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For full installation guide and warranty information, go to: **www.oceanled.com/below-water/explore-e2/**

or scan the QR code below:

OceanLED

EXPLORE E2

Quick Install Guide

For full installation guide and warranty information, go to:

www.oceanled.com/below-water/explore-e2/

Contents
Explore E2 LED Light & Cable
In-line fuse kit
Clamping kit
Quick Install Guide

IP69k CERTIFIED

ABS TYPE APPROVED PRODUCT

RINA

WARNINGS

Before installing your OceanLED Light, read and follow all warning notices and instructions which are included. Failure to follow safety warnings and instructions can result in property damage, severe injury or even death.

Before installing your OceanLED Light, check local laws for restrictions regarding the use of coloured lights in your area.

Do not operate lights out of water for a period longer than 5 minutes followed by an OFF period of at least 1 hour. Exceeding this may cause damage to the light unit.

Ensure the bonding point of the light is fitted to the cathodic protection system on the vessel. Check conductivity between earth bonding point and aluminium bronze front bezel. If mounting the light to metal, wood, or carbon fibre hull, ensure that suitable measures have been put in place to account for the effects of galvanic corrosion i.e. use of Delrin sleeve components (Isolation Kit).

Salt is an inherently corrosive material. Metal parts and certain natural and man-made surfaces are particularly susceptible to corrosion and deterioration when used in and around salt water. Some OceanLED lights contain combinations of plastic and polymer products which are impervious to saltwater corrosion, however, screws and fasteners used for the installation must be of a marine grade type stainless steel or equivalent and monitored annually to ensure the lights remain in service for years to come.

Never connect/disconnect lights with power applied as irreversible damage may occur. Ensure polarity of power connections is correct. Failure to do this may invalidate warranty.

Ensure front of lights are always fully submerged and not fitted on planning / running surfaces that may impact on water since this may damage the product. Also ensure the rear of the light is in a dry area and not subject to a wet environment. Failure to do this may invalidate warranty.

Never Use Solvents! Cleaners, fuel, and other products that may contain strong solvents, such as acetone, that attack many plastics greatly reducing their strength and irreversibly damaging the special lens coatings and cable sheathings.

Never clean lights using a high-pressure jet wash – this will invalidate warranty. Please avoid coating the front of the light/lens without consulting OceanLED. Failure to do so will invalidate your warranty.

This underwater light must be installed by a licensed or certified electrician in accordance with all applicable local codes and ordinances. Improper installation will create an electrical hazard which could result in death or serious injury to swimmers, installers, or others due to electrical shock, and may also cause damage to property. Always disconnect the power to the light at the circuit breaker before servicing the light.

1. Power Source

Most installations will utilise on-board 12/24V DC power supply from a marine battery. However, if AC to DC power supply is being used, please allow at least 15% reserve for voltage fluctuations due to variables beyond your control such as ambient temperature and supply voltage fluctuations. This is to ensure your lights are always receiving the proper voltage and to ensure the power supply is not "overloaded", causing premature failure. Use chart below in determining power supplies.

Power Consumption and Recommended Fuse values

Model	Current @ 12V DC	Current @ 24V DC	Max Nominal Power consumption	15% reserve in Watts	Recommended fuse 12V/24V DC
E2 Ultra White	3.5A	1.5A	42W	50W	4A
E2 Midnight Blue	3.5A	1.5A	42W	50W	4A

2. Preparing the Hull

When installing an Explore unit, please ensure there is enough space on the inside of the vessel to remove the insert for maintenance/after sales services. The XFM unit requires an additional 120mm / 4.7" from the rear of the mounting tube to allow the insert to be removed for maintenance. (See overall dimensions in the Appendix).

Ensure that the part of the light inside the vessel has a diameter of 100mm/ 4" around it free from any insulation material.

OceanLED recommends using a qualified installer / technician when making modifications to your vessel. Please also consult the manufacturer for more detail on modifications and installation.

If lights are assembled in a conductive or wooden hull, an Isolation Kit must be used. Contact OceanLED for additional details.

Depth/Spacing

Ideally mount your lights at similar depth levels to ensure matching colour consistency through the water. Deeper lights will look duller and possibly differ in colour compared to shallower mounted units.

