

LUMINO

E50

INSTALLATION MANUAL

IME50_R2202

TECHNICAL SUPPORT

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Installers must read this document and any other referenced documents in full before commencing installation work. Failure to observe all installation guidance in this document may result in unsafe installation, cause permanent product damage and void product warranty.

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HANDLING PRECAUTIONS

OPTIC/LENS

To avoid permanent damage, do not allow small or sharp objects to apply pressure on to the plastic optic/lens.

STRESS

Never stand or place weighted items on the product. The product is not vandal resistant and has no IK rating. Do not subject the product to impact forces.

POWER CABLES

The product's power cables and connectors must not be pulled or twisted. Never pull the product by its power cables or hang it from its power cables or connectors.

MODIFYING

The product must not be sawn, drilled or otherwise modified in any way.

DAMAGES

Inspect the product. If you see any damage upon unpacking, report to LUMINO immediately and do not install the product.

LOCATION

Use in dry locations only. This product is unsuitable for wet and damp locations. **IP20 rated for dust protection.**

Protect product from dust, paint and harmful substances during installation and use. Ensure product is not exposed to VOC gases. Do not obstruct the product and its light output.

SAFETY GUIDANCE

WIRING GUIDE

Follow the guidance shown in the provided wiring guide, including maximum cable lengths, cable sizes and other wiring instructions. When running cables through an enclosure, ensure cables are protected from damage, separated from mains voltage cables and anchored against being pulled. Make connections appropriate for the IP rating of the product.

QUALIFIED INSTALLER

Installation must be carried out by a qualified person and conducted in accordance with local regulations and applicable standards.

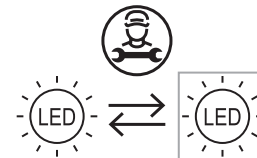
THERMAL MANAGEMENT

Ensure ambient temperature (T_a) does not exceed 45°C (113°F) and case temperature (T_c) does not exceed 80°C (176°F). Exceeding maximum T_c will cause permanent damage and void the product warranty.

Allow sufficient clear air space for the LED drivers, as well as suitable access to the drivers as specified on installation instructions.

REPAIR AND REPLACEMENT

If the product is not functioning, contact LUMINO to register a Service Call for factory repair or replacement. Product's light source is replaceable by a qualified professional. See page 3 for Ecodesign and end of life information.



DRIVERS

POWER OFF

Product and driver must not be live wired. Switch off power before work begins. Follow instructions and guidance for the make and model of driver being used.

CONSTANT CURRENT DC

Ensure supply current does not exceed 300mA (see product label). Drivers must be constant current type with both overload and short-circuit protection. Exceeding the stated voltage or current will cause permanent damage and void the product warranty. Allow one driver per E50 engine.

DIMMERS

Check dimmer is compatible with the driver and certified to local regulations.

INRUSH CURRENT

Many LED drivers can have high inrush current at power-on. Driver inrush current can be many times the normal operating current. Use a suitable MCB. Type C MCBs are normally suitable but if inrush current is a persistent problem an inrush suppressor may be required.

PROTECTION

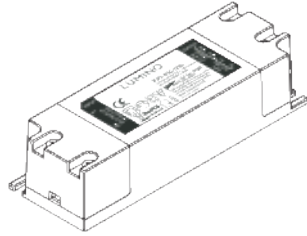
Use only with constant current Class 2 power unit to UL1310 standard with overload and short-circuit protection. Rate drivers for at least 10% above load. Driver protection circuitry must not be relied upon to protect secondary electrical circuits from damage caused by over-voltage or short circuit. DC fuses or DC electronic circuit breakers are recommended for full protection. Allow for access to drivers for maintenance and sufficient clear air space for ventilation.

CABLING

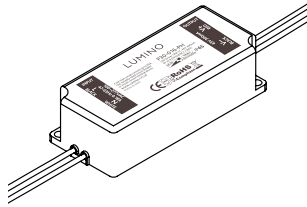
Do not overload the driver. Damage will be caused by incorrect input voltage, reverse polarity or short circuit. Plan for loads, driver locations, dimming and cabling prior to start of work. Ensure basic insulation is maintained between mains and dimming control wires.

