LUMINO

# V12S IP50

## INSTALLATION MANUAL

IMV12S_IP50_R2203

## 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.



## HANDLING PRECAUTIONS

### PLASTIC COVER / DIFFUSER

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

### 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 end caps, 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.

### CUTTING AND SAWING

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.
**IP50 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.

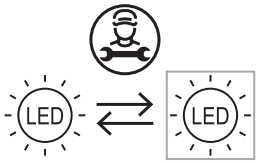
### THERMAL MANAGEMENT

Ensure ambient temperature (Ta) does not exceed 40°C (104°F) and case temperature (Tc) does not exceed 70°C (158°F). Exceeding maximum Tc 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.

### 24VDC SELV

Only use drivers with a maximum output of 24VDC. Drivers must be SELV, constant voltage with both overload and short-circuit protection.

### DIMMERS

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

### INRUSH CURRENT

Many constant voltage LED drivers can have high inrush current at power-on. Driver's 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

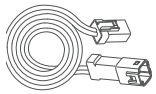
Use only with 24VDC Class 2 power unit to UL1310 standard with overload and short-circuit protection. Rate drivers for at least 10% above load. Driver protection circuitry must not be relied upon to protect secondary 24VDC electrical circuits from damage caused by over-current or short circuit. DC fuses 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.

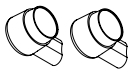
# ACCESSORIES

**Cable & Connector**
VECA-CA0250-__MF-R1
**2** / **4** Pole power link
250mm cable length



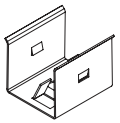
VECA-CA1000-__MF-R1
**2** / **4** Pole power link
1000mm cable length

**IDC Connector**
VECA-CA90__-R1
Sealant connector.
**1** - 3A Max / **3** - 5A Max. Pair

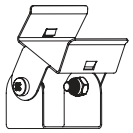


**Self-closing Cable Sleeving**
VECA-SL001-R1
1000mm Cable sleeving

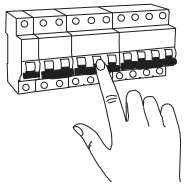
**Fixed Mount**
V12S-M__501-R1
Fixed clip
**D** - Silver / **F** - Black / **E** - White
[Specify quantity required]



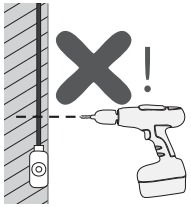
**Rotation Mount**
V12S-M__502-R1
180° Rotation clip
**D** - Silver / **F** - Black / **E** - White
[Specify quantity required]



# CHECK FIRST!



TURN OFF POWER!
COUPER LE COURANT!
STROM ABSHALTEN!
CORTE CORRIENTE!

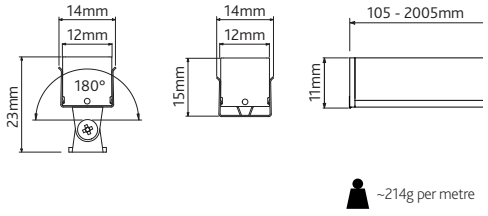


CHECK THE WALL!
VËRIFIER LE MUR!
DIE WAND ÜBERPRÜFEN!
COMPRUEBE LA PARED!

# INSTALLATION

## 1. Plan Installation

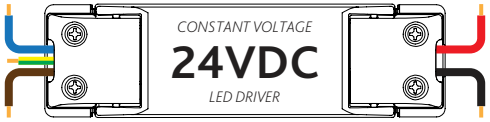
Check product and its dimensions against the planned installation. Runs of LEDs may have to be installed in a particular sequence.




## 2. Prepare Power Supply

This product requires a 24VDC power supply.

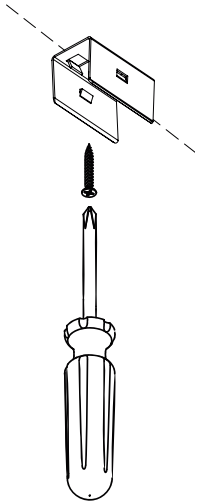
Please refer to provided wiring guide document. Failure to follow guide may result in damage to the product and voiding of warranty.




