



Bluefin Led Underwater lights.

V12/V24CC 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.

This light is designed for use on fibre glass hulls only and **not to be mounted to any Metal hull or your warranty will be void.**

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 V24CC please refer to the Driver instructions for electrical installation.

Specs: electrical/fuse ratings

| | Voltage | Current | Fuse rating |
|-----------------|--|------------|-------------|
| Mako M12IFM12V | 12V only (Absolute min of V 10V under load @ light). | 12v-5Amp | 8amp |
| Mako M12IFM 24V | 24V only (Absolute min of V 20V under load @ light). | 24V-2.6Amp | 8amp |

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 the in line fuse is installed with the correct fuse rating per the light installed.
- Ensure that you use the Screws provided and only hand tightened (**failure to do so will invalidate your warranty**).



- Ensure that the supplied gel connector is used to make a watertight connection or your **warranty will be Void.**
- **Do not remove the inline HYDRO LOCK or your warranty will be void.**
- Do not hold the light by the cable.
- Do not use abrasives on the lenses.
- Lights must be mounted a minimum of 300mm from any Anodes.
- Do not mount lights directly underneath Anodes.
- Do not bond directly to Anodes.
- Only bond to the vessels DC bonding system & ensure all connections are in perfect condition & are regularly checked.
- When mounting on any type of conductive surface or hull material full electrical isolation between the light & mounting surface must be provided & maintained at all times throughout the lights life.
- Failure to adhere to any of these requirements will invalidate warranty.
- As Galvanic currents & corrosion are external factors any type of damage caused by galvanic affects are not covered by BluefinLEDs warranty policy.

Tools required for installation:

- 2.5mm(3/32") drill bit
- 30mm(1.1/4") drill bit Drill
- Posi head hand screwdriver
- Marine sealant 3M 5200/4000UV, Sika flex 291i or equivalent (**do not use 3M 4200**)

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. **(Please be aware that the cable gland is not central to the light and is offset so take this into consideration when drilling the 30mm hole)**

Recommended spacing from 3-3"(1mtr) to 5-11" (1.8mtrs) between the lights.

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

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 V12SM12V 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).

Ensure you use the IP68 GEL CONNECTOR supplied to connect to the boats wiring or you Warranty will be void (fig 4/5).

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

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 which is attached to this manual.

For help with calculations always consult with a qualified professional or contact BluefinLED directly.

Pic 1



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.(See fig 2)

Fig 2

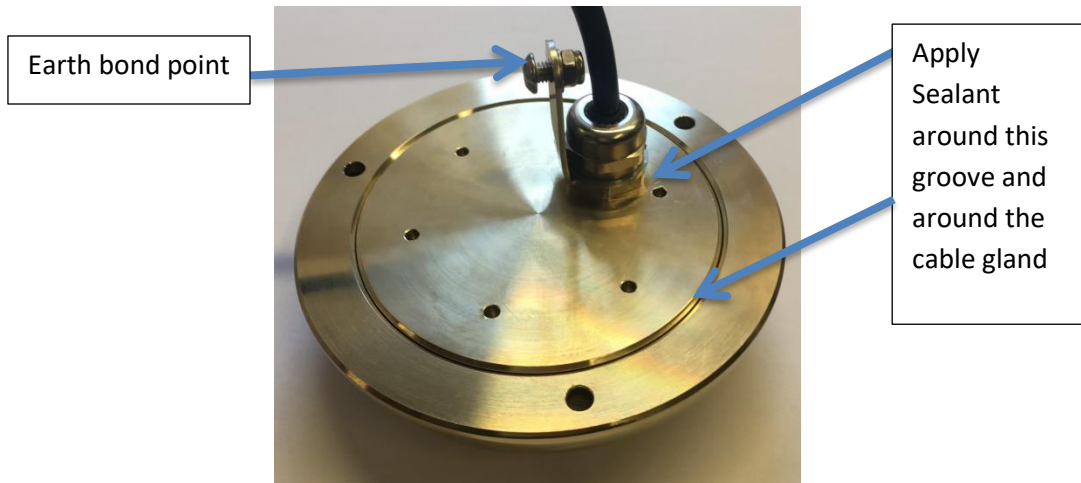
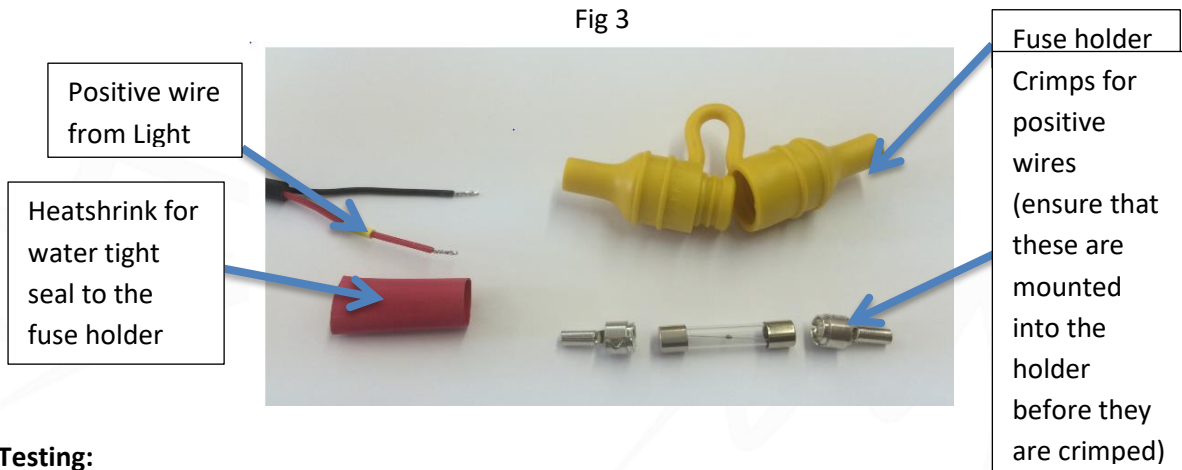


