OceanLED

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This installation manual covers the following products:

ALLURE XFM HD Gen2 mk2

Allure Xchangeable Flush Mount (XFM) Gen2 mk2			
50 XFM HD	150 XFM HD	250 XFM HD	Colours XFM HD

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IMPORTANT: Please read the instructions completely before proceeding with the installation. These instructions supersede any other instructions if they differ.

PRETEST
Always test the lights prior to installation. Failure to do this may result in additional installation time and will not be covered by warranty.

GENERAL
OceanLED underwater lights are generally used for illuminating the water around a boat or yacht. Best placement for achieving the best results are described in finding the right mounting location.

WARRANTY COVERAGE
2 year warranty from time of purchase, regardless of installation.

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IMPORTANT SAFETY PRECAUTIONS!

⚠ **IMPORTANT NOTICE: Attention Installer:** This manual contains important information about the installation, operation and safe use of this product. This information should be given to the owner and/or operator of this equipment.

☀ **CAUTION -** (Risk Group 2): Possibly hazardous optical radiation emitted from this product. Do not stare at operating lamp. May be harmful to the eye.

⚠ **WARNING**

• 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 colored lights in your area.

• Do not operate lights out of water for a period longer than 5 minutes. 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 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.

• 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 salt water 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 to the driver with power applied as irreversible damage may occur.

• 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

## ⚠ DANGER! Risk of Electrical Shock or Electrocution!

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. Failure to do so could result in death or serious injury to serviceman, swimmers or others due to electrical shock. READ AND FOLLOW ALL INSTRUCTIONS IN THIS MANUAL.

Chapter 1: Overview

This handbook provides instructions to assist you in the installation and set up of the Allure underwater lights from OceanLED.

Identifying your Model and Power Source
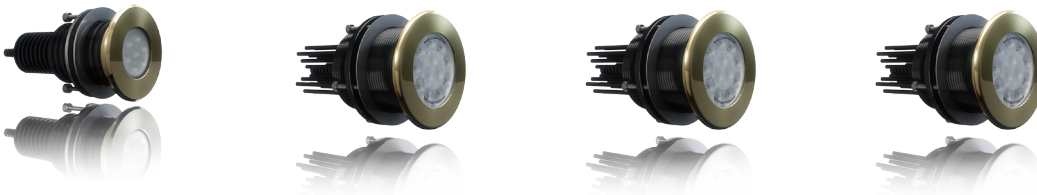
Allure Xchangeable Flush Mount (XFM) Gen2 mk2			
50 XFM HD	150 XFM HD	250 XFM HD	Colours XFM HD

Power Source

When identifying your power source, allow at least 15% reserve for voltage fluctuations due to variables beyond your control such as ambient temperature and supply voltage fluctuations to ensure your lights are always receiving the proper voltage and to ensure the power supply is not "overworked" causing premature failure. Use chart below in determining power supplies.

Model	Power Consumption in Watts	15% reserve in Watts	Recommended Fuse Value 12V DC	Recommended Fuse Value 24V DC	Recommended Fuse Value 110V AC	Recommended Fuse Value 240V AC
50 XFM	38 W	5.7 W	5 Amps	3 Amps	1.5 Amps	1 Amp
150 XFM	64 W	9.6 W	7 Amps	3 Amps	1.5 Amps	1 Amp
250 XFM	90 W	13.5 W	10 Amps	5 Amps	1.5 Amps	1 Amp
Colours XFM	120 W	18 W	N/A	10 Amps	N/A	N/A

Optional Extras (Not available in all countries, contact your reseller for more information.)

- **Remote Systems**
  A Remote System allows you to control your OceanLED lights. Multiple receivers can be used to control multiple lights on your boat.

- **2/4 Way Junction Box - Recommended**
  WARNING: Insufficient sealing of wires may lead to water ingress and cause product failure. Evidence of water ingress in cable due to installation errors will invalidate warranty. OceanLED recommends using a Blue Sea Systems ST Blade Fuse Block or an OceanLED Junction Box to prevent this issue.

Allure Series Accessories

DELRIN ISOLATING SLEEVE - • Isolation of the metal parts of the Allure Series Light from metal hulls and engine brackets to minimise galvanic corrosion between dissimilar metals. • The isolation sleeve is easily fitted to the rear of the light fixture using a suitable adhesive. Allow drying time before installation in hull. **PART NUMBERS -** • Delrin Isolation Sleeve for 150XFM / 250XFM - 001-500638	
OCEANDMX KIT (For use with the COLOURS XFM models) Take control of your OceanLED Pro Series Colours lights via your iOS or Android device. With the new OceanDMX App for Android and iOS, you have all the control and customisation you need to create any scene or light display you wish, with full control over sensitivity, speed and brightness. Choose between standard static, cycle or strobe modes. Alternatively, use audio or wave motion modes to control the colour scheme of your choice. The OceanDMX App has been custom designed with an easy to use menu structure for use solely with the new OceanDMX Controller, which transmits its own unique WiFi network for your mobile device to connect with. To use audio control, simply attach your vessels sound system to the DMX controller via a standard audio jack. In wave motion mode, you can create a dramatic display whilst on the move upon wave impact.	
DMX TOUCH PANEL CONTROLLER - • For use with the COLOURS XFM models. Available as a fixed or wifi compatible controller. • Use to change the colour and lighting effects of the above lights and choose between a spectrum of 6 million colours to suit your mood. • The wifi controller can be easily programmed to create individual colour scenes, which can then be selected at the touch of a button. **PART NUMBERS -** • DMX Touch Panel Controller: 001-500596 • DMX Wifi Compatible Touch Panel Controller: 001-500598 • 3M Ethernet Colours Connection Cable: 001-500594 • Colours Terminator Kit: 001-500467	

Products may vary from image shown.

Finding The Mounting Location - UNDERWATER

Considerations

Design -
- Allure Series lights are suitable for Fiberglass, GRP and Wooden Hulls, as well as Aluminum/Steel Hulls using suitable mounting hardware.

- If positioning lights on a transom, more smaller sizes look better than fewer bigger sizes.

- All colours of light (except blue) are typically absorbed within the first 30 meters or 100 feet. Blue lights seem brighter than white lights with a better beam spread because they are more perceptible to the cones in the human eye.

- Blue light penetrates the furthest in blue sea water, but may appear whitish or bleached out in green or brown water due to water impurities.

- When lights are pointing downwards, the light can reflect off a sandy sea bed giving a mirrored effect, and light will bounce back creating even more illumination

- Please follow instructions with any accessories used to protect warranty coverage and ensure product longevity.

Tip: When installing the Allure XFM units, please check the inside spacing to ensure that if maintenance is required, there is enough space on the inside of the boat to remove the insert. For example, the XFM unit requires an additional 165mm / 6 1/2" from the rear of the cannister to allow the insert to be removed.

Depth -
- Ideal mounting depth is 100 - 200mm (4 - 8") from the water line to the top of the fixture, (at 50% load).

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

Spacing -
- If positioning lights on a transom, take into consideration swim platforms and obstacles that may block the initial portion of the light, it may be necessary to use the next model size up.

- The recommended transom spacing is 1 - 1.5m (3 - 5') for 50 or 150 HD models and 1 - 1.8m (3 - 6') for 250 HD models.

- The recommended hull spacing is 1 - 1.8m (3 - 6') for 50 or 150 HD models and 1.2 - 2.4m (4 - 8') for 250 HD models.

Installation -
- Test units before installation.

- Make sure that when installing any underwater light, the entire rear of the bronze flange is always coated in sealant to prevent any water ingress into the hull from rear of the unit.
(refer to Chapter 3 Fig. 1)

- When switching lights on for the first time, take into consideration water clarity, ambient light etc as first time impressions can be marred by poor conditions.

- Test units after installation.

Chapter 2: Preparing the Hull

Note: OceanLED makes every effort to protect our marine and fresh water environment as well as our natural resources. Please take care to keep packaging away from and out of the water by ensuring loose packaging materials are secured and not susceptible to being blown into the water. Please recycle all packaging materials as the sustainability of our environment is everyone's responsibility.