## 3. Mounting Clips

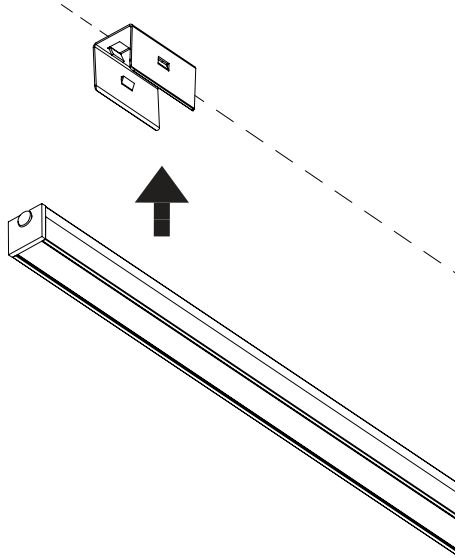
Fix all the clips securely to the mounting surface. Recommended screw size is a № 4 gauge wood screw. If necessary, use alternative fixings of a similar gauge and size suitable for the material being fixed into.

Products should be held by at least 3 equally spaced clips per metre. Products shorter than 505mm may be held by just 2 clips. There must always be a clip within 100mm of each end of the product.



## 4. Install V12S

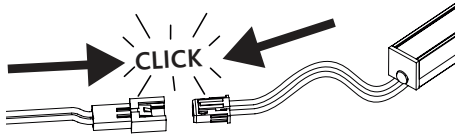
Align clips and carefully push the product into the clips. Ensure the product is fully clipped in place and check it is not misaligned or misplaced due to screw heads or wires. Ensure that cables are not pinched when installed.



## 5. Connect to LED Driver

With the power off. Feed the power cables to the V12S, connecting the product to the LED driver.

Finalise all electrical connections and test the circuit. If the product does not function as expected, turn power off immediately and check all connections.



# EMERGENCY CHARGING LED

IMPORTANT

For products containing an emergency charging LED for use with emergency packs.

To identify, check product as shown...

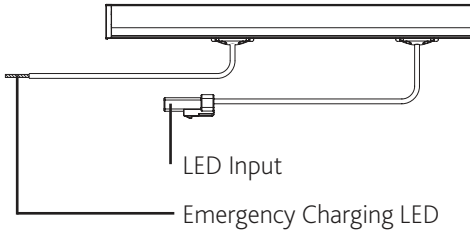

... Or, check the product label.
Product codes ending with"DBE" or "HAE" are products equipped with an emergency charging LED.

# INSTALLATION

TURN OFF POWER AND DISCONNECT BATTERY PACK BEFORE WORK COMMENCES.

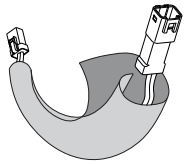
## 1. Installation

Follow the installation guide as detailed on the previous page.
Make allowances for an additional pair of wires (emergency charging LED).




## 2. Cabling

Feed both LED and emergency charging LED cables back to the emergency pack location. Protect cables with sleeving for outdoor installations (self-closing cable sleeving: VECA-SL001-R1)



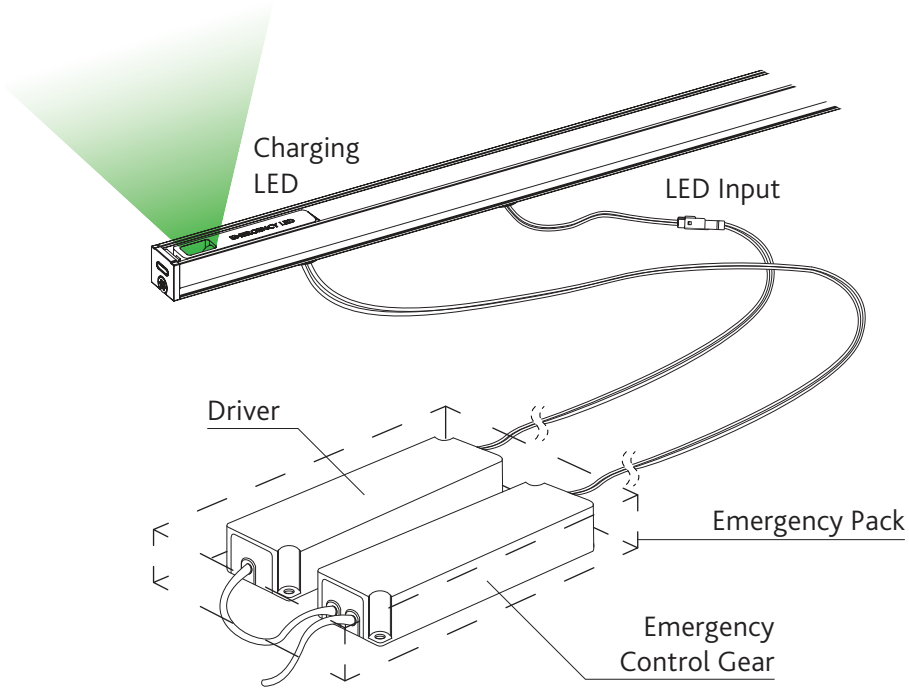
## 3. Connect Cables

Connect cables to the correct terminals found on the emergency pack.

