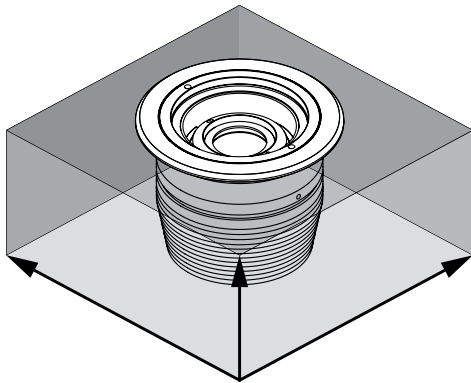
In-Ground Adjustable LED Uplighter



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AIR VOID REQUIREMENTS

For /SC and /485S Only. If installing into a surface where there will be air around the fitting, these are the minimum space requirements around the fixture to allow for proper cooling of the LED fitting.

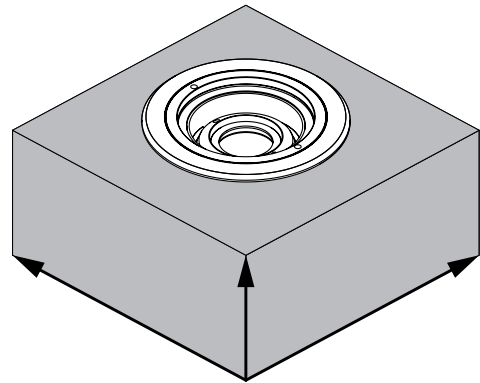


Output current	Minimum void dimension requirements (Lmm x Wmm x Hmm)	Minimum void volume	
		cm ³	Litre(s)
LD155-E3-350	120 x 120 x 85	1,200cm ³	1.2
LD155-E3-500	160 x 160 x 85	2,200cm ³	2.2
LD155-E3-700	220 x 220 x 85	4,000cm ³	4.0

These are the recommended minimum void/solid surface requirements. Going beyond the minimum specified dimensions will allow the LED fitting to cool itself more efficiently, extending the life of the product.

CONCRETE (OR SIMILAR) REQUIREMENTS

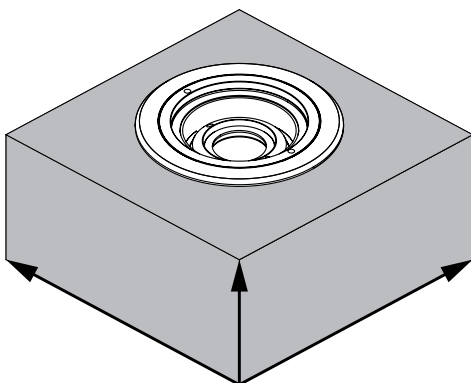
For /SC and /485S Only. If installing into a surface made from concrete (or similar), these are the minimum space requirements around the fixture to allow for proper cooling of the LED fitting.



Output current	Minimum solid surface dimension requirements (Lmm x Wmm x Hmm)	Minimum solid surface volume	
		cm ³	Litre(s)
LD155-E3-350	120 x 120 x 85	1,200cm ³	1.2
LD155-E3-500	160 x 160 x 85	2,200cm ³	2.2
LD155-E3-700	180 x 180 x 85	2,750cm ³	2.7

CONCRETE (OR SIMILAR) REQUIREMENTS

For /485N and /485N-2 Only. If installing into a surface made from concrete (or similar), these are the minimum space requirements around the fixture to allow for proper cooling of the LED fitting.



Output current	Minimum solid surface dimension requirements (Lmm x Wmm x Hmm)	Minimum solid surface volume	
		cm ³	Litre(s)
LD155-E3-350	300 x 300 x 180	18000cm ³	18
LD155-E3-500			
LD155-E3-700	400 x 400 x 200	32000cm ³	32

These are the recommended minimum solid surface requirements. Going beyond the minimum specified dimensions will allow the LED fitting to cool itself more efficiently, extending the life of the product.