Fig 3



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 temperature will show RED.(allow the light to cool down and check if submerged)

Fig 4 showing how the Gel connector is wired up.

Fig 5 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 4

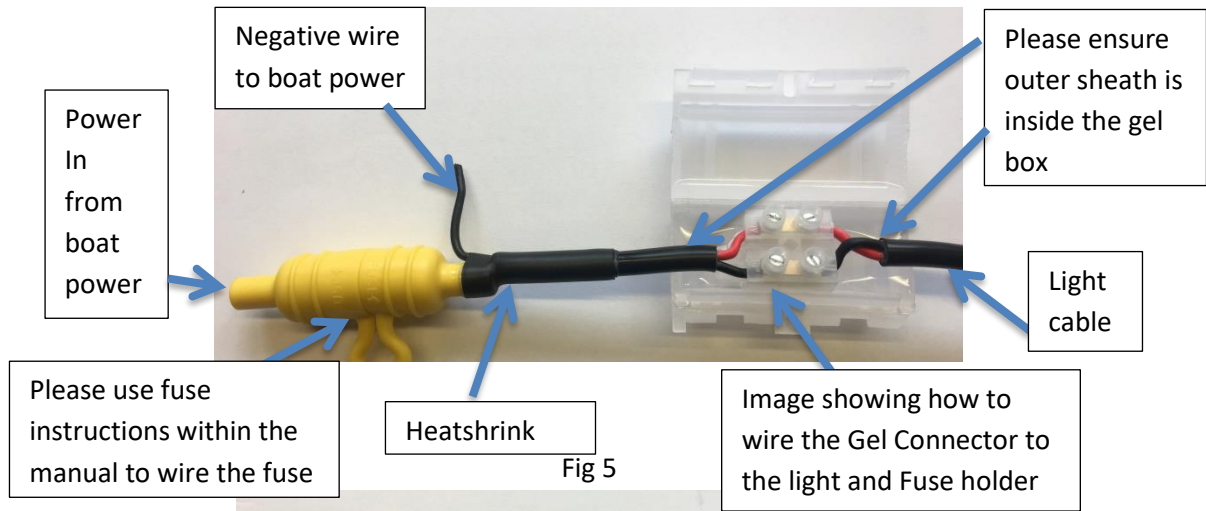


Fig 5



Bluefin Led Underwater lights.

LM24CC Driver 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.

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

Specs: electrical/fuse ratings

| | Voltage | Current | Fuse rating |
|----------------|-------------|-----------------|-------------|
| LM24CC Drivers | 12/24V only | 12V-5A 24V-2.6A | 8amp |

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 and Driver.
- Ensure that the in line fuse is installed with the correct fuse rating per the Driver installed.
- Ensure the Gel Connector supplied is used or your **warranty will be void**.
- If you wish to connect your Colour change lights and drivers to your own DMX Controller please contact BluefinLED beforehand for further advise.