SPACING / INSTALL DEPTH	E2
Recommended Spacing	1-1.5m (3-5')
Recommended Installation depth (From the light waterline)	100-200mm (4-8")

Maximum Hull Thickness

Maximum hull thickness: 60mm (2.36")

Hole Cut Out

Hole Cut out size -62mm (2.44") / With Isolation Kit 64mm (2.5")

3. Installation

Additional items required not supplied by OceanLED:

• Marine sealant - 3M 4200 or equivalent
• Cable ties
• Waterproof Cable Connectors / Junction Box* (optional)
• Allen key (5mm)
• Thread lock - Loctite 243 or equivalent.

*Optional 4-Way Junction box available from OceanLED. Please contact OceanLED or your representative for further information.

DO NOT remove the light cartridge from the mounting tube during installation. The light cartridge MUST stay fitted inside the mounting tube throughout the installation process to avoid the introduction of potential contaminants that may damage the product and void warranty. The light cartridge can only be removed for maintenance or after sales purposes and OceanLED must be contacted prior to any light cartridge being removed from the mounting tube.

Tip: OceanLED recommends dry fitting all products. Before applying sealant, please ensure the surface is clean of any dust, dirt or grease. When installing, be sure that the light fits the area and secures to the hull using the appropriate hardware before applying any sealant.
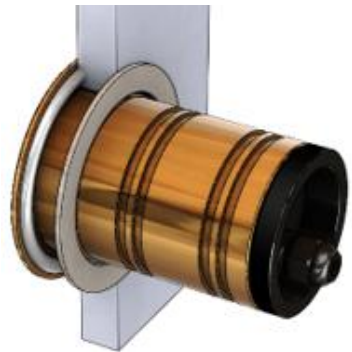
The light <u>MUST</u> be attached to the vessels bonding / cathodic protection system.

Sealant

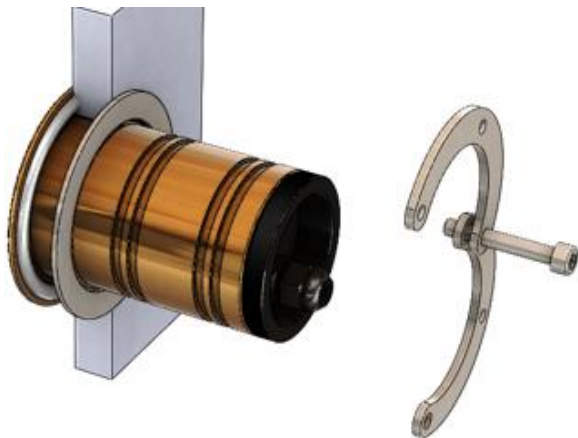Cable gland pointing downwards perpendicular to waterline

1. Apply marine sealant to the rear of the mounting tube assembly's bezel to ensure a complete unbroken seal around the light.

2. Ensure the light orientation is correct with the cable gland at the back positioned at the bottom.

3. Insert the complete light unit (mounting tube assembly + light cartridge) into the hull, pressing the light hard into the hull and twist slightly to spread the sealant around behind the light to ensure good adhesion.


5. Place the two clamping clips together to form a circle, ensuring you pair 1 threaded and 1 non-threaded hole together. Fix the clips together using one of the longer screws provided so that the clips are located approximately halfway down the length of the screw.