IMPORTANT ADVISORIES

When using the Hand tool OR replacing the optic, the following must be followed:

- Fitting and surrounding area must be dry before opening the fitting. If the fitting has been wet, allow to dry thoroughly. Powered operation will help dry the fitting quicker.
- LED fitting must be powered off, allowed to cool down, and to be kept off until all work is done.
- Do not open fitting in moisture condensing, humid conditions.
- Do not exert excessive force on the bezel when opening or risk breaking the hand tool. If faced with a stubborn bezel, gently heat the fitting. Either through powered operation or with the use of a heat gun on a low heat setting.
- If the provided allen key for /HT155 is lost, a Ø3.00mm screw driver can be used in its place for adjustments.

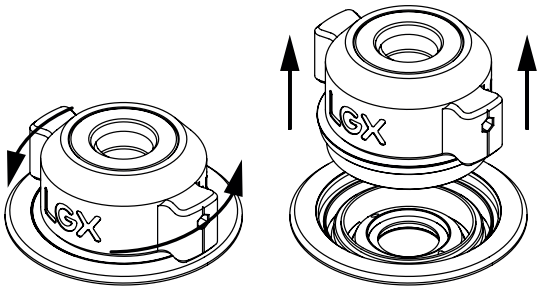
LD155 - /HT155

In-Ground Adjustable LED Uplighter

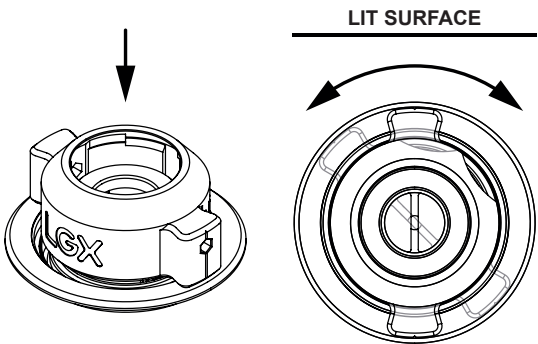
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INSTALLATION

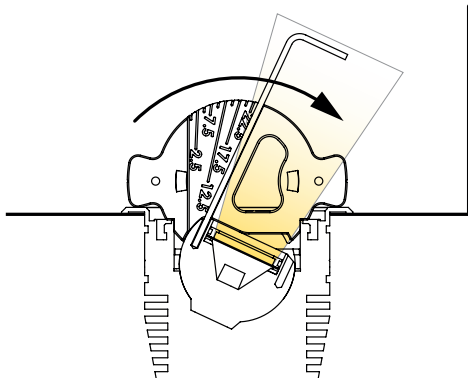
- 1** Pull apart the top half of the HT155 and fit into the corresponding holes on the top of the fitting. Press palm down on top of the tool, grip, and begin to unscrew the inner bezel. **NOTE: Keep Inner Bezel Clean**



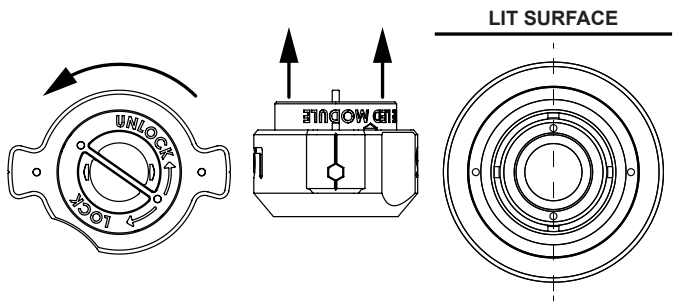
- 3** The inner pins will locate onto the LED module. Twist and orientate the LED to the desired position.