E50 LED DRIVERS

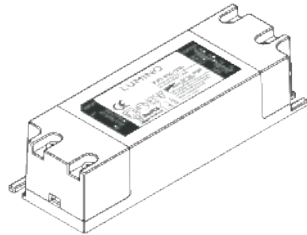
NON-DIMMING P30-016



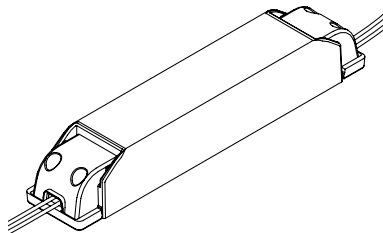
PHASE (TRIAC) DIMMING Dim to 10% P30-016-PH



0-10V DIMMING Dim to 1% P30-016-D10



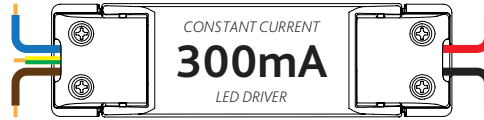
DALI DIMMING Dim to 1% P30-020-DAL



INSTALLATION

1. Prepare Power Supply

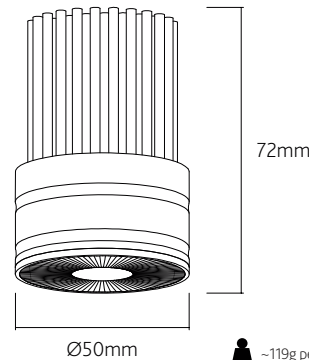
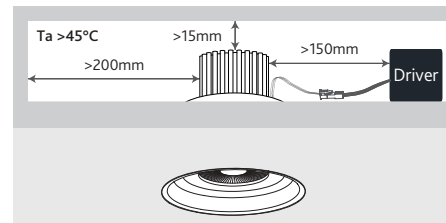
This product requires a 300mA constant current LED power supply. Allow one fitting per driver. With the power off, connect the E50 LED engine to the specified LED driver.



2. Plan Installation

Check product and its dimensions against the planned installation. It is important to allow plenty of space for the E50 LED engine to effectively cool itself. Void space limits **MUST** be observed. Do not cover!

- 200mm clear all sides of E50
- 15mm clear above E50
- 150mm clear E50 to Driver



3. Max Ambient

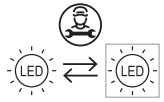
Ensure the ambient temperature within the void space doesn't exceed a maximum T_a of 45°C during operation. Failure to do so will cause irreparable damage to the fitting and void the warranty.

FIRE / ACOUSTIC COVERS

Intumescent covers / acoustic hoods can be used with E50. Ensure the internal air volume of the hood is $>0.02\text{m}^3$ (20 litres) and the maximum air temperature inside hood does not exceed 45°C during operation.

REPAIR & REPLACEMENT

VERY IMPORTANT! PLEASE READ BEFORE CARRYING OUT ANY WORK!



This product's light source is only replaceable by a qualified professional.

If the product has stopped working, please review the following before replacing the light source. It is important to identify why the product has stopped working first, as replacing the light source might not fix the cause of the failure.

When installed correctly, LEDs have a long service life, with light output gradually decreasing over time (L70 60k hrs, 70% light output after 60,000 hours of use).

Check the lighting circuit.

Was the correct power sourced used?
Check product label for requirements.

Are there nearby heat sources that might overheat the product? See first page for maximum Ta and Tc details.

All work must be done by a qualified professional, and carried out in accordance with local regulations. All tools required to replace the light source are commonly found tools. Please contact LUMINO if further assistance is required.

It is the full responsibility of the professional carrying out the repair work to ensure that after the work is complete, the repaired product still complies with all relevant safety standards and is safe to use. LUMINO cannot accept liability for any harm resulting from an unsafe repair. If in any doubt, do not carry out repair work and contact LUMINO for support.

TOOLS & PARTS LIST

Tools & Consumables Required

- T6 torx screwdriver?
- 3-4mm Flat head screwdriver
- Plastic pry tool
- Gloves
- (Optional) Isopropyl alcohol
- (Optional) Tweezers

Spare Parts

The following spare parts are available to order. Please contact LUMINO if any spare parts are required.

Optic

- 12° Spot beam optic
- 20° Medium beam optic
- 30° Flood beam optic

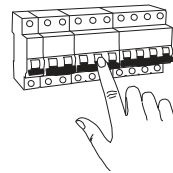
Additional Hardware

- Optic holder
- Screws
- Thermal interface material for LED

INSTRUCTIONS

1. Turn off the power.

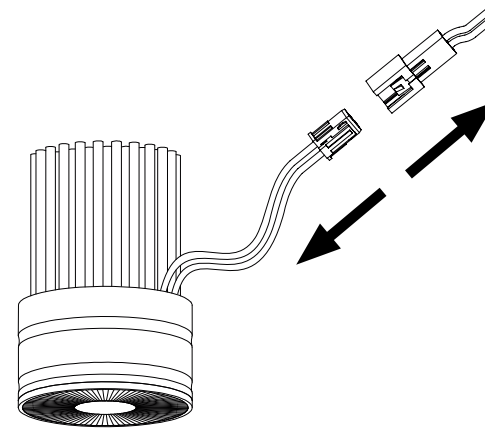
Make sure no electricity can reach the LED power supply.