Warning: There are several different hull types most are either solid fiberglass or cored. Be sure you follow the correct procedures for the hull you are preparing since all require different preparation methods. We will cover the two most common types below. If in doubt please contact your local OceanLED representative or the boat manufacturer for assistance.

Warning: Please check all components prior to installation. If there is any damage to connectors, cables, and/or any other component, please notify OceanLED BEFORE installation.

Additional tools needed that are not provided by OceanLED

• Power drill (with a hole saw sized to suit your light model, see below)

• Sand Paper

• Filler (reference boat manufacturer's specifications)

2.1 Preparing a Solid Fiberglass Hull

Tip: Always wear safety goggles and a dust mask.

1. Drill a 3mm / 1/8" pilot hole perpendicular to the waterline from inside the hull. If there is a rib, strut, or other hull irregularity near the selected mounting location, this will need to be taken into account in the planning phase and the location adjusted accordingly, or the obstruction safely removed or modified.

2. Using the correct sized hole saw (see table below), cut the mounting hole from outside the hull. Be sure to hold the drill plumb, so the hole will be perpendicular to the surface of the hull.

Solid and Cored Hull Installation Saw Size		
Product Name	Metric	Imperial
50 XFM HD Gen2	60.3mm	2 3/8"
150 XFM HD Gen2	82.6mm	3 1/4"
250 XFM HD Gen2 / Colours XFM	82.6mm	3 1/4"

TIP: If drilling large holes, alternate between applying pressure to the drill and relaxing the action to ensure an even cut through the hull and the saw's longevity. If cutting through Kevlar shield or metal, be careful of overheating the hole saw.

3. Sand the area around the hole using a heavy grit sandpaper to remove the previous bottom paint and to ensure that the sealant will adhere properly to the hull. If there is any petroleum residue inside the hull, remove it with acetone before sanding.

2.2 Preparing a Cored Fiberglass Hull

The core (wood or foam) must be cut and sealed carefully. The core must be protected from water seepage and we recommend that the hull be reinforced to prevent it from crushing under the locking nut which would allow the cannister to become loose. If unsure, please consult your local OceanLED representative.

Tip: Always wear safety goggles and a dust mask.

1. Drill a 3mm / 1/8" pilot hole perpendicular to the hull. If there is a rib, strut, or other hull irregularity

near the selected mounting location, this will need to be taken into account in the planning phase and the location adjusted accordingly, or the obstruction safely removed or modified. If the pilot hole is drilled in the wrong location, drill a second hole in a better location and repair first pilot hole.

2.   Using the correct sized hole saw cut the hole from outside the hull through the outer skin only. Be sure to hold the drill plumb, so the hole will be perpendicular to the angle of the hull.

Tip: Seal core according to boat manufacturer's specifications.

3.   The core material can be very soft. Apply only light pressure to the hole saw after cutting through the outer skin to cut through the material. Once you have cut through the core material, you will need to apply more pressure to cut through the liner material on the inside of the hull.

4.   Remove the plug of core material so the core of the hull is fully exposed. Using heavy grit sandpaper, sand and clean the inner skin, core, and the outer skin around the hole to remove fiberglass.

Tip: Completely seal the hull to prevent water seepage into the core. Allow enough preparation time for several layers of epoxy to completely dry. Remember – environmental conditions can accelerate or decelerate curing times which also varies on type of epoxy used. Consult epoxy directions and test cure time before procedure.

2.3 Preparing a Metal and Carbon Fibre Hull

A Delrin sleeve must be installed If mounting the light to metal or carbon fibre hulls to prevent the effects of galvanic corrosion. To install, follow the steps below:

1.   Drill a 3mm / 1/8" pilot hole perpendicular to the waterline from inside the hull. If there is a rib, strut, or other hull irregularity near the selected mounting location, this will need to be taken into account in the planning phase and the location adjusted accordingly, or the obstruction safely removed or modified.

2.   Using the correct sized hole saw (see table below), cut the mounting hole from outside the hull. Be sure to hold the drill plumb, so the hole will be perpendicular to the surface of the hull.

Metal and Carbon Fibre Huil (with Delrin Sleeve)		
Product Name	Metric	Imperial
50 XFM HD Gen2	64	2 $^{3/8}$
150 XFM HD Gen2	89	3 $^{1/2}$
250 XFM HD Gen2 / Colours XFM	89	3 $^{1/2}$

TIP: If drilling large holes, alternate between applying pressure to the drill and relaxing the action to ensure an even cut through the hull and the saw's longevity. If cutting through Kevlar shield or metal, be careful of overheating the hole saw.

3.   Sand the area around the hole using a heavy grit sandpaper to remove the previous bottom paint and to ensure that the sealant will adhere properly to the hull. If there is any petroleum residue inside the hull, remove it with acetone before sanding.

Chapter 3 Installation of Allure XFM HD Gen2 mk2 Models

XFM HD Gen2

Xchangeable Flush Mount
50 XFM HD Gen2 mk2

Kit Includes			
50 XFM HD Gen2 mk2 Light		Connection Cable (hard wired to the light)	
Driver V DC Gen2		Power Pigtail	
Locking Ring Kit		Fuse Kit	

3.1 Installing the Light Fixture - Allure 50 XFM Gen2 mk2 MODELS

**Additional tools needed that are not provided by OceanLED**

- Marine sealant - 3M 4200 or equivalent
- Cable ties
- Waterproof Cable Connectors / Junction Box (optional)
- Allen key (5mm)

Tip: OceanLED recommends dry fitting all products. When installing, be sure that the light fits the area and secures to the hull using the appropriate hardware before applying any sealant.

Tip: When applying sealant to light fixture, use the OceanLED packaging material as a cushion when placing light on the ground face down to prevent lens damage.

Installation (Once hull preparation is complete)

1.   (If using Delrin sleeve) insert the Delrin sleeve into the drilled hole and apply marine sealant to seal between the Delrin sleeve and the hull.

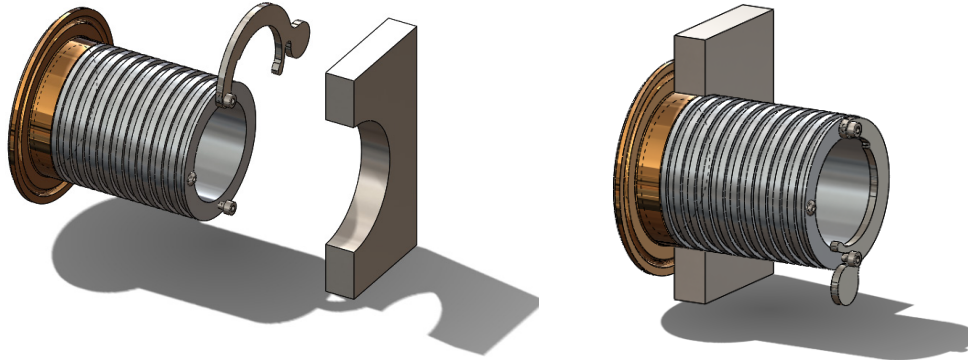2.   Unclip light retainer, remove light cartridge from cannister.
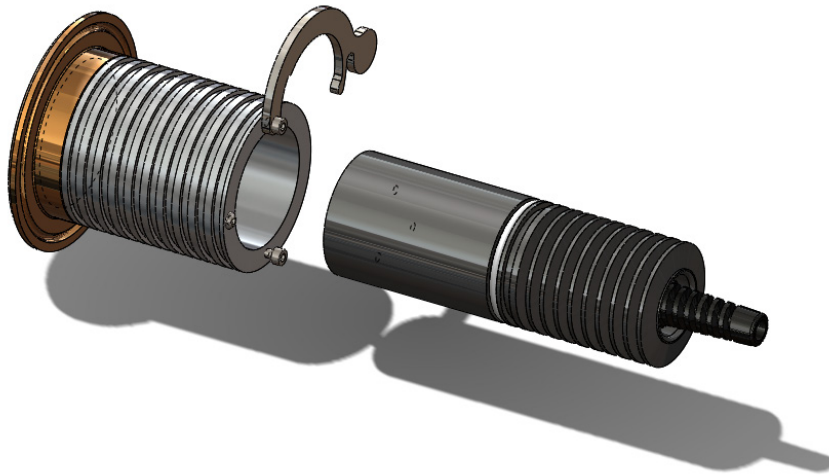
3.   Apply sealant to rear of light cannister bezel to ensure a complete unbroken seal around the light.

