

GRP Quick Install Guide

UWL_QUICK_INSTALL_GUIDE_QT_GRP_2017_v2.3

QT Series

www.underwaterlights.com

This installation manual covers the following products:

	QT80	QT100	QT130
Min. Hull Thickness	13/32" 10mm	13/32" 10mm	13/32" 10mm
Max. Hull Thickness	2 7/16" 62mm	3 1/8" 80mm	4" 101mm
Hole cut out	2 7/16" 61mm	2 7/8" 72mm	4" 101mm
Removal space required behind light for inspection	6 1/2' 160mm	6 11/16" 170mm	6 11/16" 170mm
Min recommended mounting depth to top of fixture	3" 75mm	3" 75mm	3" 75mm
Recommended mounting depth to top of fixture	10" 250mm	10" 250mm	10" 250mm

IMPORTANT: Please read the instructions completely before proceeding with the installation, for full manual please visit www.underwaterlights.com. Failure to follow the instructions may invalidate your warranty.

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.

Underwater Lights Limited

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Underwater lights limited reserves the right to change specifications without notice.

Key Reminders

- ⚠️** The QT series from UWL is a “through- hull” submersible marine light and is delivered ready for installation and does not require assembly.
- ⚠️** Maintenance of the light is carried out from inside the hull.
- ⚠️** The light is suitable for installation into GRP fiberglass and wooden hulls.
- ⚠️** Qualified/approved personnel must be used to carry out installation in accordance with ABYC (American Boat and Yacht Council), NMMA, and any other applicable 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.
- ⚠️** Before cutting a hole in the hull, check the hull wall thickness is not greater than the recommended thickness in table on next page.
- ⚠️** Refer to the table opposite for minimal wall thickness of the hull for each light.
- ⚠️** The location of the hole must be below the waterline.
- ⚠️** 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.
- ⚠️** We recommend using 3M-4200FC sealant.
- ⚠️** Before installing your 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.
- ⚠️** 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 and we strongly recommend bonding all lights via the bond point. Annually monitor every part of the installation.

Maintenance

- ⚠️** Sea growth can collect quickly on the light and this can reduce the performance in just a few weeks. To prevent the build- up of sea growth, all UWL underwater lights have been coated with a specialized coating which makes the surface of the glass lens a non-stick layer which helps ward off long term barnacle buildup. 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. This can be done in the 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.

- ⚠️** Check connections annually for corrosion, if necessary replace.
- ⚠️** Clean and reapply di-electric grease to silicone gaskets annually.

- ⚠️** It is advised to visually inspect the external metal parts of the light for galvanic corrosion on a regular basis. Galvanic corrosion can be a devastating process which can happen quickly and is exacerbated in marinas from neighbouring boats.

Power Requirements

Power Requirements

DC POWER	QT80 - White	QT80 - Blue	QT100 - White	QT100 - Blue	QT100 - Color Change
Model No.	QT80-40W	QT80-80 B	QT100W	QT100B	QT100RGBW
Supply Power	40 watt	80 watts	70 watt	70 watt	70 watt
11vDC draw current	3.6 Amps	4.6 Amps	6.8 Amps	n/a	n/a
24 vDC draw current	1.7 Amps	2.3 Amps	3.2 Amps	2.8 Amps	2.8 Amps
Max No. of lights for 20A Fuse 11vDC	5	2	2	n/a	n/a
Max No. of lights for 20A Fuse 24vDC	10	6	6	6	6
Max No. of lights for 10A Fuse 11vDC	2	1	1	n/a	n/a
Max No. of lights for 10A Fuse 24vDC	2	2	2	2	2

AC POWER	QT130 - White	QT130 - Blue	QT130 - Color Change
Model No.	QT130HP3W	QT130HPB	QT130RGBW
Supply Power	150 watt	140 watt	140 watt
110 vAC draw current	1.4 Amps	1.4 Amps	1.4 Amps
240 vAC draw current	0.7 Amps	0.7 Amps	0.7 Amps
Max No. of lights for 20A Fuse 110VAC	6	6	6
Max No. of lights for 20A Fuse 240VAC	6	6	6

Installation Tips

Design

UWL lights are suitable for Fiberglass, GRP and Wooden Hulls using suitable mounting hardware.