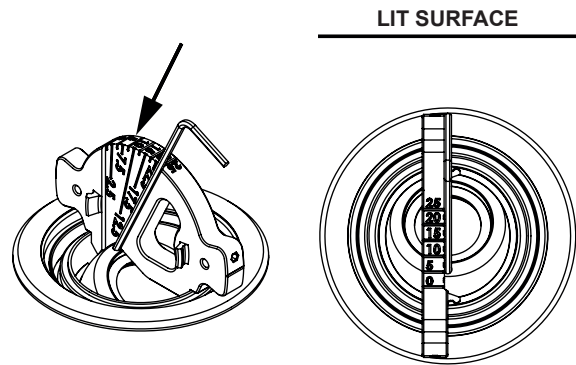
- 5** Always start in the level & upright position. Push towards the desired lit surface. If you overshoot, bring the LED back to the starting position before tilting again.



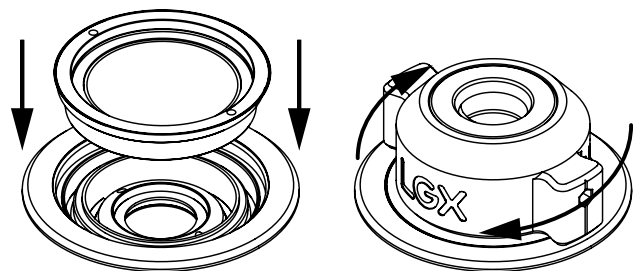
- 2** The holes on the LED module need to be perpendicular to the lit surface. Twist and pull out pins to extend.



- 4** Place the LED Angle Adjustment tool inside the fitting, along with the provided allen key.



- 6** Make sure inner bezel is clean before refitting. Ensure inner bezel is flush with the outer bezel.



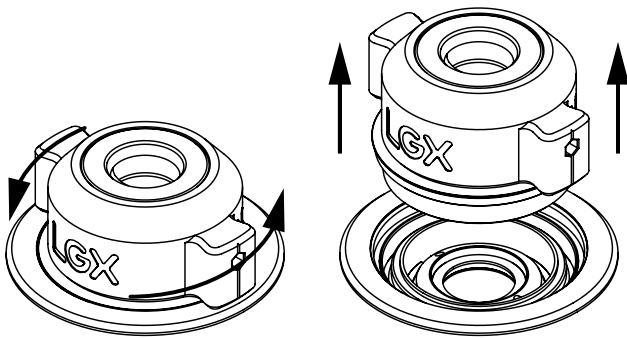
LD155 - OPTIC REPLACEMENT

In-Ground Adjustable LED Uplighter

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INSTALLATION

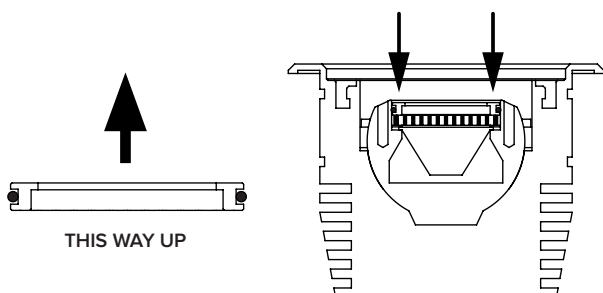
- 1** Pull apart the top half of the HT155 and fit into the corresponding holes on the top of the fitting. Press palm down on top of the tool, grip, and begin to unscrew the inner bezel. **NOTE: Keep inner bezel clean.**



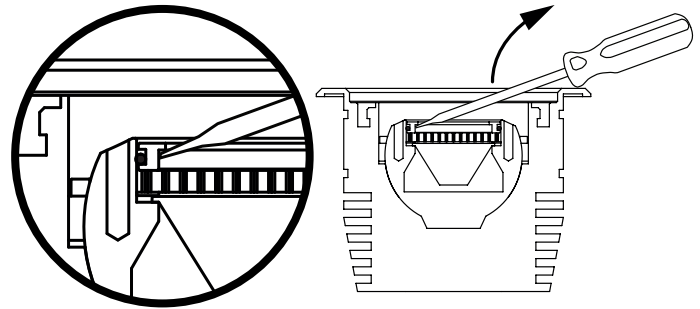
- 3** Below is the bill of materials for each beam angle option. Please contact LightGraphix if additional parts are required.