**LED is 24VDC** and **emergency charging LED is 3VDC**, ensure the correct LED is connected to the correct output.

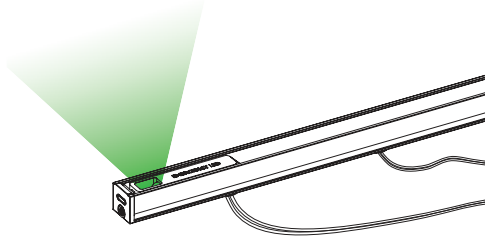
Emergency charging LED's polarity is important, showing either green or red depending on the status of the emergency pack.

Red wire = Positive (+)
White wire = Negative (-)



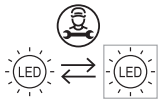

## 5. Finishing Up

Finalise all electrical connections and test the circuit. If the product does not function as expected, turn power off immediately and check all connections.



# 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

- Isopropyl alcohol
- T8 torx screwdriver
- Scissors
- Small hole punch tool (Ø1.2mm)
- Soldering iron
- Solder wick / sucker
- Solder (lead-free)
- Wire cutters

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### Spare Parts

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

**Diffusers**
V12S Clear diffuser
V12S Opal diffuser

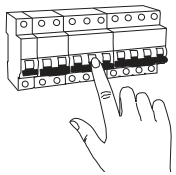
**End Caps**
V12S End cap
Silver / White / Black

**Gasket**
V12S Silicone gasket

Instructions are meant for IP50 rated products only. Do not attempt to repair the IP67 version of this product and instead contact LUMINO if a repair is required.

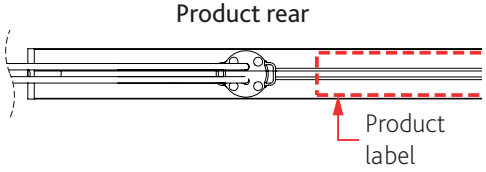
### 1. Turn off the power.

Make sure no electricity can reach the LED power supply.

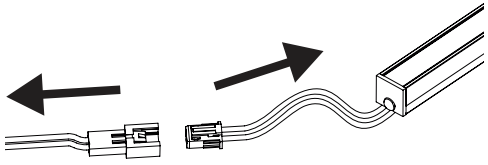


### 2. Check Product Label

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




### 3. Disconnect V12S from LED driver.

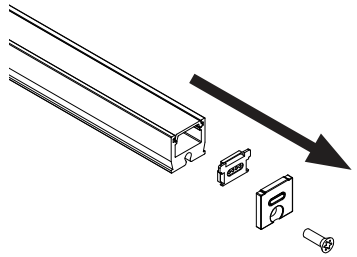


### 4. Move the Product

Move the V12S to an ESD safe workspace. Take all necessary ESD precautions where appropriate.

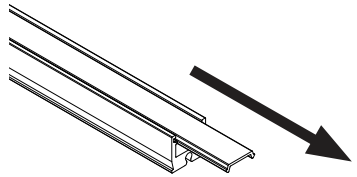
### 5. Remove End Caps

Carefully remove the end caps from the V12S using a torx T8 bit.



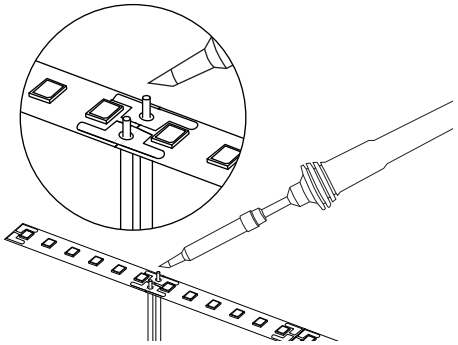
### 6. Remove Diffuser

Slide plastic diffuser off from the V12S. Take care not to damage the diffuser.



