



Bluefin Led Underwater lights.

H16/H20/H48CC Installation manual.

Thank you for choosing Bluefin LED underwater lights, our products have been designed and tested rigorously to ensure the optimum performance and longevity.

All Bluefin Led lights are water tested so please be aware there may be moisture present on the light.

Please ensure that your product is installed as per our instructions below, failure to do so may invalidate your warranty.

If you are installing a H48CC please refer to the Driver instructions for electrical installation.

Specs: electrical/fuse ratings

	Voltage	Current	Fuse rating
Hammer head H20	24V only (Absolute min of 19V under load @ light).	24v-5.1	8amp
Hammer head H16	12/24V only (Absolute min of 10V under load @ light).	12V-7.5 24V-3.8	10amp

Warnings:

- Do not attempt to install the lights whilst the boat is in the water.
- Ensure that the correct voltage is used for the light.
- Ensure that an in line fuse is installed with the correct fuse rating per the light installed.
- Ensure that use the Screws provided (**failure to do so will invalidate your warranty**).



- Ensure all connections are made water tight or your **warranty will be Void**.
- Do not remove the inline Moisture Guard.
- Do not hold the light by the cable.
- Do not use abrasives on the lenses.

Tools required for installation:

- 2.5mm(3/32") drill bit
- 30mm(1.1/4") drill bit Drill
- Posi head hand screwdriver
- Marine sealant 3M 4200 or equivalent

Installation:

For optimum affect effect the light should be positioned between 8-12" (200-300mm) below the water line and at a 90 deg angle. Recommended spacing from 3-3"(1mtr) to 5-11" (1.8mtrs) between the lights.

Drill a 30mm (1.1/4") hole for the cable access through the hull, ensuring that there are no obstructions internally in the hull.

Drill 2.5mm(3/32") pilot holes to match the mounting holes on the light.

Key the area to where the light is to be mounted with abrasive sand paper to ensure there is a clean area for the marine sealant to bond too.

Apply marine sealant to the rear of the light on the circumference of the light and around the base of the cable gland to ensure a complete continuous bead of sealant is applied in both areas. (See fig 2)

Feed the cable through the hole and mount the light to the hull using the **screws provided**.

Wipe off any excess sealant and ensure the light is seated correctly without any gaps in the sealant. (It is good practice to have excess marine sealant to clean off as this can ensure that there is a water tight seal to the hull)

Electrical connection:

It is advised that if installing H16 Models no more than 8 lights should be installed on your low voltage system and Mains Power Units should be installed (contact BluefinLED for advice).

It is advised that if installing H20 and H48CC Models no more than 6 lights should be installed on your low voltage system and Mains Power Units should be installed (contact BluefinLED for advice).

You will notice an inline moisture guard attached to your cable (Fig 1). If this guard is removed your warranty will be void

Only attach the light cable to a waterproof connection or junction box, the cable must have a watertight connection otherwise your **warranty will be void.**

Pic 1



Care should be taken when planning your electrical feeds/cables to the lights so as to ensure voltage drop between the batteries or power supply is minimised, on 12V systems this is especially important as the lower system voltage means a high current requirement which in turn means the potential for more voltage drop in the cable runs & connections.

If the cable gauge & connections are not sufficient for the lighting load attached you may experience incorrect operation of the lights & intermittent illumination as the supply dips below specification.

Please see the wire gauge guide attached to the instruction manual.

For help with calculations always consult with a qualified professional or contact BluefinLED directly. Attach the light cable to the VDC power on the boat ensuring that you use the in line fuse supplied connected to the positive(red) wire, ensure that you use the heatshrink provided to create a water tight fit into the fuse holder. (See fig 3)

Ensure that an earth bond cable is attached to the earth tab on the cable gland using the nuts and bolts supplied and is attached to the earth bonding system on the boat before installation. Please also bend the earth bond tab into the horizontal position as per fig 1