SUFFIX	PARTS NO.	DESCRIPTION
/NB	23.2070 & T10264	12° narrow beam
/MB	23.2070 & T110019	19° medium beam
/WB	23.2070 & T110020	34° wide beam
/WWB	23.2070 & T10283	54° extra wide beam
/OB	23.2063 & T10264	15° x 49° oval beam

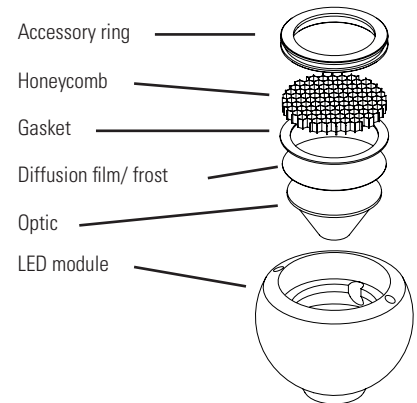
- 5** Once the optic/film has been replaced, the accessory ring will need to be pushed back into the LED module. Push until the ring is flat and level inside. Make sure the accessory ring is installed the correct way round.



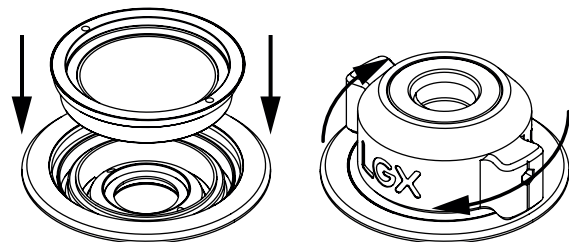
- 2** Using a wide slotted screwdriver, position the tool under the lip of the accessory ring, and pry the accessory ring out. Avoid using excessive force. **NOTE: Use a 5.5mm wide or larger slotted screwdriver.**



- 4** Shown on the right is the order in which the components need to be arranged in. Make sure that the film is installed matt side down, with the shiny side facing outwards.



- 6** Make sure inner bezel is clean before refitting. Ensure inner bezel is flush with the outer bezel.



LD155 - /SC

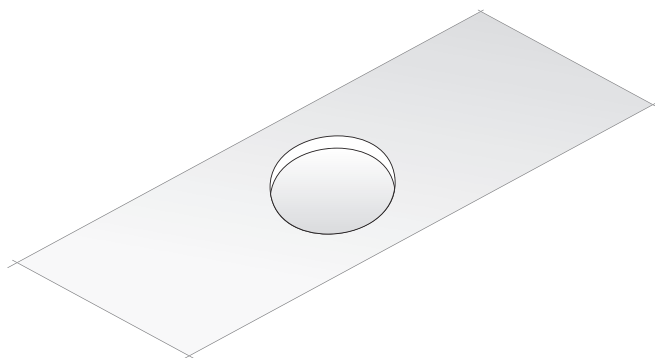
In-Ground Adjustable LED Uplighter



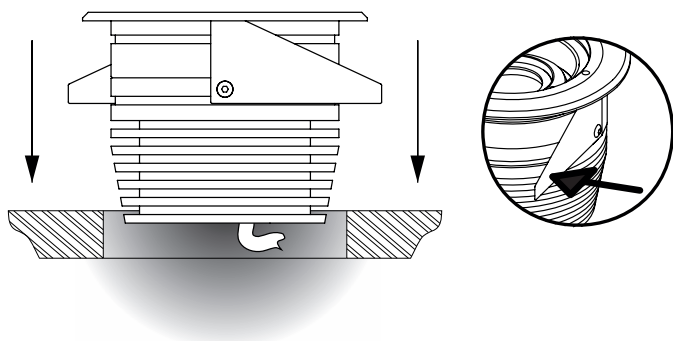
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INSTALLATION

- 1 Prepare cut out: Ø86mm

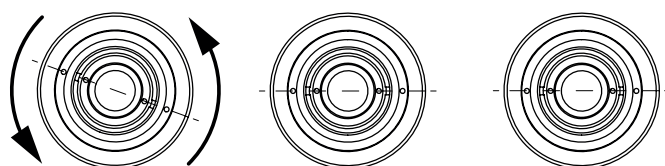


- 3 Compress springs against the side of the fitting.