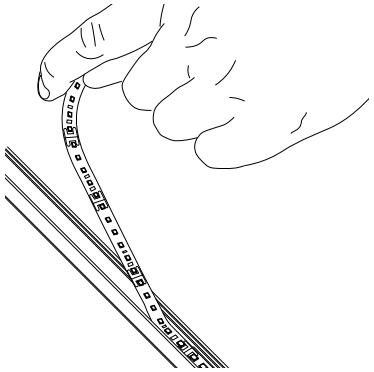
## 7. Unsolder Cable

Unsolder the individual wires from the LED tape. Solder and solder wick may be required to complete this step. Once the solder pad is at the correct temperature, pry closest end and slowly lift the LED tape away from the wires.



## 8. Remove LEDs

Remove the original LED tape. Lift one end of the LED tape and unpeel from the profile.



## 9. Recycling

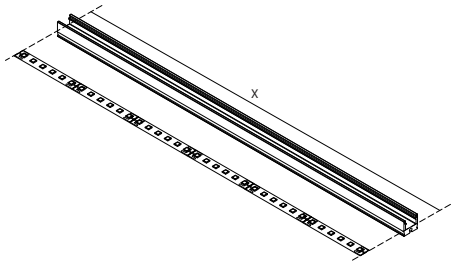
Dispose of electronic waste in accordance with local environmental regulations. Do not send to landfill.

## 10. Clean

Remove any remaining adhesive residue inside the V12S profile. Use isopropyl alcohol if necessary and allow to air dry.

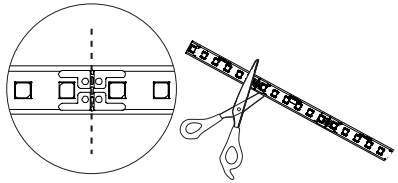
## 11. Measure LED Tape

Lay out the new LED tape, measuring how much is required. V12S profile's length should closely match the cut increments of the LED tape.




## 12. Trim LED Tape

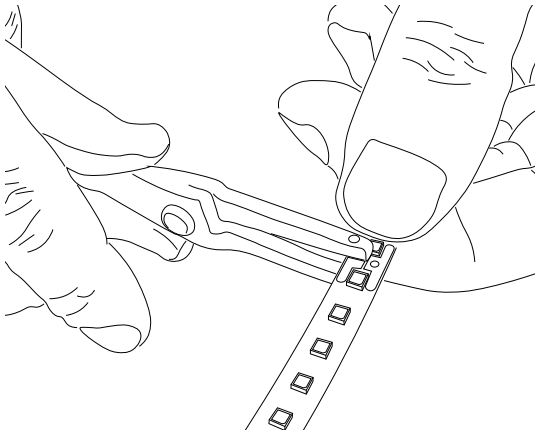
Cut between solder pads using scissors. LED tape cut increments shown on right.



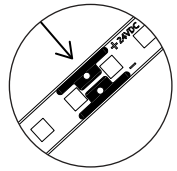
Cutting line

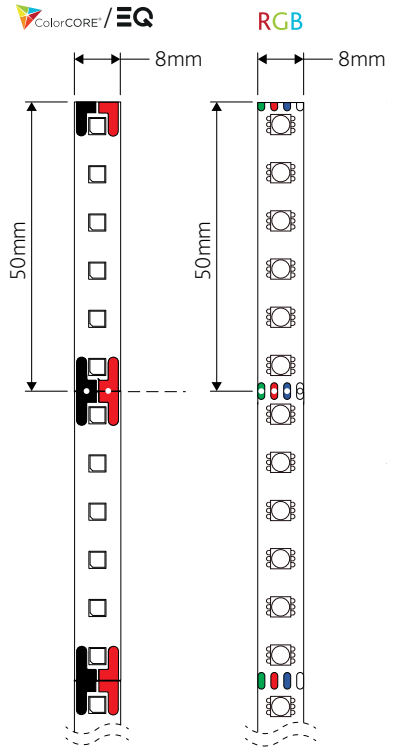
## 13. Punch Holes

Using a small hole punch tool, create Ø1.2mm holes in the LED tape as shown.



Hole position must match up with the cable entry hole on the V12S's profile. See hole offsets set on the right.