If positioning lights on a transom, odd numbers look better, i.e. positioning one centrally. 3 looks better than 2, 5 looks better than 4.

Blue lights seem brighter than white lights with a better beam spread because they are more perceptible to the cones in the human eye.

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

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

Check the inside spacing of the boat to ensure that if maintenance is required, there is enough space on the inside of the boat to remove the insert.

Depth

Ideal mounting depth is 10"(250mm) to top of fixture.

Minimum mounting depth is 3"(75mm) to top of fixture.

Ideally mount your lights at similar depths when using underwater to ensure matching color consistency through the water. Deeper lights will look duller and possibly differ in color 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.

The recommended transom spacing between lights is 18" - 36" (45cm - 90cm). The larger the light the larger gap.

The recommended spacing between lights running down port and starboard is 36"- 108" [3' - 9"] / (0.91m - 2.7m). The larger the light the larger gap.

Installation Tips

Installation

Test units before installation.

Make sure that when installing the underwater light, the entire flange of the light is coated in sealant to prevent any water ingress into the hull from rear of the unit.

When switching lights on for the first time, take into consideration water clarity, ambient light etc as first time impressions can be sometimes be less than expected.

After completing the installation procedure it is highly recommended to coat the body face with antifouling.

N.B. rear of light is rated to IP65 splashproof.

Bonding

It is essential to bond the lights to the anodes or a cathodic protection system via the earth screw located on the securing ring of the light.

Electrical

**RED - Positive Hot
BLACK - Negative Cold**

For complete instructions on vDC / vAC connections, please refer to ABYC codes of practice.

Incorrect cable gauge will drop voltage along distances. We recommend using 12AWG / 2.5 sq wire for all installations to eliminate any voltage drop and associated issues. 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. Fuse discrimination is designed to protect the wiring, not the components.

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.

Use the fuse box provided to make all connections. Refer page 8 for details.

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

Identifying Parts



Identification of Parts

1	Body
2	Compensating ring
3	Securing ring
4	Earth screw
5	Adjustment screws
6	Front heat sink ring
7	Rear heat sink ring
8	Clamp ring
9	Clamp screw ring
10	'O'ring
11	Rear cover
12	Gland nut
13	Cable block

Installation Steps

StepOne

Cut and prepare the correct sized clearance hole for the body - see page 2 for details.

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.

StepTwo

Coat the flange of the body and the area around the hole with 3M 4200 or Sikaflex 291 sealant then slide the body into the hole.

StepThree

From the inside the hull fit the compensating ring and screw the securing ring "hand tight".

StepFour

Adjust the screws so the compensating rings are flush to the hull and check the sealant has flowed completely around the body flange. Do "NOT" over tighten the screws as this will squeeze the sealant from the surface.

StepFive

Allow the sealant to solidify and remove surplus.

StepSix

Finally tighten the adjustment bolts to a medium tightness.

StepSeven

After completing the installation procedure it is highly recommended to coat the exposed body with antifouling.

StepEight

Bond all lights to the anodes or cathodic protection system if fitted by using the earth screw.

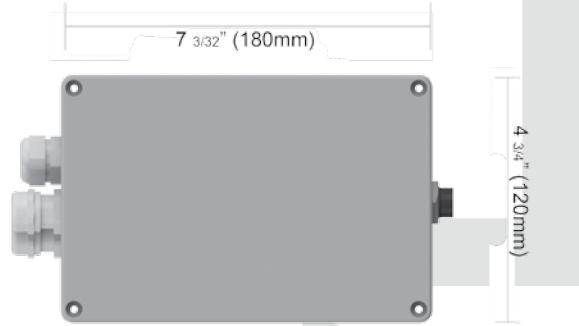
StepNine

If the light has an external driver, mount driver in an elevated ventilated, dry area using the mounting points at the corner points. Connect using suitable power cable.