2. Check Product Label

See product label and check specification of LED inside. Replacement power requirements should match or be no greater than that of the original LED.

3. Disconnect E50 from LED driver.



4. Move the Product

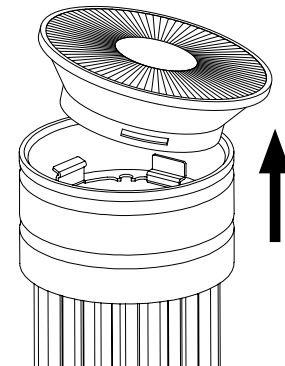
Move the E50 to an ESD safe workspace. Use ESD precautions to protect the LED.



5. Remove Optic

Using a either a pry tool or a flat head screw driver, gently detach the optic from the optic holder it is clipped into.

NOTE: If the optic or optic holder is damaged during the opening process, the respective damaged parts must be replaced.



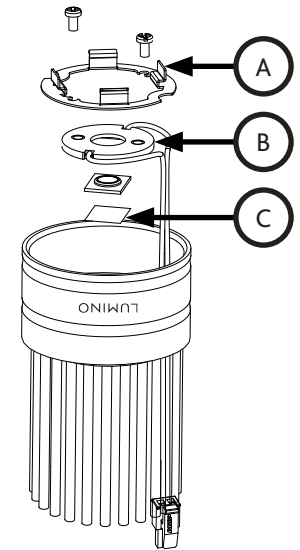
6. Remove Parts

Unscrew the T6 torx screws from the E50. Remove the optic holder (A), then set the optic holder to one side.

Carefully lift the LED holder (B) away from the heatsink.

Remove the LED (COB) from the LED holder.

The thermal interface material (C) may tear when removing the LED. The damaged thermal interface material must be replaced if this happens.



9. Recycling

Dispose of electronic waste in accordance with local environmental regulations. Do not send to landfill.

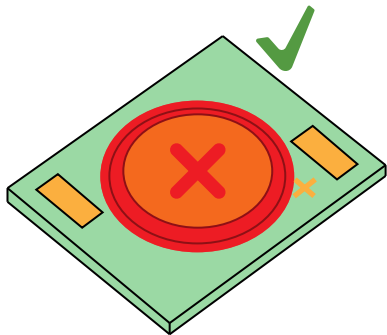


IMPORTANT! Handling the LED (COB)

Correct handling of the LED is important to ensure the longevity and reliability of the LED.

Natural oils from skin contact can damage the lit surface of the LED. Use either gloves or tweezers to hold the LED.

Do not touch or apply any pressure to the centre, as shown in red. Outer edges shown in green are safe to touch.



The LED is covered in a soft silicone, excess pressure applied to this silicone will cause damage to the LED.

Inspect LED prior to installation. Check for any signs of damage such as cracks, chipped or deformed. Do not attempt to repair a damaged LED, contact LUMINO for assistance.

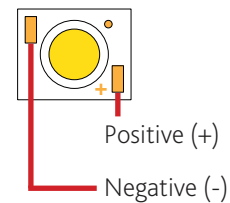
10. Install LED (COB)

The replacement LED (COB) must be installed the correct way round in order to operate.

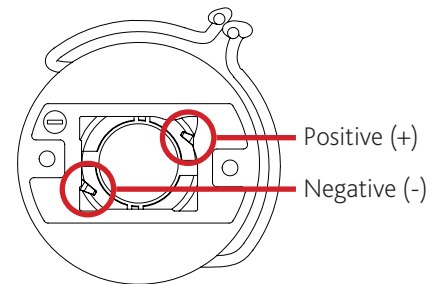
Before installing, orientate the LED so the contact pads of the LED match with the corresponding contacts on the LED holder.

Install negative side in first before the positive side. The LED holder should be able to hold the LED in place.

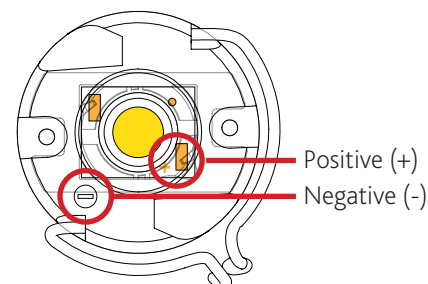
LED (COB)



LED Holder (Bottom View)



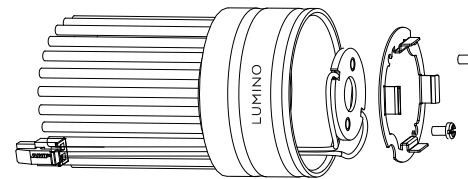
LED Holder with LED Installed (Top View)