Tip: Make sure sealant fills in the recess groove on the reverse of the light bezel:
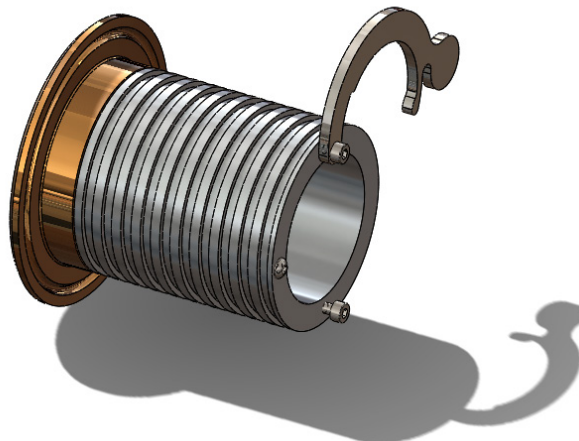
4. Insert the light cannister into the hull, feeding the retaining clip through first and seat into place. Press the light hard into the hull and twist slightly to spread the sealant around behind the light to ensure good adhesion:

Tip: This process is made much easier if a second person is inside the hull to receive the light and install the locking equipment whilst supporting the light from the outside. Breakages due to lights falling out of the hull are NOT covered under warranty and can cause serious bodily injury as can any falling object.

5. (If using Delrin sleeve) thread Delrin sleeve washer over light cannister until flush with the hull.

6. Thread the washer onto the cannister.

Tip: The stainless steel compression washer does not need to be flat to the hull, an undulating surface can be taken up with the washer.

7. Place the two C clips together to form a circle, ensuring you pair 1 threaded and 1 non-threaded hole together. Fix clips together using one of the screws provided so that the clips are located approximately half way down the length of the screw. Locate clips into grooves on outside of the cannister so that the end of the screw is close to the washer. Fit the second screw provided into the remaining holes, fixing the two clips together. Screw down to the same position:

8. Tighten the locking screws using a 5mm Allen key, applying thread lock at point of thread contact with 'C' clip. DO NOT over-tighten locking screws, as you could damage the cannister and this will not be covered under warranty..

Once you are satisfied that the unit is fully tightened, you will notice that sealant has squeezed out from around the perimeter of the light. Using a thinner or cleaner, apply to cloth and wipe off excess sealant to leave a clean seal. AVOID CONTACT WITH LENS. If you do not see sealant squeeze out from the body, you have not used enough sealant or tightened the unit enough to the hull. Carefully examine the installation to make sure the seal you have installed on the unit is fully water-tight. If in doubt, remove light, re-apply sealant and re-install.

9.   Replace light cartridge into cannister and secure with retainer clip.

10.   **Bonding**: The light **MUST** be attached to the vessels bonding / cathodic protection system. Connect the bonding cable to the rear of the cannister using the small screw attached. Once fitted it is recommended to check that there is full continuity between the vessels bonding system and the outer bezel of the cannister.
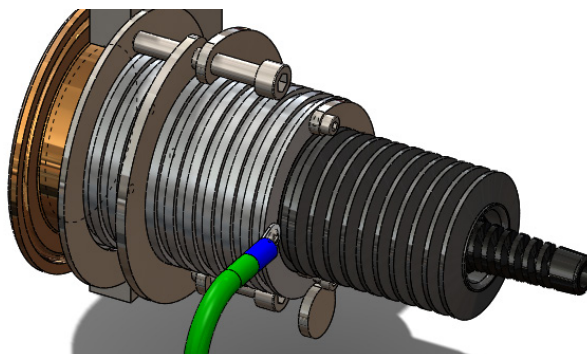
11.   See page 15 for driver installation and page 22 for finalizing the installation of OceanLED Lights.

MAINTENANCE
FOR TIPS ON REMOVING THE INSERT, PLEASE REFER TO THE MAINTENANCE AND REPAIR SECTION IN THIS GUIDE.

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Chapter 4: Installation of Allure 150, 250 & Colours XFM HD Gen2 mk2 Models

Xchangeable Flush Mount		
150 XFM HD Gen2 mk2	250 XFM HD Gen2 mk2	Colours XFM HD Gen2 mk2

Kit Includes			
Light Engine		Connection Cable (hard wired to the light)	
Driver V DC (optional)		Power Pigtail (Single Colour DC Only)	
Driver Mains V AC (optional)		Fuse Kit (Single Colour DC Only)	
Colours DMX Driver 24V DC (optional)		DMX Cable (Colours Only)	
Colours DMX Driver AC (optional)			
Locking Ring Kit			

4.1 Installing the Light Fixture - Allure 150 & 250 XFM HD Gen2 mk2

**Additional tools needed that are not provided by OceanLED**

- Marine sealant - 3M 4200 or equivalent
- Cable ties
- Waterproof Cable Connectors / Junction Box (optional)
- Allen key (4mm)

Tip: OceanLED recommends dry fitting all products. When installing, be sure that the light fits the area and secures to the hull using the appropriate hardware before applying any sealant.

Tip: When applying sealant to light fixture, use the OceanLED packaging material as a cushion when placing light on the ground face down to prevent lens damage.

Installation (Once hull preparation is complete)

1. (If using Delrin sleeve) insert the Delrin sleeve into the drilled hole and apply marine sealant to seal between the Delrin sleeve and the hull.

2. Remove rear locking ring from cannister and remove cartridge.
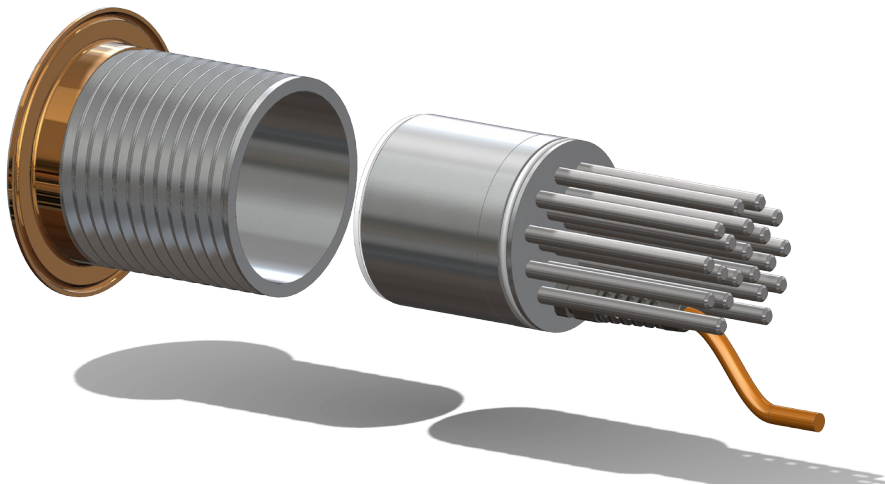
3. Apply sealant to rear of light cannister bezel to ensure a complete unbroken seal around the light.

Tip: Make sure sealant fills in the recess groove on the reverse of the light bezel:

4. Insert the light cannister 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.

Tip: This process is made much easier if a second person is inside the hull to receive the light and install the locking equipment whilst supporting the light from the outside. Breakages due to lights falling out of the hull are NOT covered under warranty and can cause serious bodily injury as can any falling object.

5.   (If using Delrin sleeve) thread Delrin sleeve washer over light cannister until flush with the hull.

6.   Thread the 6 screws provided into the locking ring, so the locking ring is positioned approx halfway along screw threads.