Installation:

Electrical connection:

- Ensure the Gel Connector supplied is used or your **warranty will be void (see fig 6/7)**
- Attach the Driver power 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 2)
- Plug the Light cable connector to driver as per Fig 1 aligning the white lines on the connectors to ensure the connector pushes home correctly.
- Plug the DMX controller cable (if supplied fig 3) into the first driver DMX IN connector as per Fig 1.
- Plug the DMX Interlink cable (Fig 4) into the DMX OUT connector on the first driver Fig 1.
- You can now daisy chain the drivers using the DMX Interlink cables going from the OUT DMX to the IN DMX on the next driver.

- When completing a circuit you must plug the DMX Terminator plug (Fig 5) into the last drivers DMX OUT to complete the circuit.

Fig 1 (Driver)



Fig 2 (Fuse connection)

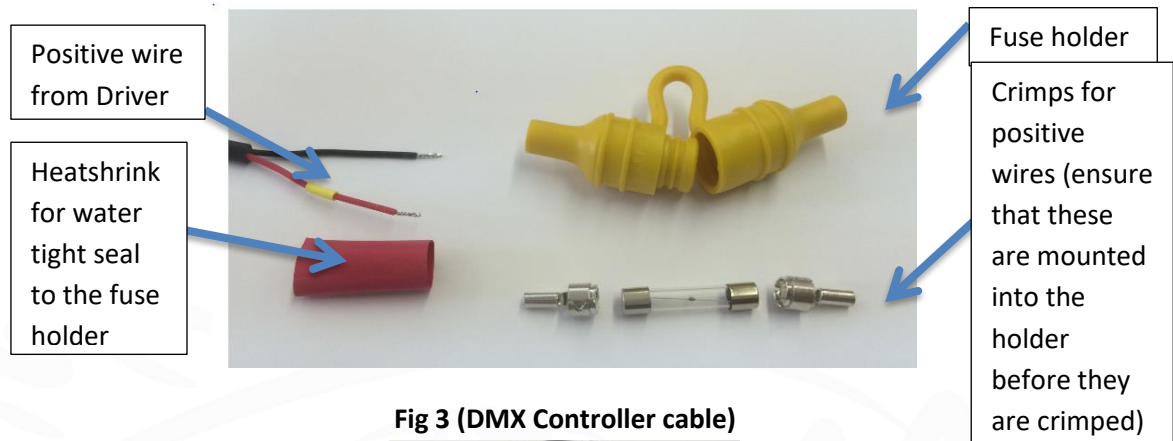


Fig 3 (DMX Controller cable)



Fig 4 (DMX Interlink cable)



Fig 5 (DMX Terminator)



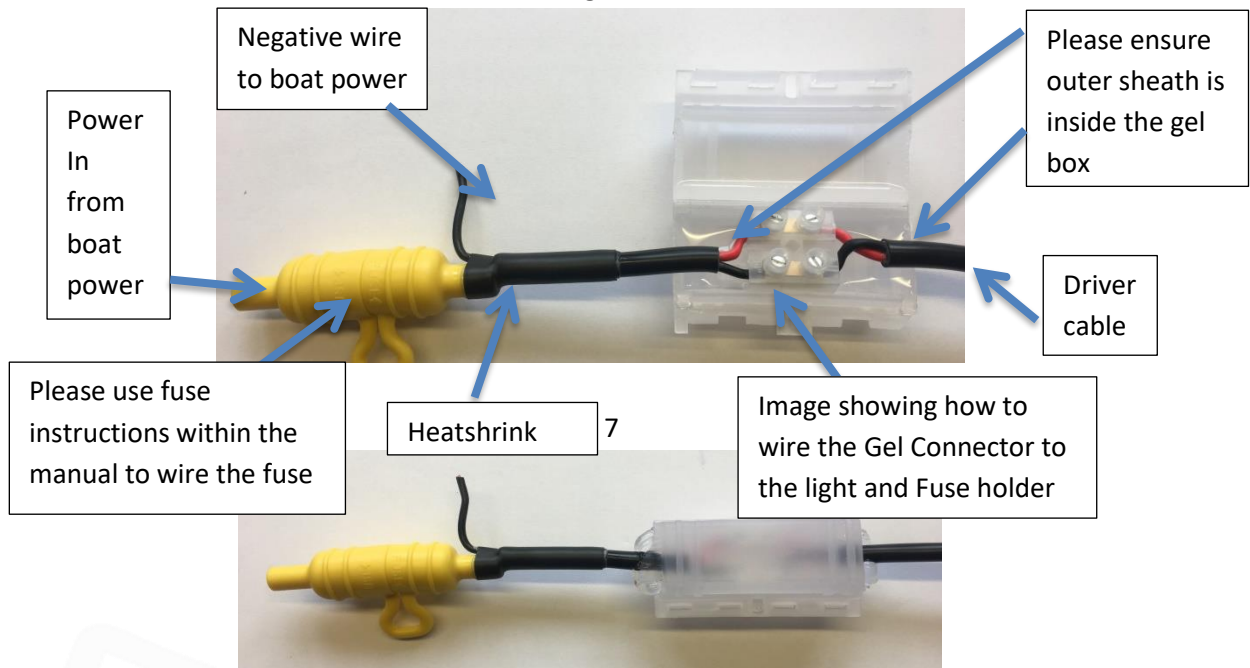
Fig 6 showing how the Gel connector is wired up.

