

LD1093 & LD1093Z

ULTRA Adjustable Marine Grade Downlight



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SPECIFICATION

LED surfaced mounted luminaires are class III recessed 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 & N1 LED Engine.**

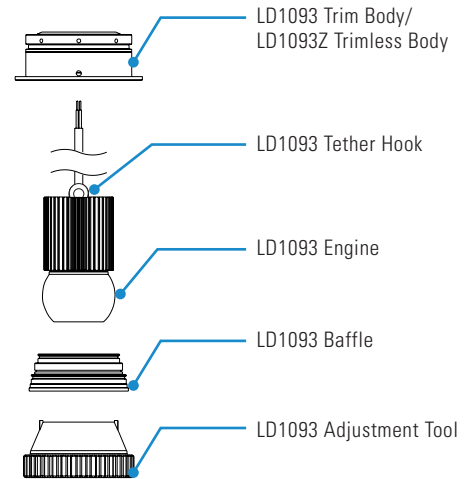
This fitting is **IP67** rated.

Lumen Maintenance: L90B5 at 90,000hrs.

LD1093-E3/ LD1093Z-E3 & LD1093-AU-E3/ LD1093Z-AU-E3					
Product & LED Output Code	Power Output	Minimum void dimensions (Lmm x Wmm x Hmm)	Minimum void volume		Max Ambient
LD1093-E3-350	350mA 5W	100x100x120	1200	1.2	-20°C to 45°C
LD1093-E3-500	500mA 7W				-20°C to 35°C
LD1093-E3-700	700mA 10W				-20°C to 35°C
LD1093-AU-E3-350	350mA 5W	100x100x120	1200	1.2	-20°C to 25°C
LD1093-AU-E3-500	500mA 7W				-20°C to 25°C
LD1093-AU-E3-700	700mA 10W				-20°C to 25°C

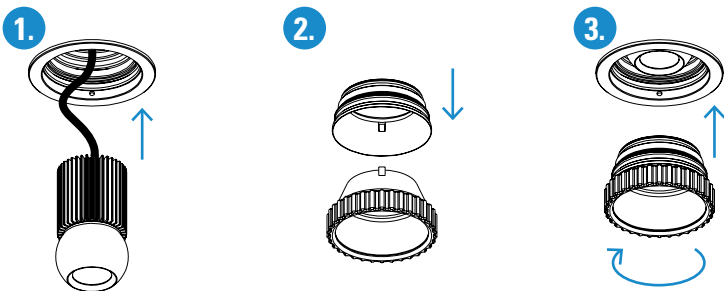
LD1093-N1/ LD1093Z-N1 & LD1093-AU-N1/ LD1093Z-AU-N1					
Product & LED Output Code	Power Output	Minimum void dimensions (Lmm x Wmm x Hmm)	Minimum void volume		Max Ambient
LD1093-N1-350	350mA 7W	100x100x120	1200	1.2	-20°C to 45°C
LD1093-N1-500	500mA 10W				-20°C to 35°C
LD1093-N1-700	700mA 14W				-20°C to 35°C
LD1093-AU-N1-350	350mA 7W	100x100x120	1200	1.2	-20°C to 25°C
LD1093-AU-N1-500	500mA 10W				-20°C to 25°C
LD1093-AU-N1-700	700mA 14W				-20°C to 25°C

LD1093 COMPONENT KEY



DIAGRAM

LD1093/LD1093Z Engine install



ENGINE INSTALLATION

1. Wire the luminaire to a specified driver ensuring the power is off.

NOTE: Connections in wet environments. Make IP68 connection to stop water travelling up the cables into the fittings! Refer to IP connection sheet for further details.

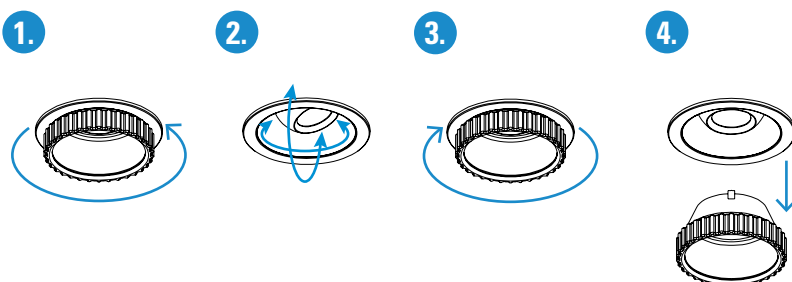
2. Place the baffle on top of the adjustment tool.