4. Insert the stainless-steel compression washer over the mounting tube.
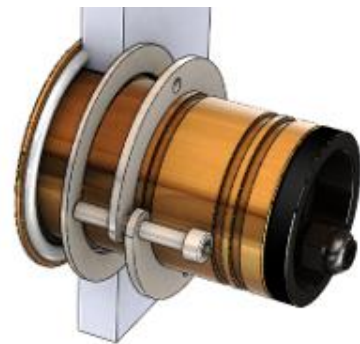
6. Locate the clips into the appropriate grooves (depending on hull thickness) on outside of the mounting tube so that the end of the screw is close to the washer. Fit the second longer screw provided into the remaining holes, fixing the two clips together. Tighten the locking screws using a 5mm Allen key, applying thread lock at point of thread contact with locking ring.
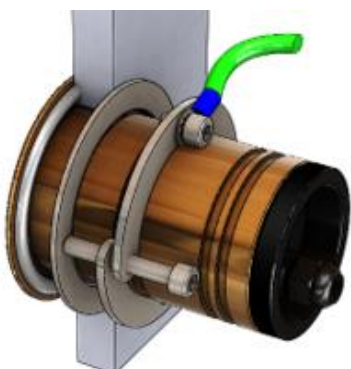
7. Connect the bonding cable to the remaining screw and lock in place with shake-proof washer provided. Tighten the locking screw using a 5mm Allen key, applying thread lock at point of thread contact with the clamping clips.
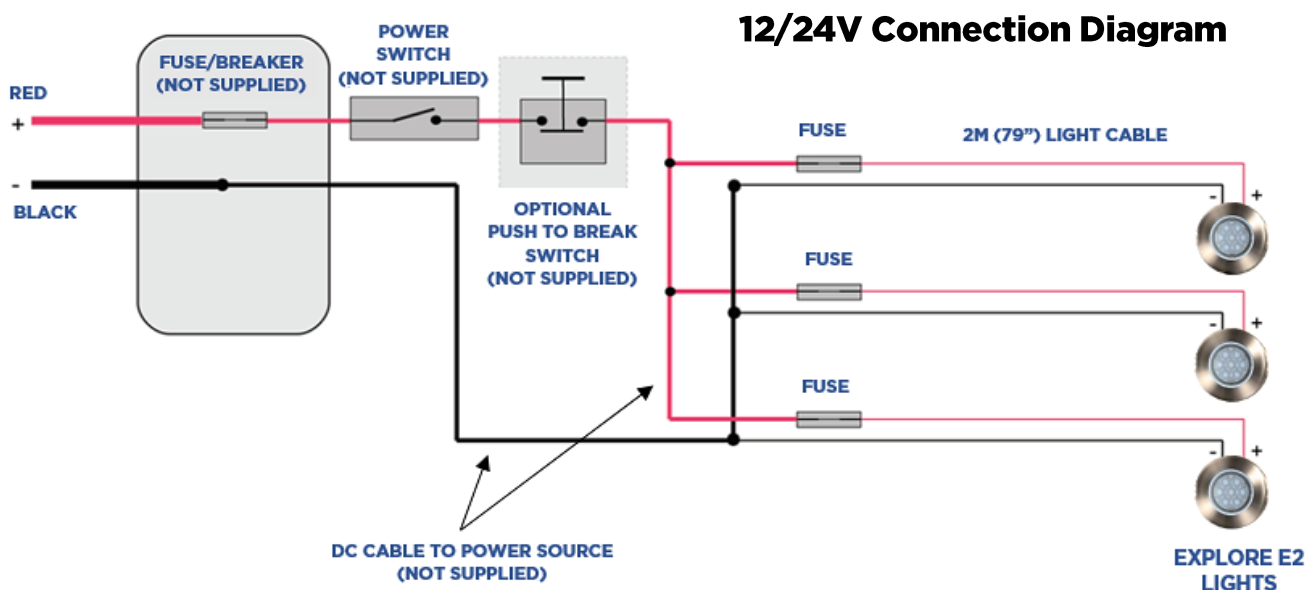
4. Electrical Installation (12/24V DC)

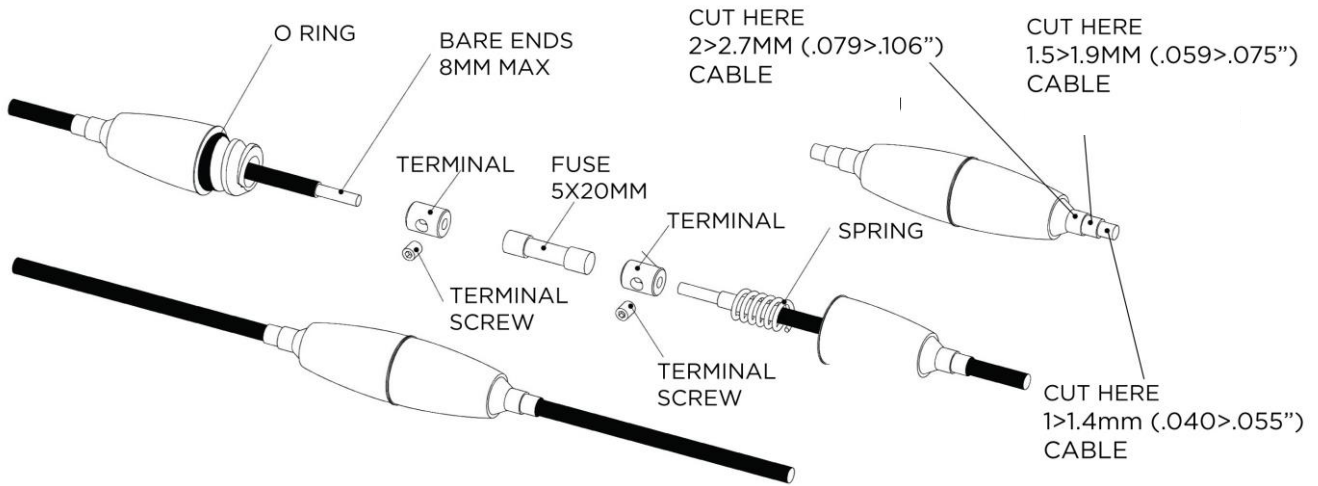**Warning:** Always consult a qualified electrician when connecting OceanLED light fixtures.