7.   Place the washer over the light cannister until in contact with the hull, then thread on the locking ring until the screws contact the washer.
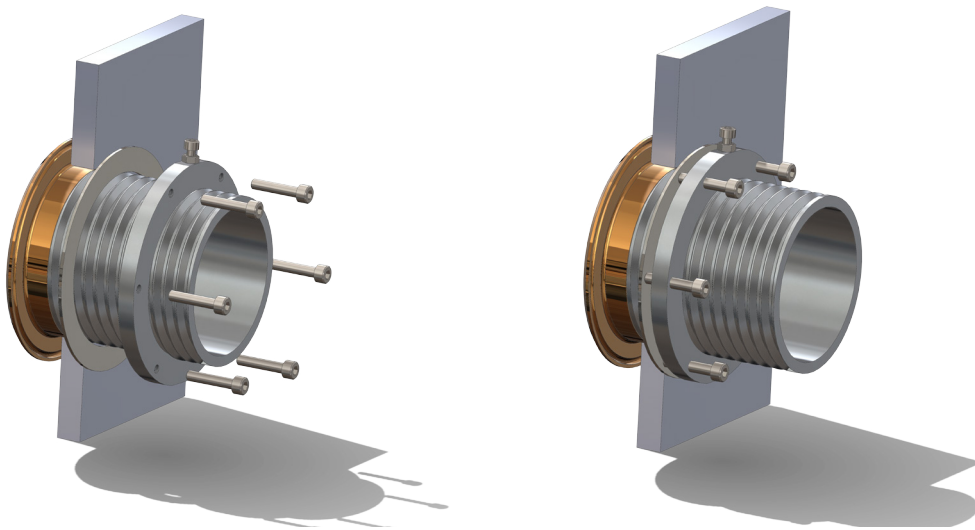
Tip: The stainless steel compression washer does not need to be flat to the hull, an undulating surface can be taken up with the washer.

8.   Tighten the locking screws using a 4mm Allen key, applying thread lock at point of thread contact with locking ring. DO NOT over-tighten locking screws, as you could damage the cannister and this will not be covered under warranty.

Once you are satisfied that the unit is fully tightened, you will notice that sealant has squeezed out from around the perimeter of the light. Using a thinner or cleaner, apply to cloth and wipe off excess sealant to leave a clean seal. AVOID CONTACT WITH LENS. If you do not see sealant squeeze out from the body, you have not used enough sealant or tightened the unit enough to the hull. Carefully examine the installation to make sure the seal you have installed on the unit is fully water-tight. If in doubt, remove light, re-apply sealant and re-install.

9.   Replace light cartridge into cannister and secure with locking ring.
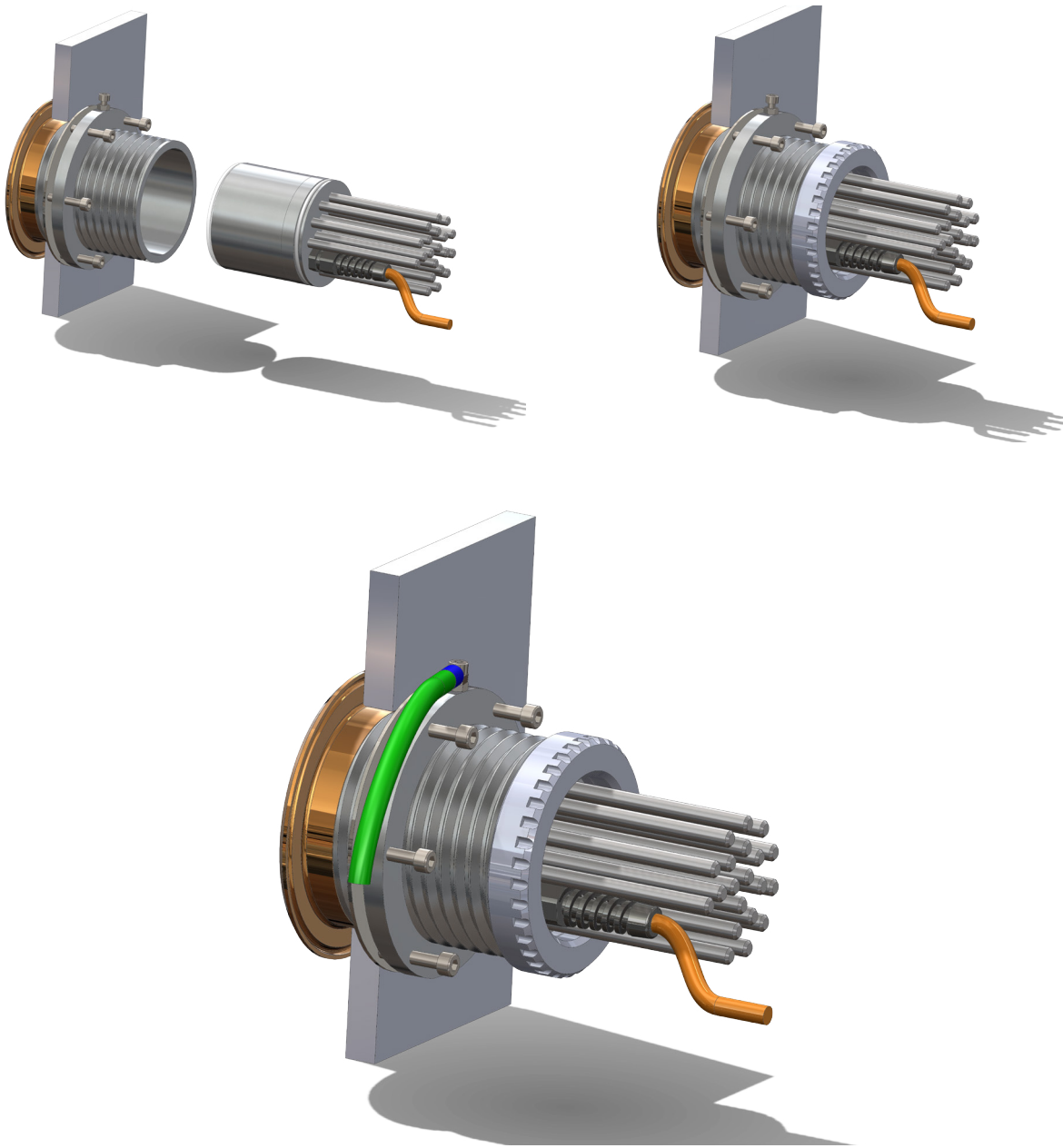
10.   **Bonding**: The light **MUST** be attached to the vessels bonding / cathodic protection system. Connect the bonding cable to the locking ring using the supplied screw. **NOTE**: It is important to tighten the screw fully to ensure that the end of the screw cuts through the insulative anodising layer of the cannister to ensure a good low resistance electrical contact. Once fitted it is recommended to check that there is full continuity between the vessels bonding system and the outer bezel of the cannister.

10.   See page 15 for driver installation and page 19 for finalizing the installation of OceanLED Lights.

MAINTENANCE

FOR TIPS ON REMOVING THE INSERT, PLEASE REFER TO THE MAINTENANCE AND REPAIR SECTION IN THIS GUIDE.

![OceanLED logo]

Chapter 5: Installation of V DC Driver / V AC Power Supply (optional)

Allure XFM HD DRIVERS

Driver V DC	Power Supply V AC	DMX Driver	DMX Driver
50/150/250 XFM	150/250 XFM	24v DC Colours	AC Colours

Chapter 5.1: Installation of V DC Driver

Additional items required (not supplied)
- Screws to secure the driver
- Junction box / waterproof connectors
- Sufficient cable to connect to power lead.

Connecting lights to your V DC power source

WARNING: **Always consult a qualified electrician when connecting OceanLED light fixtures.**
WARNING: **Never use power tools to secure the drivers: hand tighten only.**
WARNING: **Red=Positive; Black=Ground**
WARNING: **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, fuse recommendations, breaker size etc.**

Driver connections
- 2 pin is for the power pigtail.
- Multi pin is for the light (See figure below).
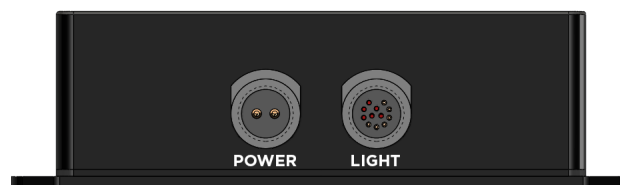
POWER   LIGHT

Warning: Mount drivers in a dry location. Drivers should not sit in standing water at any time.