3. Tighten baffle until unable to tighten anymore. Remove tool from fitting. Confirm installation was successful by powering up the fitting. If there is no light output, switch off power immediately and verify wiring.

Safety tether use optional when installing. Components to be supplied by other.

DIAGRAM

LD1093/LD1093Z Angle adjustment



FITTING ADJUSTMENT

NOTE: BEFORE ADJUSTING ENSURE FITTING IS POWERED OFF AND THE FITTING HAS COOLED DOWN

1. Loosen off baffle slightly.

2. Adjust ball in desired angle. Make tilt adjustments by hand.

3. Tighten baffle until unable to tighten anymore. The ball should be secure and locked into position. The baffle should not protrude past the bezel.

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

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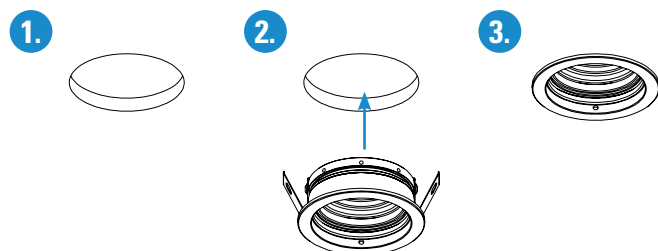
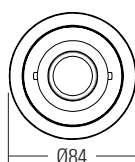
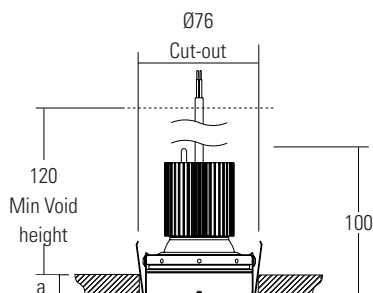
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DIAGRAM

LD1093/SC



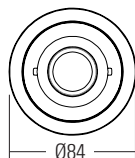
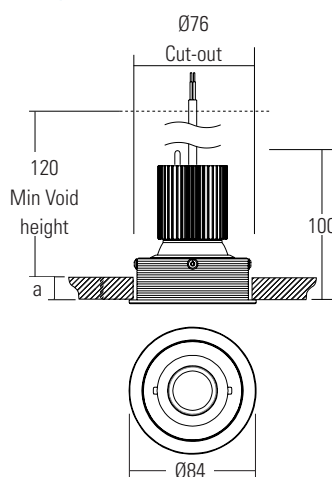
INSTALLATION

1. Cut Ø76 diameter hole at intended ceiling location.
2. Compress springs on body and bezel, and offer up into the cut-out.
3. Refer to page 1 for installing and adjusting LD1093 Engine.

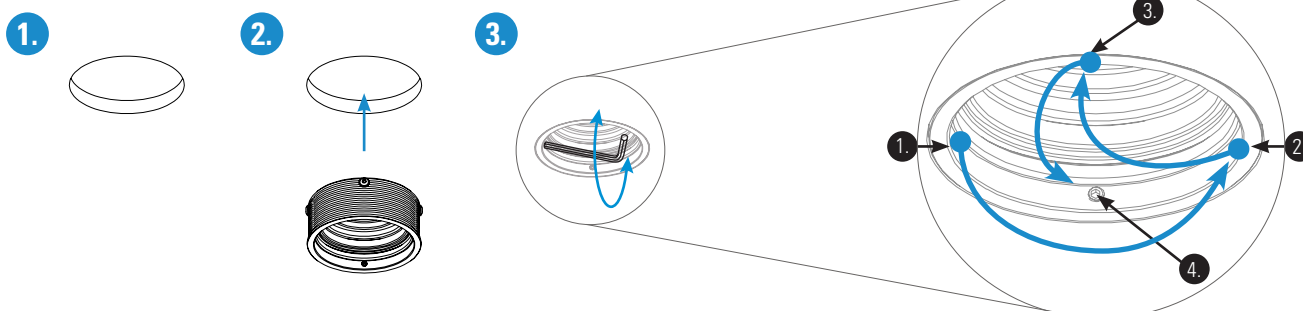
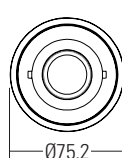
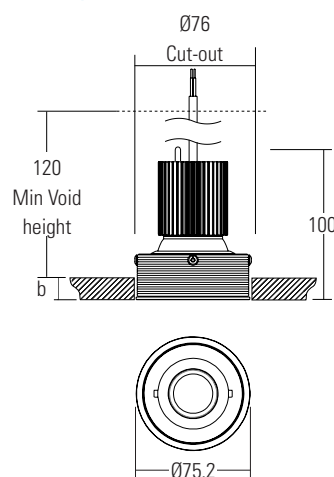
Ceiling Thickness (a)	Min	6mm
	Max	18mm