11. Fasten Down LED & Optic Holders

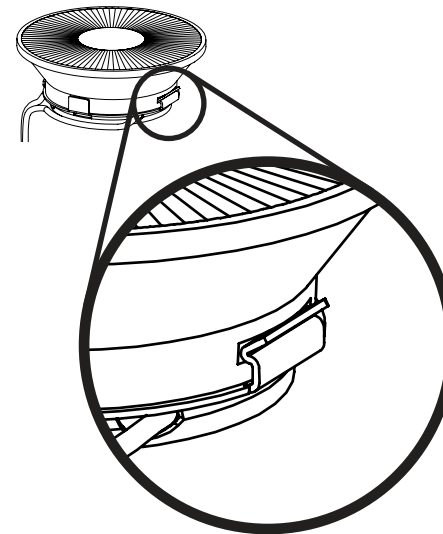
Gently flip the LED holder over and seat both it and the LED on to the heatsink. Make sure the thermal interface material is sat between the LED and heatsink. Avoid touching the LED in the centre. Align with the corresponding screw holes and fasten down.

IMPORTANT! Screws must be touch tight, 0.5nm MAX. Over tightening will break the LED.

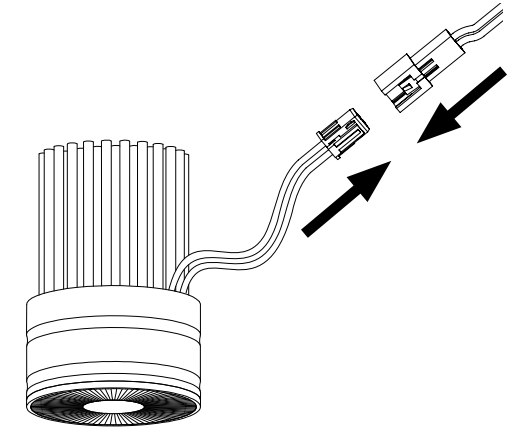


12. Install Optic

Reinstall the optic into the optic holder. Slotted holes on the optic base will locate in the corresponding clips in the optic holder. Ensure there is no gap between the optic and E50 housing.

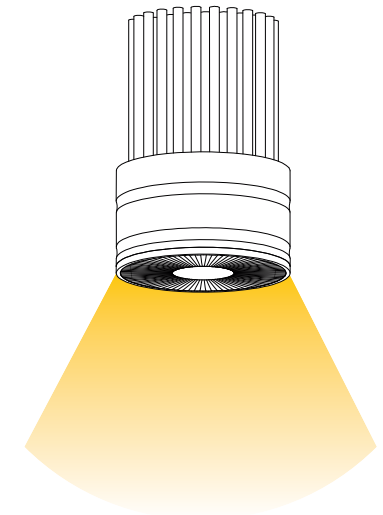


13. Reconnect E50 from LED driver.



14. Power Up

Test the E50. If the product does not function as expected, turn power off and inspect all connections.



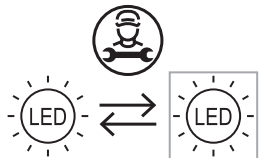
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ECODESIGN REGULATION

This product is considered to be a “containing product” in the sense of Regulations (EU) 2019/2020 and (EU) 2019/2015.

The contained light source is replaceable only by a qualified professional.

This product contains a light source of energy efficiency class as shown in the Energy Rating table. Replacement light sources must be of equal or higher energy rating. Full electrical, mechanical, thermal and optical functionality must be restored by a qualified professional when light source is replaced.



DISMANTLING

Dismantling of light source from the containing product at end of life:

The product shall be disassembled in accordance to the provided instructions.

Containing products shall be separated from building material and/or from other additional mounting accessories by means of a professional installer.

Separate control gear and light sources must be disposed of at certified disposal companies in accordance with Directive 2012/19/EU (WEEE) in the EU and with Waste Electrical and Electronic Equipment (WEEE) Regulations 2013 in the UK.

LUMINO is a member of the WEEE producer compliance scheme.
Registration number: WEE/MM8138AA

ENERGY RATING

This product contains light sources of energy efficiency classes as shown:

LED	CCT	EPREL	Energy Class
ColorCORE	4000K	1305928	E
	3500K	1305929	E
	3000K	1305930	E
	2700K	1305931	F
	2500K	1305932	E
	2200K	1305933	F

EQUIVALENT LEDs

This product's light source can be replaced by an equivalent light source from another brand, providing it matches or betters the specifications of the original light source (operating wattage must not exceed original specification).

Basic parameters to meet:

15mm x 12mm COB

LES Ø6mm - Ø7mm

12W @ 300mA MAX, constant current DC