1.   Fix driver into required position, see below diagram for mounting dimensions and clearances. Ensure chosen driver location is near enough to connect light cable without applying undue stress
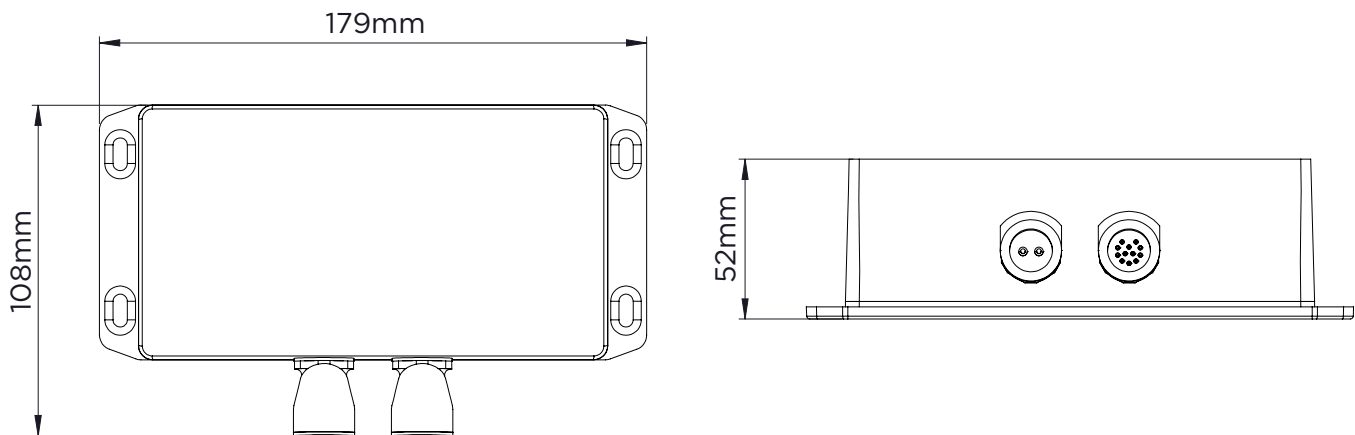
Tip: For complete instructions on V DC connections, please refer to local codes and ordinances for V DC connections. or equivalent

Warning: **Never leave the bare cables unprotected. Water deposits in the connectors and cables will corrode the cables causing the light to fail and will NOT be covered under warranty.**

2.   Depending on the model and quantity of lights installed you will need to pull the correct sized power cable from the breaker to the driver locations to supply constant power to the units. It is imperative that the correct sized tinned marine cable is used. (Refer to Cable Gauge Chart in Appendix).

Tip: Incorrect cable gauge will drop voltage along distances. Decreases in voltage will increase current demand by the driver unit and will lead to blown fuses and tripped breakers. DO NOT compensate for this by adding higher rated fuses and/or breakers. Fuses are designed to protect the wiring, not the components.

Tip: Always use dielectric grease when making the connections to the light. Corrosion of wire is NOT covered under warranty.

3   Connect the Deutsch plug from the light into the multi pin port on the driver.

4   If you are not installing a custom fuse panel, it is imperative that the OceanLED supplied fuse is installed on the power line from each light. Please consult electrical specification on page 4 to select the correct fuse, dependant on which model of light you have.

5   Using waterproof connections or a waterproof junction box, make the connections from the fused V DC power source to the 2 pin power pigtail (RED is positive, BLACK is ground). Plug the 2 pin power connector into driver

6.   Secure cables to finsh and test light units BEFORE the boat goes into the water. **NOTE:** Do not run light(s) for longer than 2 minutes to avoid damage. If you have any issues and need troubleshooting advice, please contact your local OceanLED representative.

7.   See section 5.6 for finalizing the installation of OceanLED Lights.

Chapter 5.2: Installation of V AC Power Supplies

Additional items required (not supplied)
• Screws to secure the driver
• Junction box / waterproof connectors
• Sufficient cable to connect to power lead.
• Suitable fuse / breaker(s)

Connecting lights to your AC power source

WARNING: **Always consult a qualified electrician when connecting OceanLED light fixtures.**
*WARNING*: **Never use power tools to secure the drivers: hand tighten only.**
WARNING: **Brown=Live; Blue=Neutral; Green/Yellow=Earth**
WARNING: **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, fuse recommendations, breaker size etc.**

Driver connections
• The 3 core input is for the power
• The multi pin Deutsch connector is for the light.

Allure 150 AC Driver		Allure 250 AC Driver

Warning: Mount drivers in a dry location. Drivers should not sit in standing water at any time.

1.   Fix driver into required position, see below diagram for mounting dimensions and clearances. Ensure chosen driver location is near enough to connect light cable without applying undue stress.

Tip: For complete instructions on V AC connections, please refer to local codes and ordinances for V AC connections or equivalent.

Warning: **Never leave the bare cables unprotected. Water deposits in the connectors and cables will corrode the cables causing the light to fail and will NOT be covered under warranty.**

2.   Depending on the model of lights being installed you will need to pull the correct sized power cable from the breaker to the driver locations to supply constant power to the units. It is imperative that the correct sized tinned marine cable is used.

Tip: Always use dielectric grease when making the connections to the light. Corrosion of wire is NOT covered under warranty.

Tip: Mount all drivers/power supplies in a dry location. Drivers/Power supplies should not sit in standing water at any time.

3.   Connect the Deutsch plug from the light into the Deutsch connector on the AC Power Supply (multi pin).

4.   If you are not installing a custom fuse panel, it is imperative that the supply to each driver is appropriately fused. Please consult electrical specification on page 4 to select the correct fuse dependant on which model of light you have.

5   Connect the 3 core input cable end of the mains power supply to the boat's fused power supply using waterproof connectors or waterproof junction box. (Brown is Live, BLUE is Neutral, GREEN/YELLOW is Earth)

6.   Secure cables to finsh and test light units BEFORE the boat goes into the water. **NOTE:** Do not run light(s) for longer than 2 minutes to avoid damage. If you have any issues and need troubleshooting

advice, please contact your local OceanLED representative.

7.   See section 5.6 for finalizing the installation of OceanLED Lights.

5.3 Installation of Colours 24V DC DMX Driver

Additional items required (not supplied)
• Screws to secure the driver
• Junction box / waterproof connectors
• Sufficient cable to connect to power lead.
• Suitable fuse / breaker(s)
• DMX controller (1 per system)
• DMX terminator (1 per system)

Warning: **Always consult a qualified electrician when connecting OceanLED light fixtures.**
Warning: **Never use power tools to secure the drivers: Hand tighten only.**
Warning: **Red = Positive; Black = Negative (Ground).**
Warning: **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, fuse recommendations, breaker size etc.**

Driver connections
• The 2 core input is for the power
• The multi pin Deutsch connector is for the light
• 2x DMX connections (DMX in / DMX out)

Warning: Mount drivers in a dry location. Drivers should not sit in standing water at any time.

1.   Fix driver into required position, see below diagram for mounting dimensions and clearances. Ensure chosen driver location is near enough to connect light cable without applying undue stress

Tip: Incorrect cable gauge will drop voltage along distances. Decreases in voltage will increase current demand by the driver unit and will lead to blown fuses and tripped breakers. DO NOT compensate for this by adding higher rated fuses and/or breakers. Fuses are designed to protect the wiring, not the components.

2   Depending on the quantity of lights installed, you will need to pull the correct sized power cable from the breaker to the driver locations to supply constant power to the units. It is imperative that the correct sized tinned marine cable is used. (Refer to Cable Gauge Chart in Appendix).

Tip: Always use dielectric grease when making the connections to the light. Corrosion of wire is NOT covered under warranty.

3   Connect the Deutsch plug from the light into the multi pin port on the driver.

4   If you are not installing a custom fuse panel, it is imperative that a correctly rated fuse is installed on the power line from each light. Please consult electrical specification on page 4 to select the correct fuse.

5   Using waterproof connections or a waterproof junction box, make the connections from the fused 24V DC power source to the 2 core power cable (RED is positive, BLACK is ground).