DIAGRAM

LD1093/493XPR



LD1093Z/493XPR



INSTALLATION

1. Cut Ø76 diameter hole at intended ceiling location. Its vital to cut a tidy and accurate hole for the expansion ring.
2. Offer fixing up into the cut-out.
3. Once flush with the ceiling, the (x4) M4 grub screws on the inside of the fitting must be tightened with a M4 allen key . Its important to evenly tighten the grub screws. The grub screws should be tightened as per step 3 (the screws should be fastened in a symmetrical order). Ensure the fixing is adequately tightened, and does not come lose from the ceiling.
4. Refer to page 1 for installing and adjusting LD1093 Engine.

Ceiling Thickness (a)	Min	3mm
	Max	30mm

Ceiling Thickness (b)	Min	12mm
	Max	30mm

LD1093 & LD1093Z

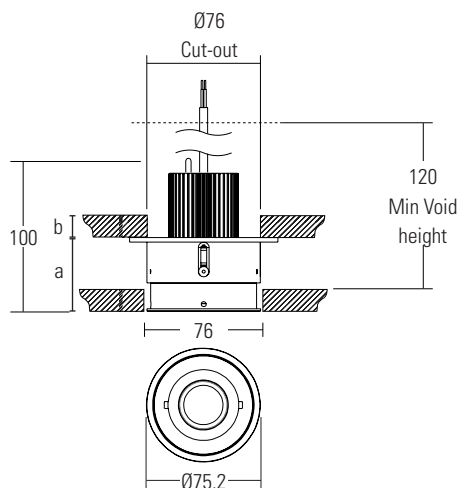
ULTRA Adjustable Marine Grade Downlight



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DIAGRAM

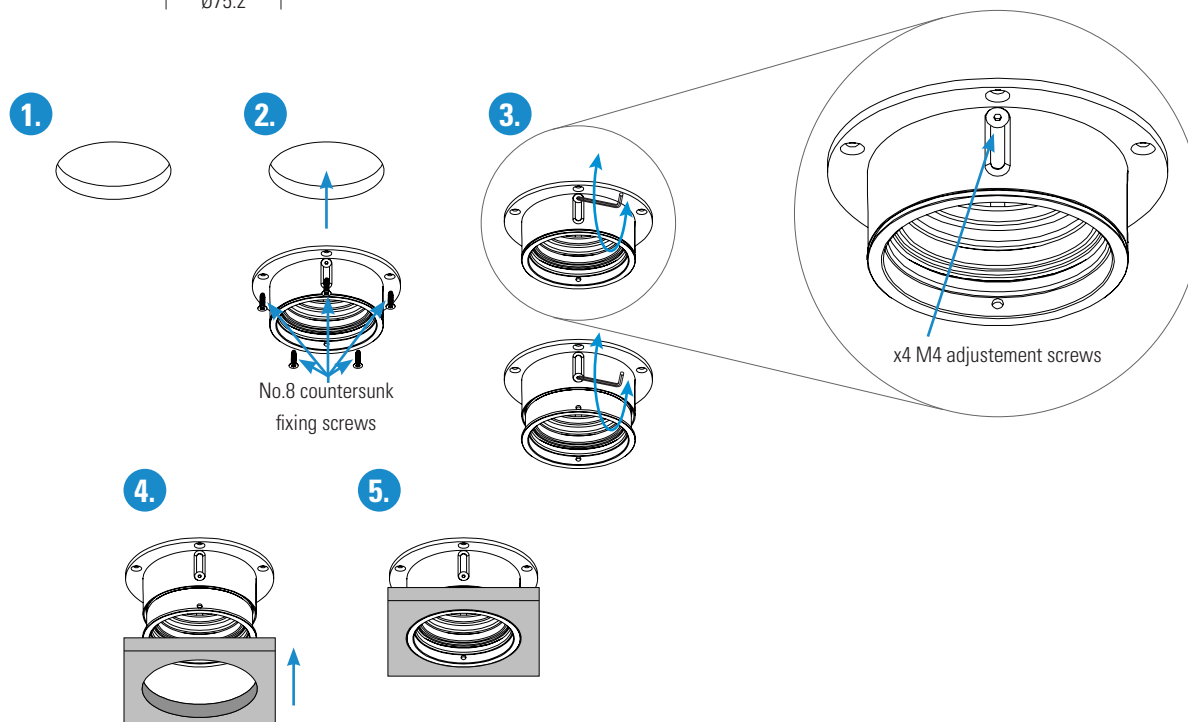
LD1093Z/493SMS



INSTALLATION

1. Cut Ø76 diameter hole at intended ceiling location.