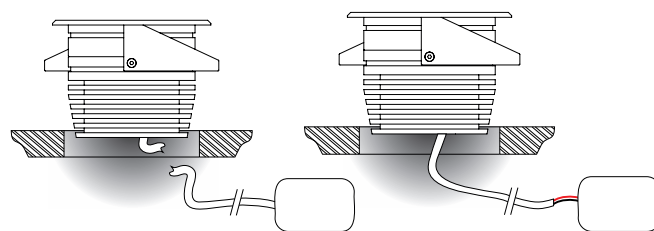


- 5 For a neat and tidy appearance, rotate the fitting so that the holes on the top of the fitting line up with the intended lit surface.

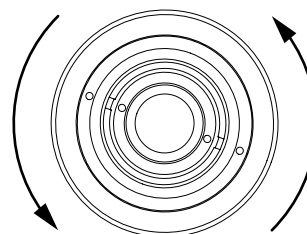
LIT SURFACE



- 2 Feed cable through to the driver's location. Connect luminaire to the specified driver, ensuring it is disconnected from the mains side. **NOTE: Connections in wet environments. Make IP68 connection to stop water travelling up the cables into the fitting!**



- 4 Rotate fitting anti-clockwise to allow the springs to bite into the mounting surface. This will help it stay securely in place.



- 6 Confirm installation was successful by powering up the fitting. If there is no light output, switch off power immediately and verify wiring.



LD155 - /485S

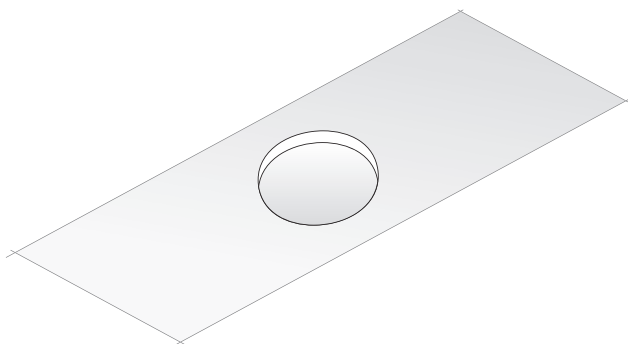
In-Ground Adjustable LED Uplighter



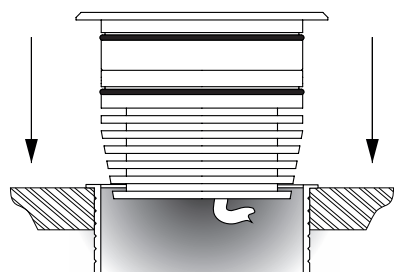
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INSTALLATION

- 1 Prepare cut out for fixing sleeve: $\varnothing 86\text{mm}$ (+1mm or +2mm)
Bond in sleeve for a secure fit. **NOTE: Rotabond 2000, 3M 4200 Marine, Simson MSR, Sikaflex 221 adhesives recommended.**



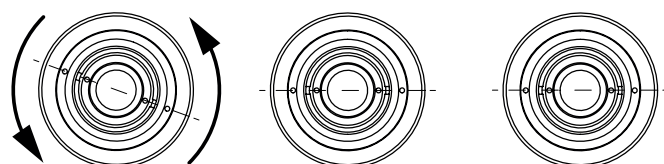
- 3 Grease O-rings with a heavy duty, silicone-free grease and place LD155 into sleeve. Failure to do so could hamper removal and cause damage to concrete can. **DO NOT PUSH IN FULLY YET!**