6.   Continue to section 5.5 for DMX control connection

5.4 Installation of Colours AC DMX Driver

Additional items required (not supplied)
• Screws to secure the driver
• Junction box / waterproof connectors
• Sufficient cable to connect to power lead.
• Suitable fuse / breaker(s)
• DMX controller (1 per system)
• DMX terminator (1 per system)

WARNING: **Always consult a qualified electrician when connecting OceanLED light fixtures.**
WARNING: **Never use power tools to secure the drivers: hand tighten only.**
WARNING: **Brown=Live; Blue=Neutral; Green/Yellow=Earth**
WARNING: **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, fuse recommendations, breaker size etc.**

Driver connections
• The 3 core input is for the power
• The multi pin Deutsch connector is for the light
• 2x DMX connections (DMX in / DMX out)

Warning: Mount drivers in a dry location. Drivers should not sit in standing water at any time.

1.   Fix driver into required position, see below diagram for mounting dimensions and clearances. Ensure chosen driver location is near enough to connect light cable without applying undue stress

414mm

160mm

106mm

Tip: For complete instructions on V AC connections, please refer to local codes and ordinances for V AC connections or equivalent.

Warning: Never leave the bare cables unprotected. Water deposits in the connectors and cables will corrode the cables causing the light to fail and will NOT be covered under warranty.

2.	Depending on the quantity of lights being installed you will need to pull the correct sized power cable from the breaker to the driver locations to supply constant power to the units. It is imperative that the correct sized tinned marine cable is used.

Tip: Always use dielectric grease when making the connections to the light. Corrosion of wire is NOT covered under warranty.

3.	Connect the Deutsch plug from the light into the Deutsch connector on the AC Power Supply (multi pin).

4.	If you are not installing a custom fuse panel, it is imperative that the supply to each driver is appropriately fused. Please consult electrical specification on page 4 to select the correct fuse dependant on which model of light you have.

5	Connect the 3 core input cable end of the mains power supply to the boat's fused power supply using waterproof connectors or waterproof junction box. (Brown is Live, BLUE is Neutral, GREEN/YELLOW is Earth).

6.	Continue to section 5.5 for DMX connection.

5.5 DMX Control Connection

TIP: It is recommended to mount drivers within 10'/3m of one another in order to utilise the 3m DMX Ethernet Colours Connection Cable provided.

Warning: Never leave the bare cables unprotected. Water deposits in the connectors and cables will corrode the cables causing the light to fail and will NOT be covered under warranty.

1.	Using the DMX cable (supplied with the OceanLED DMX controllers), connect the first driver in the series into the first DMX port. If required, the DMX control panel cable can be extended by a competent electrician.

2.	If you have multiple drivers, they have to be daisy-chained; DMX out (driver 1) to DMX IN (driver 2) – See diagram below.

3. The final device in the chain needs to be terminated properly using a DMX terminator. This is essential for closing the control circuit (Included with OceanLED DMX controller kits).

4. Secure cables to finish and test light units BEFORE the boat goes into the water. If you have any issues and need troubleshooting advice, please contact your OceanLED representative.

5. See section 5.6 for finalizing the installation of OceanLED Lights

Connection Diagram
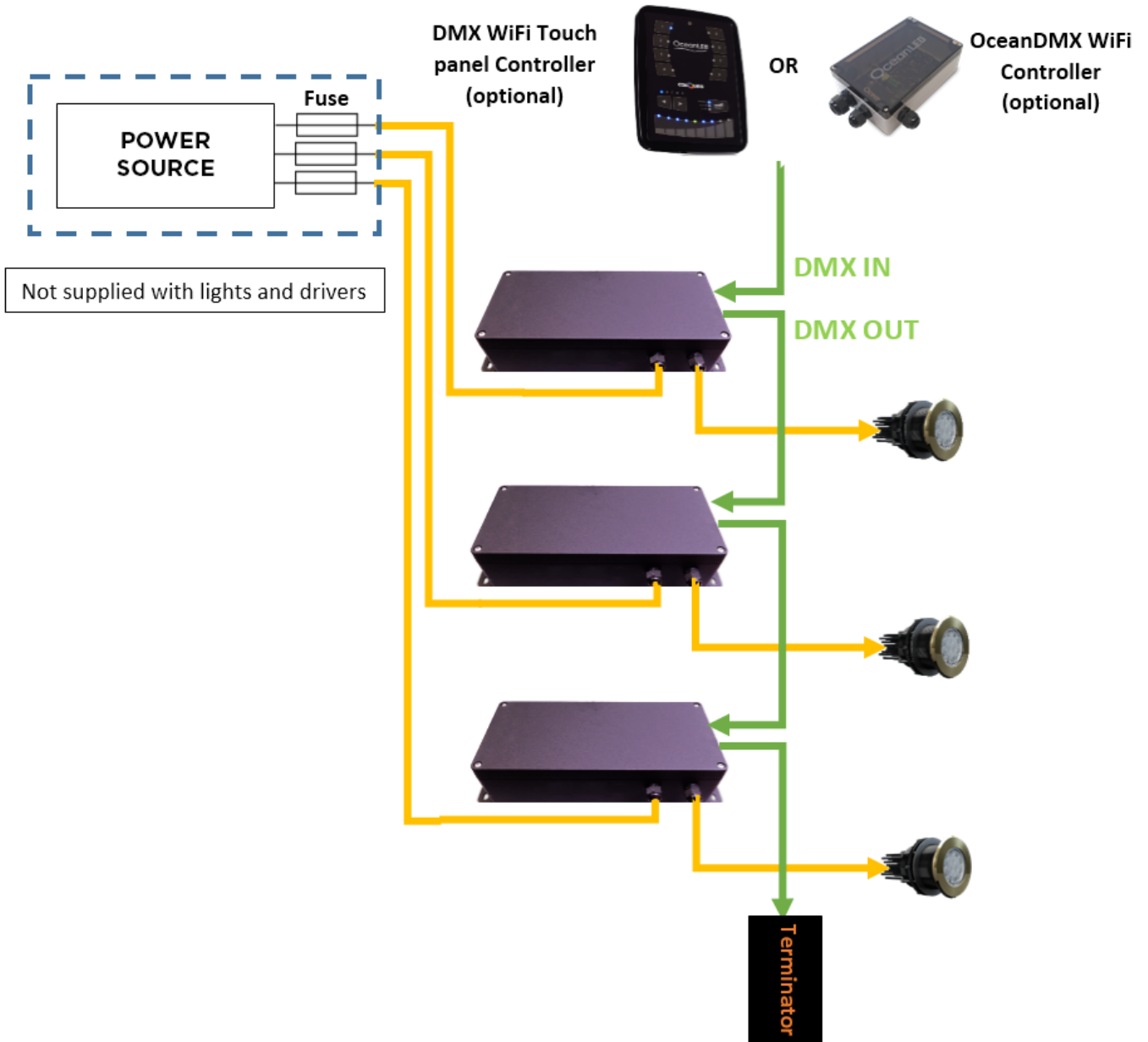
TO CREATE INDIVIDUAL DMX ADDRESSES

For more complex custom installation requirements, please contact your local OceanLED representative

5.5 Test your installation

⚠ **WARNING -** Do not run out of water for a period longer than 5 minutes. Exceeding this may cause damage to the light unit.

Test your lights

Always test the lights BEFORE the boat 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 boat in the water unchecked for several days.***

When the boat 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 boat 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.

Chapter 6: Operation, Maintenance and Troubleshooting

6.1 - Operation

Warning: **Never connect/disconnect lights to the driver with power applied as irreversible damage may occur.**

6.1.1 Single Colour

1. Once fully installed, lights will illuminate when power is applied to the driver.

6.1.2 DMX Colours

1. Once fully installed and power is applied, lights will illuminate dimly for approximately one second. Then turn off unless there is a valid DMX signal.

2. For operation of Colours, consult the relevant DMX controller manual.

6.2 - Maintenance

1. Marine growth can build up quickly on the light and can reduce the performance in just a few weeks. To help prevent this, all OceanLED lights have been coated with a specialized Tritonium® coating which makes the surface of the glass lens a non-stick layer. Lights should be cleaned with a boat brush or similar biweekly, or as needed to keep the lens of the light clean. Growth varies greatly around the world and maintenance is imperative to the proper operation and longevity of the product. If heavy fouling occurs, barnacles can be removed from the lens using a plastic scraper and moderate pressure under water. If cleaning the lens while the boat is out of the water, apply water to the lens before scraping. Never scrape or try to remove barnacles from a dry lens.