When connecting light units, please note that all OceanLED lights will operate within a specific voltage range. Please check the electrical information to ensure cable gauge follow the recommendations.

Never leave the bare cables unprotected. Take care to not leave the bare wire ends in bilge water before making the waterproof connections. Water deposits in the connectors and cables will cause corrosion. Over time water can also work its way into the unit along the inside of the cable due to capillary action causing the light to fail. This will NOT be covered under warranty.

1. Depending on the model and number of lights installed, you will need to pull the **correct sized power cable** (see full installation guide Chapter 7) from the DC power source (breaker/fuse panel) to the light locations to supply constant power to the light units. It is imperative that the correct sized tinned marine grade cable is used to avoid voltage drop issues.

2. Using waterproof butt splices or IP66 waterproof junction boxes, make the connections at either end of the system to attach the lights to the DC system. Make sure any heatshrink used completely encapsulates the outer wire sheath (the use of glue-lined heat shrink is highly recommended to ensure water tightness).

3. It is imperative that either the OceanLED supplied fuse on each power line to each light or a suitable protection device is used to protect the cable/light unit. Failure to do so will void the warranty. Make sure any heatshrink used completely encapsulates the outer wire sheath (the use of glue-lined heat shrink is highly recommended to ensure water tightness).

4. Secure cables ensuring where the cable exits the light it is not under undue stress. Finish and test the light units BEFORE the vessel goes into the water.

12/24V Connection Diagram

RED · FUSE/BREAKER (NOT SUPPLIED) · POWER SWITCH (NOT SUPPLIED) · FUSE · 2M (79") LIGHT CABLE · BLACK · OPTIONAL PUSH TO BREAK SWITCH (NOT SUPPLIED) · FUSE · FUSE · DC CABLE TO POWER SOURCE (NOT SUPPLIED) · EXPLORE E2 LIGHTS

Fuse Kit Connection Overview

O RING

BARE ENDS
8MM MAX

CUT HERE
2>2.7MM (.079>.106")
CABLE

CUT HERE
1.5>1.9MM (.059>.075")
CABLE

TERMINAL

FUSE
5X20MM

TERMINAL

SPRING

TERMINAL
SCREW

TERMINAL
SCREW

CUT HERE
1>1.4mm (.040>.055")
CABLE

5. Finalising the installation

The Explore XFM mounting tube is constructed from corrosion resistant Aluminium Bronze and does not require further protection. The glass is pre-coated with a specialized Tritonium® coating which helps to prevent marine growth from adhering to the glass.

Warning: No paint or any type of anti-fouling agent should be applied to the bezel, as damage may occur to the light due to chemical incompatibility and can affect the performance of the light and will immediately void the warranty. However, if bottom painting of the bezel is deemed essential, then an area of at least 5mm should be left uncoated around the glass lens:

Warning: Please do not use any un-authorised cleaning products to remove excess paint or antifoul off the bezel. OceanLED recommends using Isopropyl Alcohol (IPA) only.

Always test the lights BEFORE the vessel goes back into the water. At this final stage make sure all of the system is operational. If you have any issues, please contact your local OceanLED representative.

Warning: Never install a new light fixture then leave the vessel in the water unchecked for several days. Never leave lights ON out of water for longer than 5 minutes followed by an off period of 1 hour. When the vessel is placed in the water, immediately check for leaks. Note that very small leaks may not be readily observed. It is best not to leave the vessel in the water for more than 3 hours before checking it again. If there is a small leak, there may be considerable bilge water accumulation after 24 hours. If a leak is observed, you must TAKE ACTION IMMEDIATELY to prevent damage.

6. Operation

To enter strobe mode, with the light on, toggle the power off then quickly back on. They should now strobe in a random pattern. The lights can be reset from strobe mode by simply turning off, waiting 10 seconds, then turn on again.