Fig 2

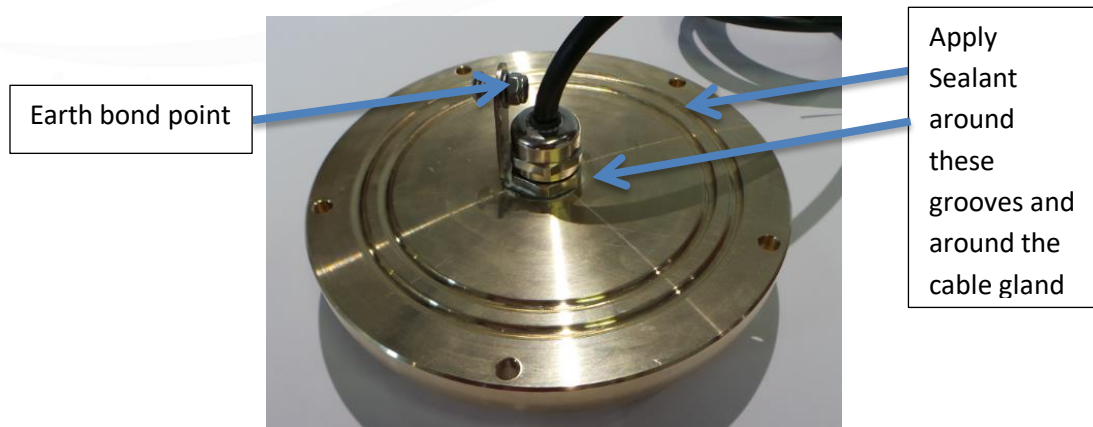
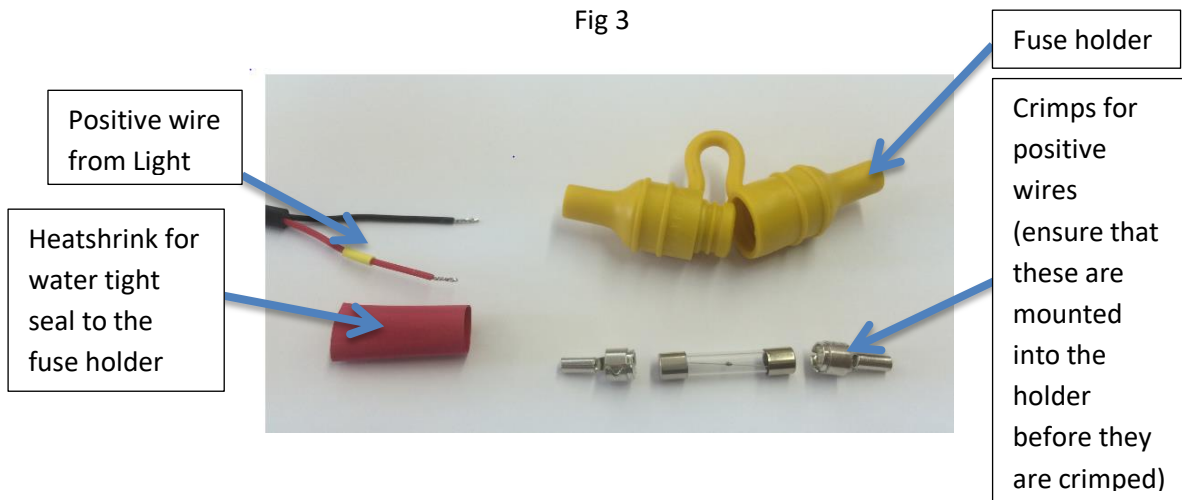


Fig 3



Bluefin LED Underwater lights. YOU MUST INSTALL THIS GEL CONNECTOR OR YOUR WARRANTY WILL BE VOID !!!

Please ensure that your product is installed as per our instructions below, failure to do so **WILL INVALIDATE YOUR WARRANTY.**

Use these instructions in conjunction with the light instructions to ensure that all is fitted correctly.

Warnings:

- Do not attempt to install the lights whilst the boat is in the water.

Installation:

Fig 1 showing how the Gel connector is wired up.

Fig 2 showing how the finished Gel connector should look when finished.

Ensure that the black outer sheath is inside the gel connector.

The IP68 GEL CONNECTOR MUST BE INSTALLED CORRECTLY OR YOU WARRANTY WILL BE VOID.