WARNING: **Harsh cleaning solvents such as acetone may damage the light. Using a harsh solvent on the light may invalidate your warranty.**

2. Check connections annually for corrosion, if necessary, replace connections.

3. Check light installations periodically for signs of corrosion.

6.3 Removing light cartridge from cannister

WARNING: **Before attempting to remove the Insert from the cannister, be sure to check that the lens on the unit has not cracked and leaked water into the light unit. If the lens or seals have been compromised, do not remove the insert whilst the boat is in the water. Contact your local OceanLED representative for more Information (If lens becomes damaged then a replacement unit is required).**

6.3.1 Removing the light cartridge 50 XFM HD

1. Turn the power off that supplies the light units.

2. Disconnect the light from the driver.

3. Unclip retainer.

4. The light insert is now ready for removal. Pull out from cannister twisting to break seal.

NOTE: Do not remove O ring or tamper with the cannister as this may cause damage.

6.3.2 Removing the light insert Allure 150 & 250 XFM HD

1. Turn the power off that supplies the light units.

2. Disconnect the light from the driver.

3. Remove rear locking ring using locking ring spanner provided.

WARNING: **REMOVAL WITH INCORRECT TOOLS MAY DAMAGE THE UNIT AND INVALIDATE WARRANTY.**

4. The light insert is now ready for removal. Pull out from cannister using a slight twisting motion to break seal.

NOTE: Do not remove O ring or tamper with the cannister as this may cause damage.

6.4 Fitting or Replacing your XFM HD light cartridge

Installing or replacing the 50 XFM cartridge

1. Check that the O-ring is fitted on the rear of the light cartridge, not damaged and free from debris.

2. Ensure inside of cannister is clean and free of any moisture.

3. Insert the light cartridge into the cannister. Slide in completely until the retainer clip aligns with the groove in the light cartridge.

4. Secure with retainer clip.

NOTE: Make sure vessels bonding / cathodic protection system is attached to bonding point on rear of cannister.

Installing or replacing the 150 or 250 XFM cartridge

1. Check that the O-ring is fitted on the rear of the light cartridge, not damaged and free from debris.

2. Ensure inside of cannister is clean and free of any moisture.

3. Insert the light cartridge into the cannister. Slide in completely until it comes to a stop.

4. Fit rear locking ring on to cannister.

5. Hand tighten onto outer cannister, then using locking ring spanner secure fully.

NOTE: Make sure vessels bonding / cathodic protection system is attached to bonding point on front locking ring.

Replacement Parts

Lost, broken, and worn parts should be replaced immediately and can be obtained through your dealer or from the manufacturer (Only use genuine OceanLED parts).

OceanLED

Troubleshooting Problems and Their Solutions

ALLURE SERIES			
Problem	**Check**	**Cause**	**Fix**
Light does not look bright	Check that there is no marine growth on the lens	Marine growth	Clean the lens as per maintenance advice
	Check voltage supply to the light is correct	Voltage is either too high or too low	Investigate reason for high or low voltage and fix
	Check voltage supply is stable and does not fluctuate	Voltage is fluctuating	Investigate reason for voltage fluctuation and fix
	Check that the electrical connections between the light and the supply cable have been made correctly	Poor electrical connection	Remake connection and seal connection correctly
	Confirm all LEDs are illuminated	1 or more LEDs are not working	Contact your dealer.
	Check lights to see if water is present inside the light	Water present	Contact your dealer.
	Check cable connections for corrosion	If corrosion is present	It is not advised to reuse the cable if water is present inside. Contact your dealer for a replacement. This is NOT covered by the warranty
Light has water inside	Check integrity of lens	Light will require replacing	This is not covered by the warranty - Contact your dealer for a replacement light. Only use genuine OceanLED parts
	Check connections to make sure they are not submerged in water	Light will require replacing	This is not covered by the warranty
	Check cable to make sure there is no damage to the cable	Cable will require replacing	This is not covered by the warranty. Only use genuine OceanLED parts
	Checked all factors that are above and the light still does not work	Light faulty	Contact your dealer for a replacement light

Troubleshooting Problems and Their Solutions

ALLURE SERIES			
Problem	**Check**	**Result**	**Fix**
Light does not light up	Check that the electrical connections between the light and the supply cable have been made correctly	Poor electrical connection	Remake connection and seal joint correctly
	Check that the wiring polarity is correct, red to positive and black to negative	Polarity incorrect	Change the wiring polarity and seal joint correctly
	Check that there is power supply to the light cable connection	Poor electrical connection	Trace the cables back, checking at joints until break has been located. Then rectify the problem and seal joint correctly
	Check that the electrical connections between the supply cable and the light circuit breaker or fuse have been made correctly	Poor electrical connection	Remake connection and seal joint correctly
	Check that the in-line fuse is intact and not blown	Replace fuse	If fuse keeps blowing then there is a short circuit in the light system that must be traced and rectified. If no external short can be located contact your dealer
	Exchange the interlink cable (between light and driver) with one from a working light	Light works, faulty cable	Contact your dealer for a replacement cable
	Exchange the driver with one from a working light	Light works, faulty driver	Contact your dealer for a replacement driver
	Check that the light supply circuit breaker is closed or the fuse has not blown	Close circuit breaker / replace fuse	If breaker / fuse keeps blowing then there is a short circuit in the light system that must be traced and rectified. If no external short can be located contact your dealer

ALLURE - COLOURS			
Problem	**Check**	**Result**	**Fix**
The colour change trouble shooting problems and solutions are the same as above three tables for standard colours, with the addition of the below:			
Light does not respond to the controller	Check DMX connections are daisy-chained between controllers	Not daisy-chained	Daisy-chain the DMX connections
	Check all cables are connected correctly	Not connected correctly	Correct cabling connections
		Connections are correctly connected	Contact the Warranty Department

Chapter 7: Appendix

CABLE LENGTH (FEET)	SUPPLY CABLE CONDUCTOR SIZE CHART							
	CIRCUIT CURRENT							
	2 AMP	4 AMP	6 AMP	8 AMP	10 AMP	12 AMP	14 AMP	16 AMP
0-5	18 AWG	18 AWG	16 AWG	16 AWG	16 AWG	14 AWG	14 AWG	14 AWG
10-15	18 AWG	18 AWG	16 AWG	16 AWG	14 AWG	14 AWG	14 AWG	14 AWG
15-20	18 AWG	18 AWG	16 AWG	14 AWG	14 AWG	14 AWG	12 AWG	12 AWG
20-25	18 AWG	16 AWG	14 AWG	14 AWG	12 AWG	12 AWG	12 AWG	10 AWG
25-30	18 AWG	16 AWG	14 AWG	12 AWG	12 AWG	10 AWG	10 AWG	10 AWG
30-35	18 AWG	14 AWG	14 AWG	12 AWG	10 AWG	10 AWG	10 AWG	8 AWG
35-40	18 AWG	14 AWG	12 AWG	12 AWG	10 AWG	10 AWG	8 AWG	8 AWG
40-45	16 AWG	14 AWG	12 AWG	10 AWG	10 AWG	8 AWG	8 AWG	8 AWG
45-50	16 AWG	14 AWG	12 AWG	10 AWG	10 AWG	8 AWG	8 AWG	8 AWG
50-55	16 AWG	12 AWG	10 AWG	10 AWG	8 AWG	8 AWG	8 AWG	4 AWG
55-60	16 AWG	12 AWG	10 AWG	10 AWG	8 AWG	8 AWG	4 AWG	4 AWG
60-65	14 AWG	12 AWG	10 AWG	8 AWG	8 AWG	8 AWG	4 AWG	4 AWG
65-70	14 AWG	12 AWG	10 AWG	8 AWG	8 AWG	4 AWG	4 AWG	4 AWG
70-75	14 AWG	12 AWG	10 AWG	8 AWG	8 AWG	4 AWG	4 AWG	4 AWG
75-80	14 AWG	10 AWG	10 AWG	8 AWG	4 AWG	4 AWG	4 AWG	2 AWG
80-85	14 AWG	10 AWG	8 AWG	8 AWG	4 AWG	4 AWG	4 AWG	2 AWG
85-90	14 AWG	10 AWG	8 AWG	8 AWG	4 AWG	4 AWG	2 AWG	2 AWG
90-95	14 AWG	10 AWG	8 AWG	8 AWG	4 AWG	4 AWG	2 AWG	2 AWG
95-100	12 AWG	10 AWG	8 AWG	4 AWG	4 AWG	4 AWG	2 AWG	2 AWG

Chapter 8: Warranty Statement:

This warranty statement is for those products supplied to and sold from all territories internationally

OceanLED stands by its products. In general terms, the company gives a full 2 year's manufacturer's warranty on all of its products from date of sale from OceanLED.