Driver Specifications

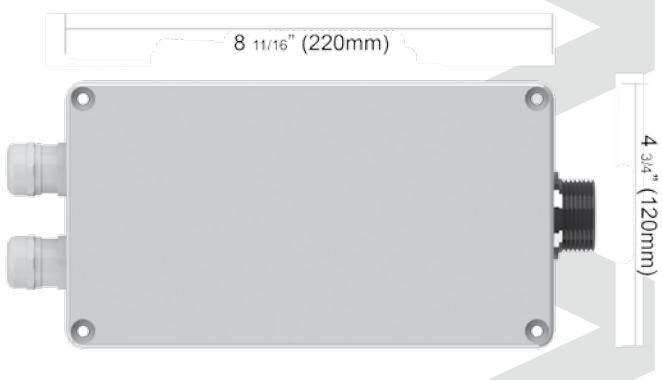
QT I 100

Color Change / Blue



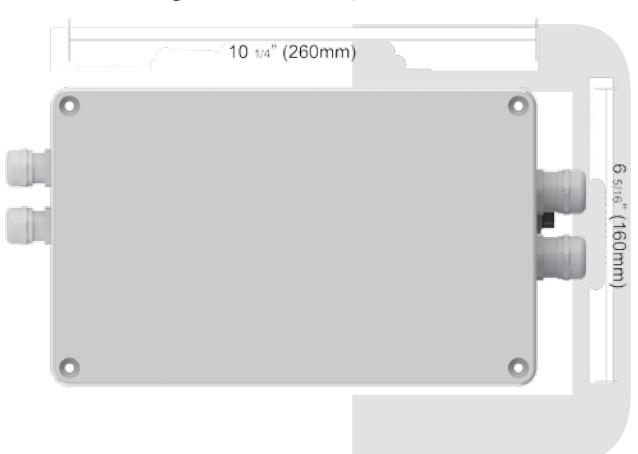
QT I 30

White



QT I 30

Color Change / Blue



Driver Specifications

Key specifications

Length of box	7 3/32" (180mm)
Length overall w/ plugs	9 27/32" (250mm)
Width of box	4 3/4" (120mm)
Height of box	3 1/2" (90mm)
IP rating	67
Mounting	4 x screws through base
Internal Fuse	5 Amp

Key specifications

Length of box	8 11/16" (220mm)
Length overall w/ plugs	12 19/32" (320mm)
Width of box	4 3/4" (120mm)
Height of box	3 1/2" (90mm)
IP rating	67
Mounting	4 x screws through base
Internal Fuse	5 Amp

Key specifications

Length of box	10 1/4" (260mm)
Length overall w/ plugs	13" (330mm)
Width of box	6 5/16" (160mm)
Height of box	3 1/2" (90mm)
IP rating	67
Mounting	4 x screws through base
Internal Fuse	5 Amp