2. Position the fixing over the cut-out, and secure using x5, No.8 countersunk fixing screws.
3. Loosen all 4 M4 adjustment screws using M4 allen key. Set the sleeve to desired height. After setting height, tighten the 4 hex screws until fitting is secure.
4. Offer up second ceiling panel with Ø75.2 cut-out.
5. **Refer to page 1 for installing and adjusting LD1093 Engine.**

Void Gap (a)	Min	32.7mm
	Max	45.7mm
Ceiling Thickness (b)	Min	1mm
	Max	5mm (18mm if fitting at minimum)



LD1093 & LD1093Z

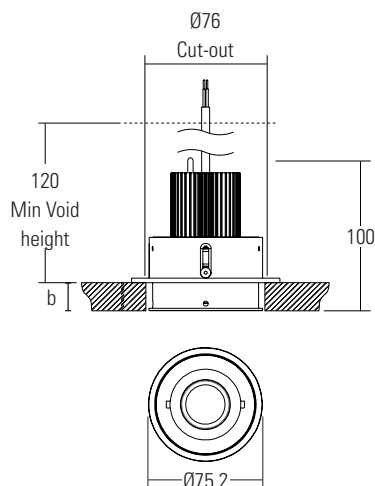
ULTRA Adjustable Marine Grade Downlight



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DIAGRAM

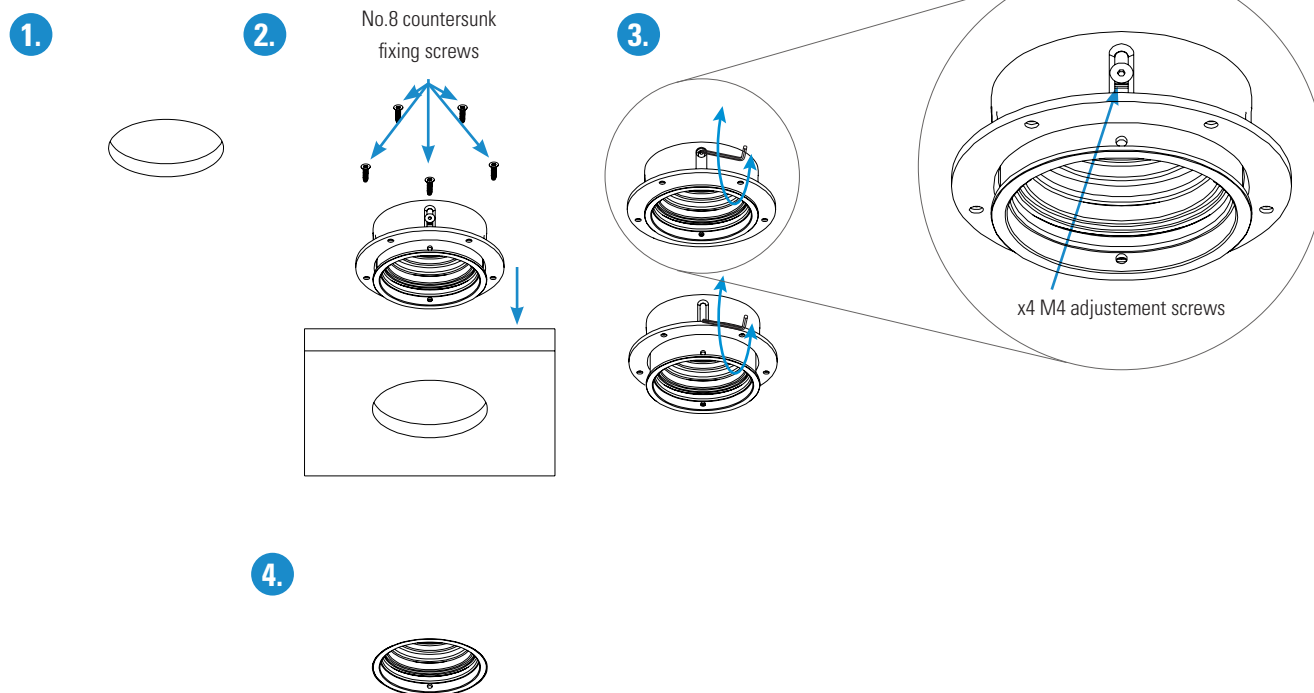
LD1093Z/493CMR



INSTALLATION

1. Cut Ø76 diameter hole at intended ceiling location.
2. Position the fixing over the cut-out, and secure using x5, No.8 screws.
3. Loosen all 4 M4 adjustment screws using M4 allen key. Set the sleeve to desired height. After setting height, tighten the 4 hex screws until fitting is secure.
4. Refer to page 1 for installing and adjusting LD1093 Engine.