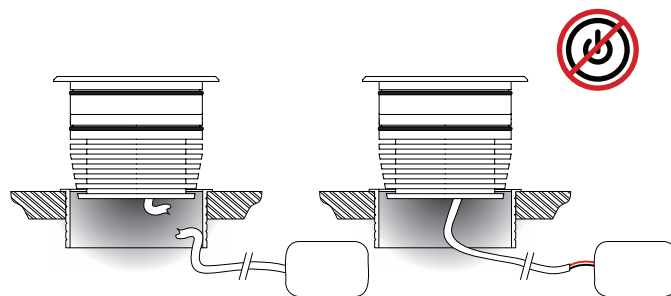
NOTE: "Rocol Synthetic Grease Sapphire Premier" recommended

- 5 Confirm installation was successful by powering up the fitting. If there is no light output, switch off power immediately and verify wiring.

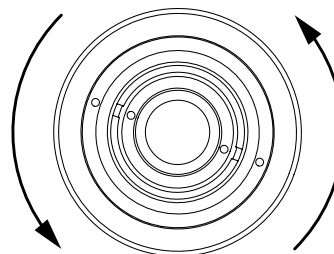
LIT SURFACE



- 2 Feed cable through to the driver's location. Connect luminaire to the specified driver, ensuring it is disconnected from the mains side. **NOTE: Connections in wet environments. Make IP68 connection to stop water travelling up the cables into the fitting!**



- 4 For a neat and tidy appearance, rotate the fitting so that the holes on the top of the fitting line up with the intended lit surface. Once in a satisfactory orientation, push fittings fully into their sleeves.



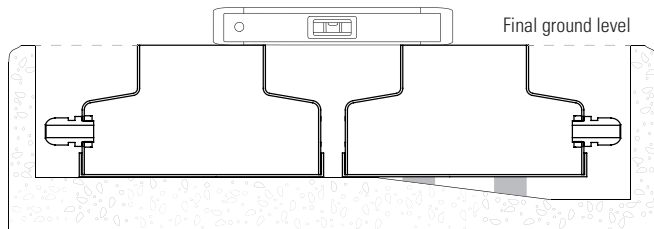
LD155 - /485N

In-Ground Adjustable LED Uplighter

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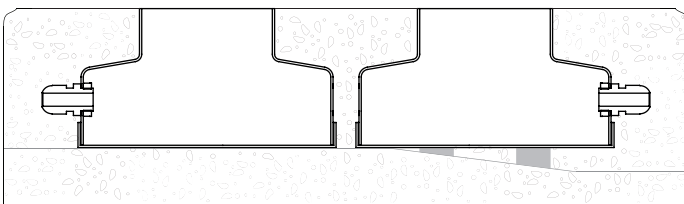
INSTALLATION

- Place the concrete can in the prepared area/cavity, this must be level. If the housing requires bolster, ensure it is supported.

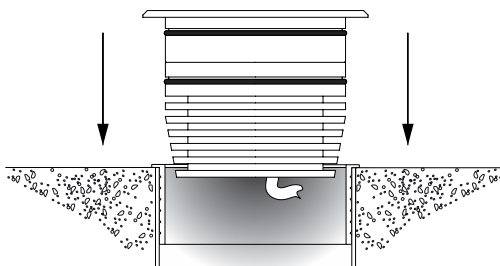


/485N Concrete can has been used for illustration use only

- Fill remaining cavity with concrete. When pouring ensure as little material falls into the can as possible.

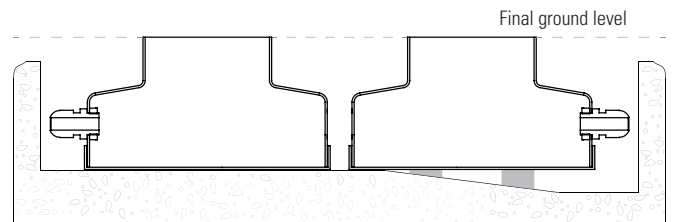


- Grease O-rings with a heavy duty, silicone-free grease and place LD155 into sleeve. Failure to do so could hamper removal and cause damage to concrete can. DO NOT PUSH IN FULLY YET!

