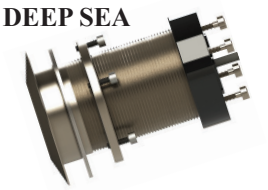
UNDERWATER LIGHT MULTI UPGRADES

*The simple story of how underwater lights on yachts came about was a telephone call from Peter, a yacht chief engineer who wanted underwater lights on a new build in Holland. The year 1991. My response was nobody makes them but as an ex Lloyd Register Surveyor I will design and get them approved for you. We then became the first dedicated manufacturer of underwater lights for yachts. Since then we have refined our lights and are proud that we can upgrade all our original lights to the latest technology available today. Now we are being involved in upgrading and/or replacing our competitors underwater lights some of which are listed below.

LUMISHORE

OCEAN LED

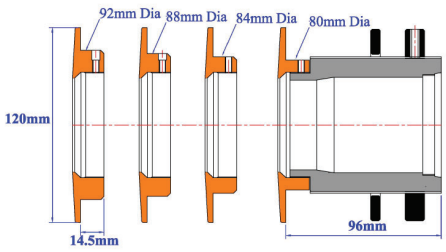
DEEP SEA



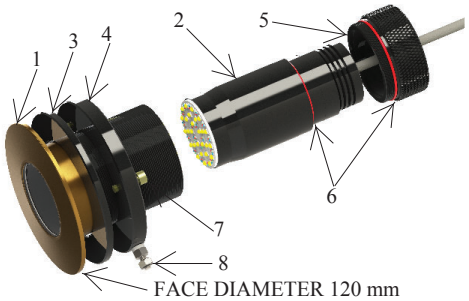
SEA VISION

*The designs above are very similar to our lights so you can replace the existing fitting with a new UC hull insert without alterations to the hull. A full warranty is given for the UC insert, light source, driver and you can be confident with the back up and service from Underwater Lights Ltd. in the years to come.
We also manufacture exchange light sources and drivers for your existing lights. No warranty is given for failure of the existing fitting.

* Below show the parts and dimensions of the UC-120-MR system. The body diameter is machined to suit the existing manufacturers hole cut-out size. The BODY (1) is common for all sizes and the LED HEAT SINK (2) has many options of LED configurations such as RGB+W, White with 14,000 and 25,000 lumens and Blue. Please see chart below for total replacement and exchange part numbers.

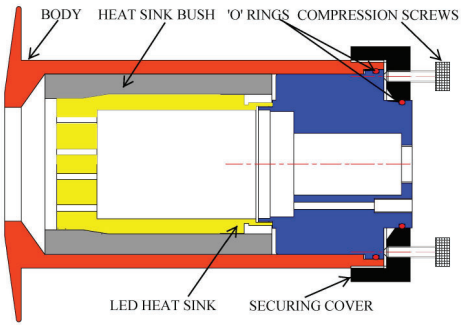


DESCRIPTION	Qnty
1-BODY	1
2-LED HEAT SINK	1
3-COMPENSATING RING	1
4-SECURING RING	1
5-CLAMP RING	1
6- 'O' RING	1
7-ADJUSTMET BOLTS	4
8-EARTH SCREW	1



BODY REPLACEMENT AND EXCHANGE LIGHT SOURCE			110-230 VAC SUPPLY (add to part number)			24 VOLT DC (add to part number)		
MANUFACTURE	PART NUMBER	LIGHT SOURCE EXCHANGE	RGB+W	WHITE 25,000lm	BLUE	RGB+W	WHITE 14,000lm	BLUE
LUMISHORE	UC-120-MR-L	UC-120-EX-L	AC-RGBW	AC-W	AC-B	DC-RGBW	DC-W	DC-B
OCEAN LED	UC-120-MR-OL	UC-120-EX-OL	AC-RGBW	AC-W	AC-B	DC-RGBW	DC-W	DC-B
DEEP SEA	UC-120-MR-DS	UC-120-EX-DS	AC-RGBW	AC-W	AC-B	DC-RGBW	DC-W	DC-B
SEA VISION	UC-120-MR-SV	UC-120-EX-SV	AC-RGBW	AC-W	AC-B	DC-RGBW	DC-W	DC-B

* LED Exchange Procedure for all types of Bodys
Remove all internal parts and clean the internal surfaces of the body.
Slide the Heat Sink Bush fully into the end of the Body.
Slide the LED Heat Sink into the Heat Sink Bush and ensure the 'O' Rings are fitted.
Check the Compression Screws are backed off the Securing Cover and fully screw the Securing Cover onto the Body.
To secure the LED Heat Sink firmly in place finger tighten the Compression Screws.



THE UC-LED RANGE IS DESIGNED AND MANUFACTURED BY UNDERWATER LIGHTS LTD IN THE U.K.