Fig 7 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 6



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

| | | | | | |
|--|--|--|--|--|--|
| | | | | | |
|--|--|--|--|--|--|

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, 1/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 | 2 0AWG | 41 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 | 2 0AWG | 41 0AWG | 25mm 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 | 2 0AWG | 41 0AWG | 25mm CSA | | | | | | |
| 65ft | 20m | 20ft | 6m | 14AWG | 2.5mm CSA | 10AWG | 4mm CSA | 8AWG | 6mm CSA | 8AWG | 6mm CSA | 6AWG | 16mm CSA | 4AWG | 25mm CSA | 2AWG | 40mm CSA | 2AWG | 40mm CSA | 1AWG | 70mm CSA | 1AWG | 70mm CSA | 2 0AWG | 41 0AWG | 25mm CSA | 4AWG | 25mm CSA | 2AWG | 40mm CSA | 1AWG | 70mm CSA | 2 0AWG | 41 0AWG | 25mm CSA | |
| 80ft | 24m | 25ft | 8m | 12AWG | 2.5mm CSA | 10AWG | 6mm CSA | 8AWG | 6mm CSA | 6AWG | 16mm CSA | 4AWG | 25mm CSA | 2AWG | 40mm CSA | 2AWG | 40mm CSA | 1AWG | 70mm CSA | 1AWG | 70mm CSA | 2 0AWG | 41 0AWG | 25mm CSA | 4AWG | 25mm CSA | 2AWG | 40mm CSA | 1AWG | 70mm CSA | 2 0AWG | 41 0AWG | 25mm CSA | | | |
| 100ft | 30m | 30ft | 9m | 10AWG | 2.5mm CSA | 8AWG | 6mm CSA | 6AWG | 16mm CSA | 6AWG | 16mm CSA | 4AWG | 25mm CSA | 2AWG | 40mm CSA | 2AWG | 40mm CSA | 1AWG | 70mm CSA | 1AWG | 70mm CSA | 2 0AWG | 41 0AWG | 25mm CSA | 4AWG | 25mm CSA | 2AWG | 40mm CSA | 1AWG | 70mm CSA | 2 0AWG | 41 0AWG | 25mm CSA | | | |
| 130ft | 40m | 40ft | 12m | 8AWG | 4mm CSA | 6AWG | 16mm CSA | 4AWG | 25mm CSA | 4AWG | 25mm CSA | 2AWG | 40mm CSA | 2AWG | 40mm CSA | 1AWG | 70mm CSA | 1AWG | 70mm CSA | 2 0AWG | 41 0AWG | 25mm CSA | 4AWG | 25mm CSA | 2AWG | 40mm CSA | 1AWG | 70mm CSA | 2 0AWG | 41 0AWG | 25mm CSA | | | | | |
| 165ft | 50m | 50ft | 15m | 6AWG | 6mm CSA | 4AWG | 25mm CSA | 2AWG | 40mm CSA | 2AWG | 40mm CSA | 1AWG | 70mm CSA | 1AWG | 70mm CSA | 2 0AWG | 41 0AWG | 25mm CSA | 4AWG | 25mm CSA | 2AWG | 40mm CSA | 1AWG | 70mm CSA | 2 0AWG | 41 0AWG | 25mm CSA | 4AWG | 25mm CSA | 2AWG | 40mm CSA | 1AWG | 70mm CSA | 2 0AWG | 41 0AWG | 25mm CSA |
| 200ft | 61m | 60ft | 18m | 4AWG | 4mm CSA | 2AWG | 40mm CSA | 2AWG | 40mm CSA | 2AWG | 40mm CSA | 1AWG | 70mm CSA | 1AWG | 70mm CSA | 2 0AWG | 41 0AWG | 25mm CSA | 4AWG | 25mm CSA | 2AWG | 40mm CSA | 1AWG | 70mm CSA | 2 0AWG | 41 0AWG | 25mm CSA | 4AWG | 25mm CSA | 2AWG | 40mm CSA | 1AWG | 70mm CSA | 2 0AWG | 41 0AWG | 25mm CSA |