Ceiling Thickness (b)	Min	1.7mm
	Max	19.7mm



LD1093 & LD1093Z

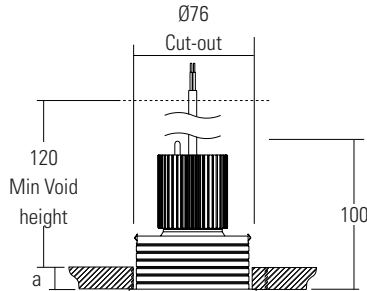
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DIAGRAM

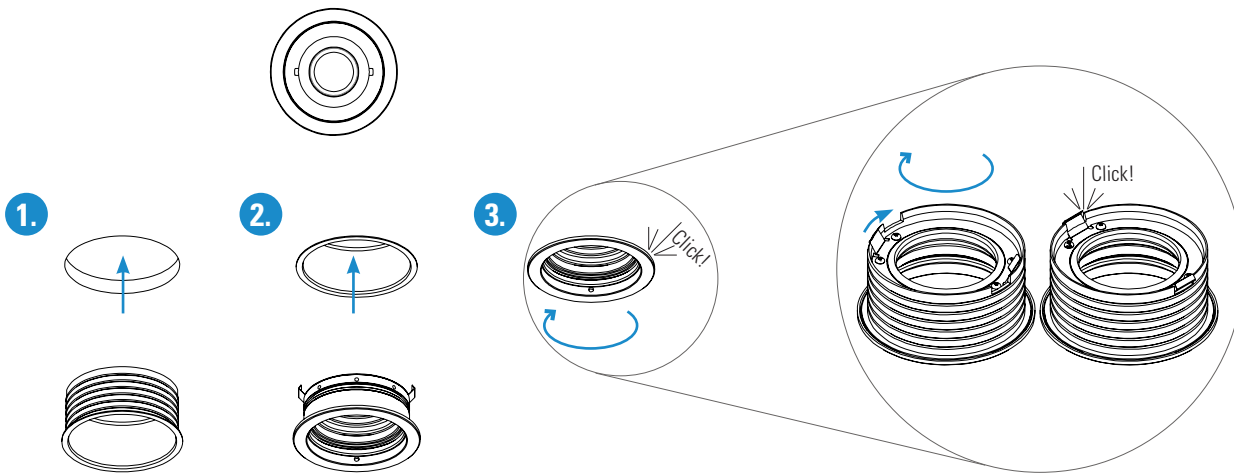
LD1093/493S



INSTALLATION

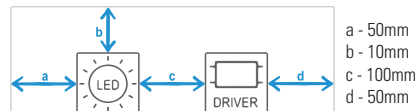
1. Cut Ø76 diameter hole at intended ceiling location.
2. Bond in sleeve for a secure fit. **NOTE: Rotabond 2000, 3M 4200 Marine, Simson MSR, Sikaflex 221 adhesives recommended.** Grease O-ring with a heavy duty, silicone-free grease. Compress springs on body and bezel, and offer up into the cut-out.
3. The bezel should click in place once inserted, if not, twist the housing in the sleeve until you hear and feel a click! **Refer to page 1 for installing and adjusting LD1093 Engine.**

Ceiling Thickness (a)	Min	1mm
	Max	30mm



LED & CONTROL GEAR SEPARATION DISTANCES

Warning – Risk of overheating or fire if the clearance distances are compromised. Building insulation must not cover the control gear.



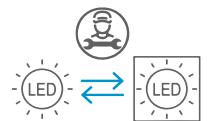
SEE CONSTANT CURRENT WIRING SHEET FOR IN SERIES WIRING DIAGRAM

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. To be used in conjunction with an eldoLED EC0drive 361/A.

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 manufacturers 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.

MAINTENANCE

Clean with soft damp cloth
LED: Please contact LightGraphix
O-ring replacement part numbers: N/A

CONNECTION

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