Fig 1

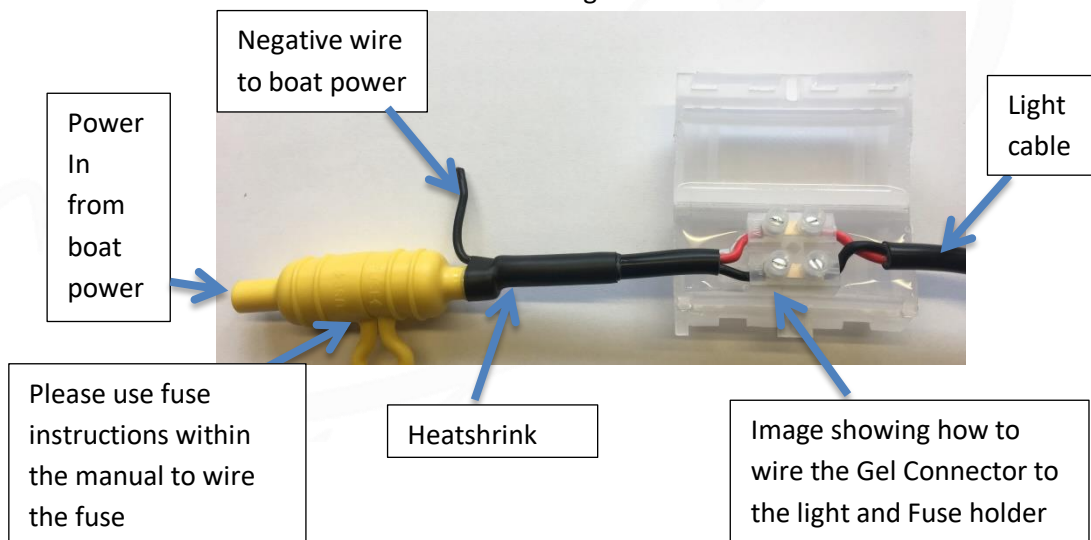
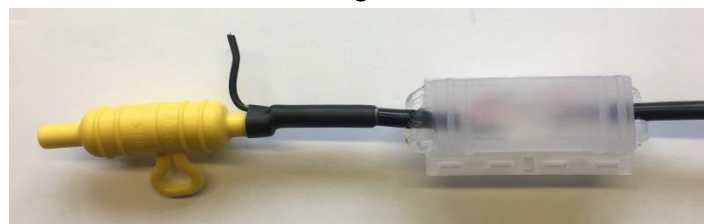


Fig 2



Testing:

Test the light before installation ensuring that you use the correct voltage and the light is illuminated correctly.

After installation ensure again that the light is illuminated correctly before the boat goes back into the water and the lens label is removed.

After your boat goes back into the water check internally for water tightness around where the light is installed.

The light has internal indicator Led's for fault finding, these are as follows:

- Over voltage will flash red.(check the voltage to the light)
- Under voltage will show a constant red. (check the voltage to the light)
- Over temperature will show amber.(allow the light to cool down and check if submerged)

Maintenance:

Regularly check the installation for water tightness.

Only clean the light with a soft bristle brush.

Warranty:

Your product has a 2 year limited warranty for defects.

For any warranty issues please contact your point of sale retailer or go to

www.bluefinled.com for further advice.

Installer please ensure that the SERIAL NUMBERS of the lights are written below and the manual is handed over to the end user.

Please make a note of the serial numbers of the lights here.

SERIAL NUMBERS

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Bluefin LED

Cottage Farm, Cottage Lane,
Norton Juxta Twycross, Atherstone. CV9 3QH

Sales - Tel: 07950 909048

Service - Tel: 01827 880450

Administration - Tel: 01827 880450

Registered Address: Square Rig Limited, t/a Bluefin Led, Cottage Farm, Cottage Lane, Norton Juxta Twycross, Atherstone, CV9 3QH
Company Registration Number: 08871451 VAT Number: 179 2690 64

Email: simon.steadman@bluefinled.com

Email: mark.branson@bluefinled.com

Email: samantha.barrie@bluefinled.com



Wire Gauge selection guide using information from ABYC E-11 & US Coast Guard guidelines for marine electrical installations