| | | 70ft | 21m | 2AWG | 4mm CSA | 2AWG | 40mm CSA | 2AWG | 40mm CSA | 2AWG | 40mm CSA | 1AWG | 70mm CSA | 1AWG | 70mm CSA | 2 0AWG | 41 0AWG | 25mm CSA | 4AWG | 25mm CSA | 2AWG | 40mm CSA | 1AWG | 70mm CSA | 2 0AWG | 41 0AWG | 25mm CSA | 4AWG | 25mm CSA | 2AWG | 40mm CSA | 1AWG | 70mm CSA | 2 0AWG | 41 0AWG | 25mm CSA |
| | | 80ft | 24m | 2AWG | 4mm CSA | 2AWG | 40mm CSA | 2AWG | 40mm CSA | 2AWG | 40mm CSA | 1AWG | 70mm CSA | 1AWG | 70mm CSA | 2 0AWG | 41 0AWG | 25mm CSA | 4AWG | 25mm CSA | 2AWG | 40mm CSA | 1AWG | 70mm CSA | 2 0AWG | 41 0AWG | 25mm CSA | 4AWG | 25mm CSA | 2AWG | 40mm CSA | 1AWG | 70mm CSA | 2 0AWG | 41 0AWG | 25mm CSA |
| | | 90ft | 27m | 2AWG | 4mm CSA | 2AWG | 40mm CSA | 2AWG | 40mm CSA | 2AWG | 40mm CSA | 1AWG | 70mm CSA | 1AWG | 70mm CSA | 2 0AWG | 41 0AWG | 25mm CSA | 4AWG | 25mm CSA | 2AWG | 40mm CSA | 1AWG | 70mm CSA | 2 0AWG | 41 0AWG | 25mm CSA | 4AWG | 25mm CSA | 2AWG | 40mm CSA | 1AWG | 70mm CSA | 2 0AWG | 41 0AWG | 25mm CSA |
| | | 100ft | 30m | 2AWG | 4mm CSA | 2AWG | 40mm CSA | 2AWG | 40mm CSA | 2AWG | 40mm CSA | 1AWG | 70mm CSA | 1AWG | 70mm CSA | 2 0AWG | 41 0AWG | 25mm CSA | 4AWG | 25mm CSA | 2AWG | 40mm CSA | 1AWG | 70mm CSA | 2 0AWG | 41 0AWG | 25mm CSA | 4AWG | 25mm CSA | 2AWG | 40mm CSA | 1AWG | 70mm CSA | 2 0AWG | 41 0AWG | 25mm CSA |
| | | 110ft | 34m | 2AWG | 4mm CSA | 2AWG | 40mm CSA | 2AWG | 40mm CSA | 2AWG | 40mm CSA | 1AWG | 70mm CSA | 1AWG | 70mm CSA | 2 0AWG | 41 0AWG | 25mm CSA | 4AWG | 25mm CSA | 2AWG | 40mm CSA | 1AWG | 70mm CSA | 2 0AWG | 41 0AWG | 25mm CSA | 4AWG | 25mm CSA | 2AWG | 40mm CSA | 1AWG | 70mm CSA | 2 0AWG | 41 0AWG | 25mm CSA |
| | | 120ft | 37m | 2AWG | 4mm CSA | 2AWG | 40mm CSA | 2AWG | 40mm CSA | 2AWG | 40mm CSA | 1AWG | 70mm CSA | 1AWG | 70mm CSA | 2 0AWG | 41 0AWG | 25mm CSA | 4AWG | 25mm CSA | 2AWG | 40mm CSA | 1AWG | 70mm CSA | 2 0AWG | 41 0AWG | 25mm CSA | 4AWG | 25mm CSA | 2AWG | 40mm CSA | 1AWG | 70mm CSA | 2 0AWG | 41 0AWG | 25mm CSA |
| | | 130ft | 40m | 2AWG | 4mm CSA | 2AWG | 40mm CSA | 2AWG | 40mm CSA | 2AWG | 40mm CSA | 1AWG | 70mm CSA | 1AWG | 70mm CSA | 2 0AWG | 41 0AWG | 25mm CSA | 4AWG | 25mm CSA | 2AWG | 40mm CSA | 1AWG | 70mm CSA | 2 0AWG | 41 0AWG | 25mm CSA | 4AWG | 25mm CSA | 2AWG | 40mm CSA | 1AWG | 70mm CSA | 2 0AWG | 41 0AWG | 25mm 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.