Warranty replacements shall be covered for a period of 2 years from the date of the original product sale from OceanLED.

To claim, please contact an authorized OceanLED dealer and complete the troubleshooting guidelines and warranty claim form (available from www.oceanled.com). Claims may be disputed if the troubleshooting guidelines are not completed or no defect is found with the product. The detailed terms and conditions of this warranty are set out below.

However; please note that all metal parts corrode in salt water. The primary factors affecting corrosion are not directly related to our products and accordingly OceanLED cannot be held responsible for corrosion-related defects this includes where water has been allowed to enter the cable as a result of immersion in water during the installation or improper sealing of connections. Please note corrosion will be particularly aggressive if installation and/or bonding have not been undertaken properly; or if stray currents are active in the vicinity of a boat.

Color variation occurs within the LED manufacture. While we make every effort to match the color of any lights there may be a noticeable difference. OceanLED does not warrant this color variation on lights.

OceanLED reserves the right to change the design, range and components without any prior notification either written or verbal.

OceanLED does not cover any charges incurred for hauling of vessels.

1: WARRANTY OF QUALITY

1.1   In the case of goods manufactured and sold by Ocean LED Marine LTD, a company incorporated in England and Wales (registered number 08927130) and whose registered office is at Unit 1 Jacknell Road, Dodwells Bridge Ind. Est. Hinckley, Leicestershire, LE10 3BS (the "Goods" and the "Company", respectively), the Company warrants to the purchaser of the Goods (the "Buyer") Conditions and unless otherwise notified) upon delivery (whether installed or not), and for a period of 2 years, that goods supplied shall be of satisfactory quality within the meaning of the Sale of Goods Act of 1979.

1.2   the Company shall not liable for a breach of the warranty in Condition 1.1 unless:

1.2.1   the Buyer gives written notice of the defect to the Company, and to the carrier if the defect is as a result of damage in transit, within 14 days of the time when the Buyer discovers or ought to have discovered the defect; and

1.2.2   the Buyer has the obligation to provide all the requested information where is reasonably possible and provided a truthful statement of all information requested in relation to the claim.

1.2.3   the Buyer returns such Goods to the Company's place of business at the Buyers cost, regardless of the outcome of the claim.

1.2.4   the Company is given a reasonable opportunity after receiving the returned Goods for the examination to take place at the Company's place of business.

1.3   the Company shall not be liable for a breach of the warranty in Condition 1.1 if:

1.3.1   the Buyer makes any further use of such Goods after giving such notice; or

1.3.2   the defect arises because the Buyer failed to follow the Company's oral or written instructions as to storage, transportation, installation, commissioning, modification, use or maintenance of the Goods or (if there are none) good trade practice; or the defect arises from the corrosion of metal parts or the failure of the Buyer to ensure that Goods are installed correctly, bonded correctly and that there are no active stray currents in the vicinity; or

1.3.3   the defect arises as a result of any default of, or caused by, the Buyer or (without limitation) as a result of misuse, abuse, improper installation, neglect, improper shipping by a party other than the Company; or

1.3.4   the Buyer alters, repairs or modifies such Goods without written consent of the Company; or

1.3.5   the defect arises due to a cause beyond the Company's reasonable control, such as: act of God, explosion, flood, tempest, fire or accident, including without limitation lightning; war or threat of war, national emergency, sabotage, terrorism, insurrection, protest, riot, epidemic, civil disturbance or requisition; Acts, restrictions, regulations, by-laws, prohibitions or measures of any kind on the part of any governmental, parliamentary or local authority; import or export regulations or embargoes; strikes, lock-outs or other industrial actions or trade disputes (whether involving employees of the Company or of a third party); restraints or delays affecting carriers or inability or delay in obtaining supplies of adequate or suitable materials; or power failure or breakdown in machinery.

1.3.6   where the Company has notified the Customer directly of in service modification(s) deemed necessary to further protect the Goods from damage have not been followed.

1.3.7   where a claim has been made where the Goods ownership is in dispute.

1.3.8   where the parts where not purchased from an authorized outlet.

1.3.9   where the goods where purchased via the internet from the United States but were not shipped to an address or fitted in the United States.

1.4   Subject to Conditions 1.2 and Condition 1.3, if any of the Goods do not conform with the warranty in Condition 1.1 the Company shall at its option repair or replace such Goods (or the defective part) without charge for labor or parts or refund the price of such Goods at the original purchase price. The Company shall pay for the return transportation to the Buyer of such repaired or replaced Goods.

1.5   Any Goods replaced shall belong to the Company and any such repaired or replacement Goods shall be guaranteed on these terms for the unexpired portion of the warranty period of the warranty in Condition 1.1.

2: LIMITATION OF LIABILITY

2.   These Conditions set out the entire financial liability of the Company (including any liability for the acts or omissions of its employees, agents and sub-contractors) to the Buyer in respect of:

2.1.1.   Any breach of these Conditions;

2.1.2   any defect in the Goods;

2.1.3   any use made or resale by the Buyer of any Goods, or of any product incorporating any of Goods; and

2.1.4   any representation, statement or tortuous act or omission including negligence arising or in connection with the contract with the Buyer.

2.2.   All warranty, conditions and other terms implied by both UK law are, to the fullest extent permitted by law, excluded from the contract with the Buyer.

2.3.   Nothing in these conditions excludes or limits the liability of the Company;

2.3.1.   for death or personal injury caused by the Company's negligence;

2.3.2   under both UK law;

2.3.3   for any matter which it would be illegal for the Company to exclude or attempt to exclude its liability; or

2.3.4   for fraud or fraudulent misrepresentation.

2.4.   Subject to the above Condition 2.3:

2.4.1   the Company's total liability in contract, (including without limitation negligence or breach of statutory duty), misrepresentation, restitution or otherwise, arising in connection with the performance or contemplated performance of the contract with the Buyer or (without limitation) in respect of the Goods shall be limited to the original purchase; and

2.4.2   the Company shall not be liable to the Buyer for any pure economic loss, loss of profits, loss of business, loss of contracts, damage to property, depletion of goodwill or otherwise, in each case whether direct, indirect or consequential, or any claims for consequential whatsoever (however caused) which arise out of or in connection with the contract with the Buyer or (without limitation) the Goods.

3: THIRD PARTY RIGHTS

No term of any Contract formed between the Buyer and the Company shall be enforceable by virtue of the Contracts (Rights of Third Parties) Act 1999 by any person that is not a party to it.

4: APPLICABLE LAW

Each of (a) the sale of the Goods to the Buyer, (b) these conditions, and (c) any disputes or claims arising there from or in connection therewith shall be governed by and construed in accordance with the law of England; and the Buyer and the Company irrevocably agree that the Courts of England have exclusively jurisdiction to settle any dispute or claim that arises out of or in connection with the foregoing.

5: GREY MARKET INTERNET POLICY

Grey marketed products continue to be a threat to our worldwide distribution and dealer network. In order to proactively discourage this activity by Internet resellers of our product, OceanLED will not honor the warranty

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Please remove this page and keep for your files

For technical assistance:

Europe: service@oceanled.com

The Americas: warranty@oceanledusa.com

Warranty Serial Code(s):

CREE

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