Circuit Type		Current flow in Amps																																					
10% V Drop Low-Power Non Critical (P series Single colour)	3% V Drop High-Power/Critical (H, S & GW Plus colour change Series)	5A	10A	15A	20A	25A	30A	40A	50A	60A																													
20ft	6m	6ft	2m	16 AWG	1.5mm CSA	16AWG	2.5mm CSA	14AWG	4mm CSA	14AWG	4mm CSA	12AWG	4mm CSA	10AWG	6mm CSA	8AWG	10mm CSA	6AWG	16mm CSA	6AWG	16mm CSA	4AWG	25mm CSA	4AWG	25mm CSA	2AWG	40mm CSA	2AWG	40mm CSA	1AWG	70mm CSA	1AWG	70mm CSA	0AWG	70mm CSA	2 0AWG	3 0AWG	4 0AWG	25mm CSA
30ft	9m	10ft	3m	14AWG	1.5mm CSA	14AWG	2.5mm CSA	12AWG	4mm CSA	12AWG	4mm CSA	10AWG	6mm CSA	8AWG	10mm CSA	6AWG	16mm CSA	4AWG	25mm CSA	4AWG	25mm CSA	2AWG	40mm CSA	2AWG	40mm CSA	1AWG	70mm CSA	1AWG	70mm CSA	0AWG	70mm CSA	0AWG	70mm CSA	0AWG	70mm CSA	0AWG	70mm CSA	0AWG	70mm CSA
50ft	15m	15ft	5m	12AWG	2.5mm CSA	12AWG	4mm CSA	10AWG	6mm CSA	10AWG	6mm CSA	8AWG	10mm CSA	6AWG	16mm CSA	4AWG	25mm CSA	4AWG	25mm CSA	2AWG	40mm CSA	2AWG	40mm CSA	1AWG	70mm CSA	1AWG	70mm CSA	0AWG	70mm CSA	0AWG	70mm CSA	0AWG	70mm CSA	0AWG	70mm CSA	0AWG	70mm CSA	0AWG	70mm CSA
65ft	20m	20ft	6m	10AWG	2.5mm CSA	10AWG	4mm CSA	8AWG	6mm CSA	8AWG	6mm CSA	6AWG	16mm CSA	4AWG	25mm CSA	4AWG	25mm CSA	2AWG	40mm CSA	2AWG	40mm CSA	1AWG	70mm CSA	1AWG	70mm CSA	0AWG	70mm CSA	0AWG	70mm CSA	0AWG	70mm CSA	0AWG	70mm CSA	0AWG	70mm CSA	0AWG	70mm CSA	0AWG	70mm CSA
80ft	24m	25ft	8m	8AWG	2.5mm CSA	8AWG	6mm CSA	6AWG	6mm CSA	6AWG	6mm CSA	4AWG	25mm CSA	4AWG	25mm CSA	2AWG	40mm CSA	2AWG	40mm CSA	1AWG	70mm CSA	1AWG	70mm CSA	0AWG	70mm CSA	0AWG	70mm CSA	0AWG	70mm CSA	0AWG	70mm CSA	0AWG	70mm CSA	0AWG	70mm CSA	0AWG	70mm CSA	0AWG	70mm CSA
100ft	30m	30ft	9m	6AWG	2.5mm CSA	6AWG	6mm CSA	4AWG	6mm CSA	4AWG	6mm CSA	2AWG	40mm CSA	2AWG	40mm CSA	1AWG	70mm CSA	1AWG	70mm CSA	0AWG	70mm CSA	0AWG	70mm CSA	0AWG	70mm CSA	0AWG	70mm CSA	0AWG	70mm CSA	0AWG	70mm CSA	0AWG	70mm CSA	0AWG	70mm CSA	0AWG	70mm CSA	0AWG	70mm CSA
130ft	40m	40ft	12m	4AWG	2.5mm CSA	4AWG	6mm CSA	2AWG	6mm CSA	2AWG	6mm CSA	0AWG	70mm CSA	0AWG	70mm CSA	0AWG	70mm CSA	0AWG	70mm CSA	0AWG	70mm CSA	0AWG	70mm CSA	0AWG	70mm CSA	0AWG	70mm CSA	0AWG	70mm CSA	0AWG	70mm CSA	0AWG	70mm CSA	0AWG	70mm CSA	0AWG	70mm CSA	0AWG	70mm CSA
165ft	50m	50ft	15m	2AWG	2.5mm CSA	2AWG	6mm CSA	0AWG	6mm CSA	0AWG	6mm CSA	0AWG	70mm CSA	0AWG	70mm CSA	0AWG	70mm CSA	0AWG	70mm CSA	0AWG	70mm CSA	0AWG	70mm CSA	0AWG	70mm CSA	0AWG	70mm CSA	0AWG	70mm CSA	0AWG	70mm CSA	0AWG	70mm CSA	0AWG	70mm CSA	0AWG	70mm CSA	0AWG	70mm CSA