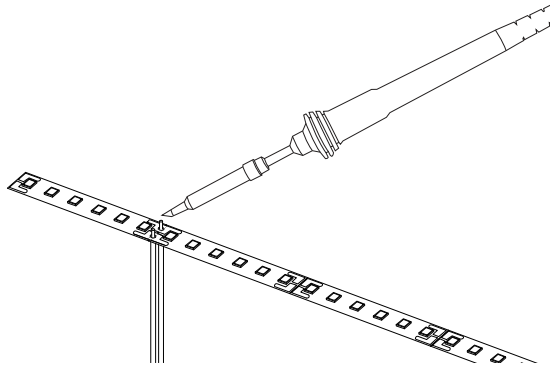




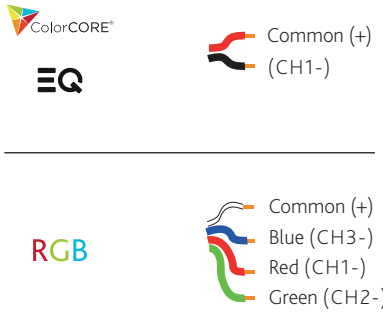

## 14. Solder Cables

With the paper backing still applied.
Resolder the cable/s to the LED solder pads.
Take care not to over heat the pads.

IMPORTANT: Observe LED tape's polarities!

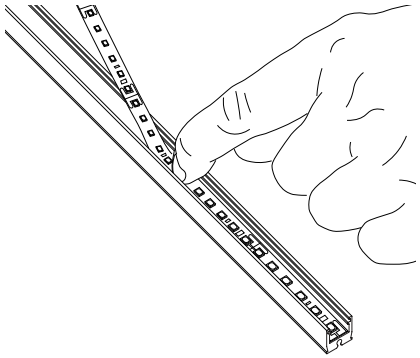


## Wiring Diagram



## 15. Install LED Tape

Peel back 50mm to 100mm of the adhesive backing, starting with the hole punched end of the LED tape.
Carefully align the beginning of the tape with the start of the V12S extrusion.
Simultaneously unpeel backing and press down on the LED tape, working along the length of the profile.
Only use finger/thumb pressure on the LEDs.

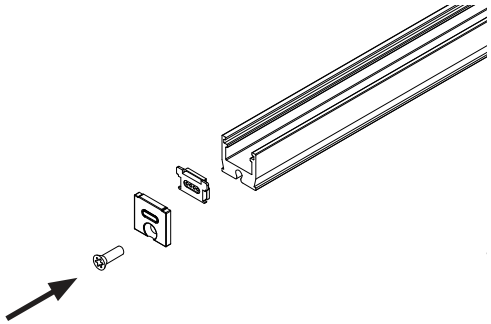


## 16. Test LED

Before any further work is done.
Momentarily power the LED to verify that the cable was soldered to the LED tape correctly, and that the tape itself is functioning.

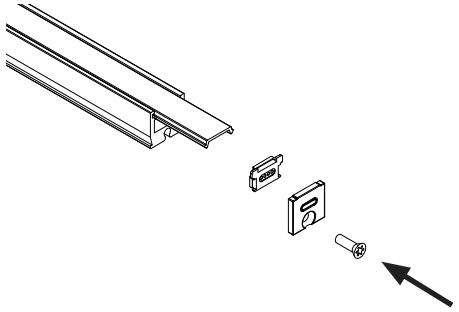
## 17. End Cap & Gasket

Install one end cap with a gasket, using a torx T8 screwdriver on to one end of the V12S.
Hand tighten screw, do not over torque.



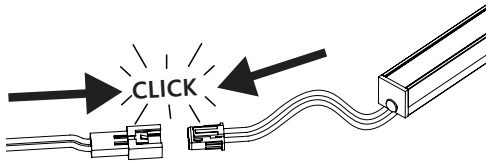
## 18. Install Diffuser

Slide the diffuser fully into the V12S. Then complete the build by attaching the final end cap and gasket.
Hand tighten screw, do not over torque.



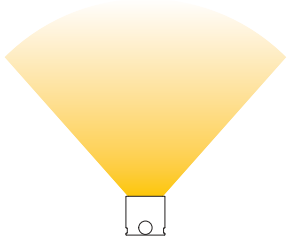
## 19. Reconnect

With the power off, reconnect the V12S to the LED driver.




## 20. Power Up

Test the V12S. If the product does not function as expected, turn power off and inspect all connections.

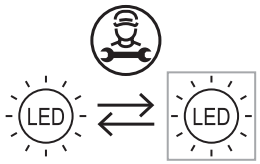


## ECODESIGN REGULATION

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 | 6W/m | 12W/m |
|---|---|---|---|
| ColorCORE | 4000K | F | F |
| | 3500K | F | F |
| | 3000K | F | F |
| | 2700K | F | F |
| | 2500K | F | F |
| | 2200K | F | F |
| EQ | 4000K | F | F |
| | 3000K | G | G |
| | 2700K | G | G |
| RGB | N/A | | |