INSTALLATION FOR 80, 100,130 AND UC-120-MR RANGE OF UNDERWATER LIGHTS

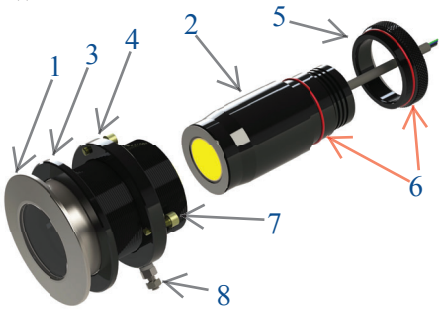
***Installation for the 80, 100, 130 and UC retro range of underwater lights.**
The range are for a "through- hull" submersible marine light and is delivered ready for installation. Maintenance of the LED is carried out from inside the hull. The light is suitable for installation into GRP-fiberglass and wooden hulls. The leds an be driven by a 110-240vac and DC voltage. For more information see the specification sheets
***Qualified/Approved personnel must be used to carry out installation**
Before cutting a hole in the hull check the diameter required for the light and the hull thickness in the specification sheets. The location of the holes must be below the waterline. After finishing the hole surface, check the Body (1) can be inserted.
***Note for cored hulls -** After cutting, the exposed surfaces of the hole must be finished to form a solid surface through it. Thus protecting the internal core of the hull. The wall thickness of the hole should not to less than 5mm-0.25inch. Apply 3M-4200FC sealant to the 'Body' (1) flange. Slide the body into the hole and from inside the hull put the 'compensating ring' (3) on and screw the securing ring' (4) up hand tight. Gently tighten the adjustment screws (7) so the compensating ring is flush to the hull and the sealant has flowed completely around the flange and hull.
***DO NOT overtighten the bolts** as this will squeeze the sealant from the surfaces. Allow the sealant to solidify and remove surplus. Finally tighten the bolts to 4Nm. / 3ft. lbs.
*It is not necessary to remove the heat sink (2) when carrying out installation.
*To remove the heat sink (2) unscrew the clamp ring (5). There are two M5 tapped holes to use if the heat sink is difficult to remove. Please see pictures below.
*Before fitting the new LED heat sink (2) ensure the barrel part of the body (1) and the lens is clean.
Use silicone grease to lightly coat the heat sink (2), clamp ring (5) and sealing 'O' rings (6). Slide the heat sink (2) into the barrel and tighten the knurled securing clamp ring (5) to secure the heat sink (2) into the body. When the heat sink (2) cannot be rotated the clamp ring (5) has secured all in place. If this is not done it will cause overheating of the LED and the LED could fail.
***Caution**: do not operate lights unless totally submerged.
After completing the installation procedure it is highly recommended to coat the BODY (1) face with antifouling and bond the lights to the anodes or a cathodic protection system as shown below.
***EARTHING LIGHT FOR CATHODIC PROTECTION**-Tighten the earth screw (8) on the securing ring (4) so that it bites into the screwed barrel. Connect an earth cable to the earth screw(8) and make sure the cable is connected to the cathodic protection system. Use the yachts anode and the front face of the light to ensure there is good electrical connection between them.

QT 100 Description	Qnty.
1; BODY	1
2; LED HEAT SINK	1
3; COMPENSATING RING	1
4; SECURING RING	1
5; CLAMP RING	1
6; 'O' RINGS	2
7; ADJUSTMENT SCREWS	3
8; EARTH SCREW	1

ITEM 8

EARTH SCREW

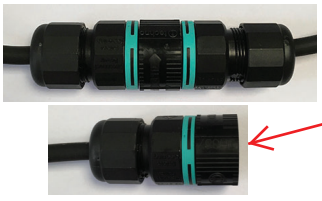
EARTH CABLE



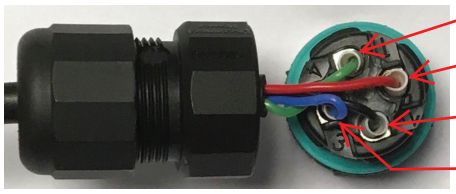
LIGHT TO DRIVER - CABLE, PLUG AND SOCKET INFORMATION FOR SINGLE COLOUR

* The underwater light has one meter of cable with a plug connected that will connect directly into the driver. Extension cables with sockets are available in three and six meter lengths. Maximum cable distance between light and driver 25 meters
*Two sockets can be provided for making your own extensions using a suitable four core (Minimum1mm sq) cable

SOCKETS FOR EXTENSIONS



SOCKET WIRING DIAGRAM FOR SINGLE COLOUR



4=TEMPERATURE
1=POSITIVE
2=NEGATIVE
3=TEMPERATURE

POLARITY NOT CRITICAL FOR 3 & 4 (Temperature)
POWER 1 & 2 CRITICAL