200ft	61m	60ft	18m	0AWG	2.5mm CSA	0AWG	6mm CSA	0AWG	6mm CSA	0AWG	6mm CSA	0AWG	70mm CSA	0AWG	70mm CSA	0AWG	70mm CSA	0AWG	70mm CSA	0AWG	70mm CSA	0AWG	70mm CSA	0AWG	70mm CSA	0AWG	70mm CSA	0AWG	70mm CSA	0AWG	70mm CSA	0AWG	70mm CSA	0AWG	70mm CSA	0AWG	70mm CSA	0AWG	70mm CSA
		70ft	21m	0AWG	2.5mm CSA	0AWG	6mm CSA	0AWG	6mm CSA	0AWG	6mm CSA	0AWG	70mm CSA	0AWG	70mm CSA	0AWG	70mm CSA	0AWG	70mm CSA	0AWG	70mm CSA	0AWG	70mm CSA	0AWG	70mm CSA	0AWG	70mm CSA	0AWG	70mm CSA	0AWG	70mm CSA	0AWG	70mm CSA	0AWG	70mm CSA	0AWG	70mm CSA	0AWG	70mm CSA
		80ft	24m	0AWG	2.5mm CSA	0AWG	6mm CSA	0AWG	6mm CSA	0AWG	6mm CSA	0AWG	70mm CSA	0AWG	70mm CSA	0AWG	70mm CSA	0AWG	70mm CSA	0AWG	70mm CSA	0AWG	70mm CSA	0AWG	70mm CSA	0AWG	70mm CSA	0AWG	70mm CSA	0AWG	70mm CSA	0AWG	70mm CSA	0AWG	70mm CSA	0AWG	70mm CSA	0AWG	70mm CSA
		90ft	27m	0AWG	2.5mm CSA	0AWG	6mm CSA	0AWG	6mm CSA	0AWG	6mm CSA	0AWG	70mm CSA	0AWG	70mm CSA	0AWG	70mm CSA	0AWG	70mm CSA	0AWG	70mm CSA	0AWG	70mm CSA	0AWG	70mm CSA	0AWG	70mm CSA	0AWG	70mm CSA	0AWG	70mm CSA	0AWG	70mm CSA	0AWG	70mm CSA	0AWG	70mm CSA	0AWG	70mm CSA
		100ft	30m	0AWG	2.5mm CSA	0AWG	6mm CSA	0AWG	6mm CSA	0AWG	6mm CSA	0AWG	70mm CSA	0AWG	70mm CSA	0AWG	70mm CSA	0AWG	70mm CSA	0AWG	70mm CSA	0AWG	70mm CSA	0AWG	70mm CSA	0AWG	70mm CSA	0AWG	70mm CSA	0AWG	70mm CSA	0AWG	70mm CSA	0AWG	70mm CSA	0AWG	70mm CSA	0AWG	70mm CSA
		110ft	34m	0AWG	2.5mm CSA	0AWG	6mm CSA	0AWG	6mm CSA	0AWG	6mm CSA	0AWG	70mm CSA	0AWG	70mm CSA	0AWG	70mm CSA	0AWG	70mm CSA	0AWG	70mm CSA	0AWG	70mm CSA	0AWG	70mm CSA	0AWG	70mm CSA	0AWG	70mm CSA	0AWG	70mm CSA	0AWG	70mm CSA	0AWG	70mm CSA	0AWG	70mm CSA	0AWG	70mm CSA
		120ft	37m	0AWG	2.5mm CSA	0AWG	6mm CSA	0AWG	6mm CSA	0AWG	6mm CSA	0AWG	70mm CSA	0AWG	70mm CSA	0AWG	70mm CSA	0AWG	70mm CSA	0AWG	70mm CSA	0AWG	70mm CSA	0AWG	70mm CSA	0AWG	70mm CSA	0AWG	70mm CSA	0AWG	70mm CSA	0AWG	70mm CSA	0AWG	70mm CSA	0AWG	70mm CSA	0AWG	70mm CSA
		130ft	40m	0AWG	2.5mm CSA	0AWG	6mm CSA	0AWG	6mm CSA	0AWG	6mm CSA	0AWG	70mm CSA	0AWG	70mm CSA	0AWG	70mm CSA	0AWG	70mm CSA	0AWG	70mm CSA	0AWG	70mm CSA	0AWG	70mm CSA	0AWG	70mm CSA	0AWG	70mm CSA	0AWG	70mm CSA	0AWG	70mm CSA	0AWG	70mm CSA	0AWG	70mm CSA	0AWG	70mm CSA

To use for BluefinLED underwater lights select the appropriate current Column for you lights, power & quantity from the top row.
 then the cable distance run in one direction i.e. from panel or batteries to the light placement or group.
 Then at the point the Column & row crosses read the cable suggestion in US or EU gauges for your installation.
Failure to install the correct power feeds may invalidate your warranty, if in doubt please consult with BluefinLED or a qualified professional.