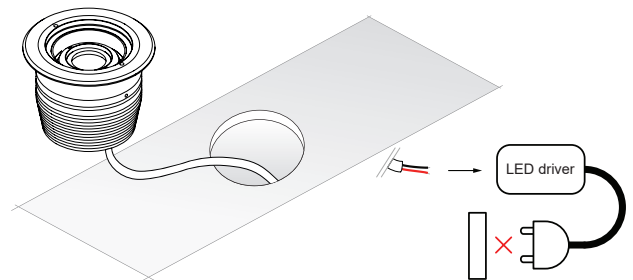


NOTE: "Rocol Synthetic Grease Sapphire Premier" recommended

- If a secondary surface is going to be used ensure the concrete is offset by the specified material thickness.

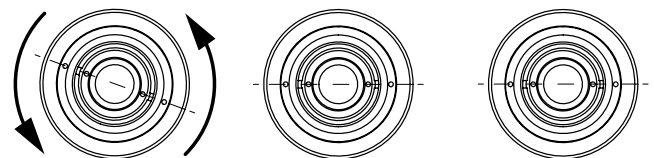


- Feed cable through to the driver's location. Connect luminaire to the specified driver, ensuring it is disconnected from the mains side. **NOTE: Connections in wet environments. Make IP68 connection to stop water travelling up the cables into the fitting!**



- For a neat and tidy appearance, rotate the fitting so that the holes on the top of the fitting line up with the intended lit surface. Once in a satisfactory orientation, push fittings fully into their sleeves.

LIT SURFACE



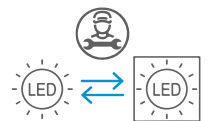
SEE CONSTANT CURRENT WIRING SHEET FOR IN SERIES WIRING DIAGRAM

Do not power up until fitting is wired correctly! Constant current LEDs must be wired in series, polarity is critical. Please refer to specified driver sheet for details on the minimum and maximum number of LEDs per circuit.

CORE COLOUR & POLARITY		
Colour of Cable	Red	Black
Polarity	+	-

END OF LIFE

This fitting contains a replaceable (LED only) light source, that must be replaced by a professional. If the product has come to the end of its life or is in need of repair please contact LightGraphix or your preferred recycling scheme.



IMPORTANT

Make sure that all cables and connections are securely connected before switching on the power. Failing to do this can lead to failure of the LEDs and/or the driver. If the LEDs do not work upon power up, turn off the power source immediately and check the polarity of the wiring. Any attempt made to open up and/or modify the luminaire will invalidate the manufacturer's warranty. The external cable of this luminaire cannot be replaced; if the cable is damaged the luminaire shall be destroyed. This is inclusive of but not limited to removal of the LightGraphix product label or removal of any parts from the main body of the product including bezels, electrical components and factory fitted fixing methods (unless otherwise stated in these instructions). Luminaire should be wired no further than 30 meters away from a SELV constant current LED driver (based on a 1mm squared cross sectional cable). Forward voltage of luminaire is 18VDC, if wired in series UOUT of LED driver and luminaire circuit should not exceed 60VDC. Terminal block not included. Installation must be performed by a qualified person. For connections made in dry environments 2 x Wago 221-2411 or connections with similar specifications are recommended. For damp or wet environments a connector of the same electrical specification but with a suitable IP rating should be used. The fitting guarantees a minimum static load resistance of 5kN. The rated maximum surface temperature is less than 100°C.

MAINTENANCE

Clean with soft damp cloth
LED: Please contact LightGraphix
O-ring replacement part numbers: Outer O-ring 17.0010.

CONNECTION

- Wire Connection Method: Clamp
- No. of Positions: 1Way
- Rated Voltage: 450V
- Rated Current: 32A
- Wire Size (stranded): 18 - 14AWG