DC Fuse Box

QT 80/100

Single Color



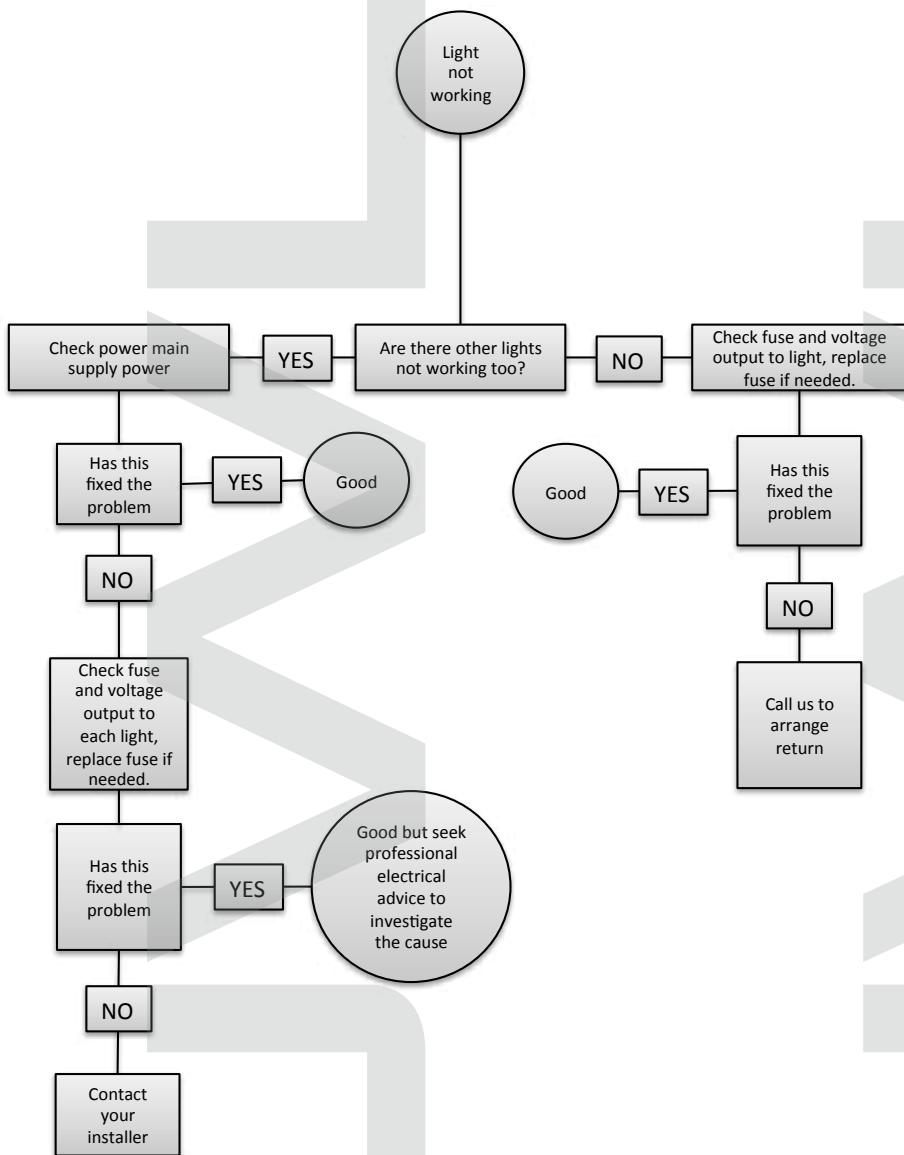
Key specifications

Length of box	4 3/4" (120mm)
Length overall w/ plugs	9 27/32" (250mm)
Width of box	2 1/2" (65mm)
Height of box	1 1/8" (28mm)
IP rating	68
Mounting	2 x screws (NOT SUPPLIED)
Supplied Fuse	10 Amp
Maximum Fuse Rating	20 Amp
Multi box connection	In series ONLY
Blanking Plugs	2 supplied
Input Voltage	12/24 DC

DC POWER	QT80 - White	QT80 - Blue	QT100 - White
Model No.	QT80-40W	QT80-80 B	QT100W
Supply Power	40 watt	80 watts	70 watt
11 vDC draw current	3.6 Amps	4.6 Amps	6.8 Amps
24 vDC draw current	1.7 Amps	2.3 Amps	3.2 Amps
Max No. of lights for 20A Fuse 11vDC	5	2	2
Max No. of lights for 20A Fuse 24vDC	10	6	6
Max No. of lights for 10A Fuse 11vDC	2	1	1
Max No. of lights for 10A Fuse 24vDC	2	2	2

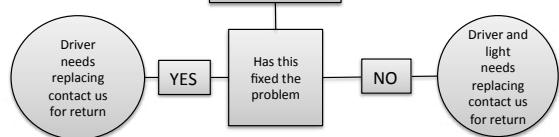
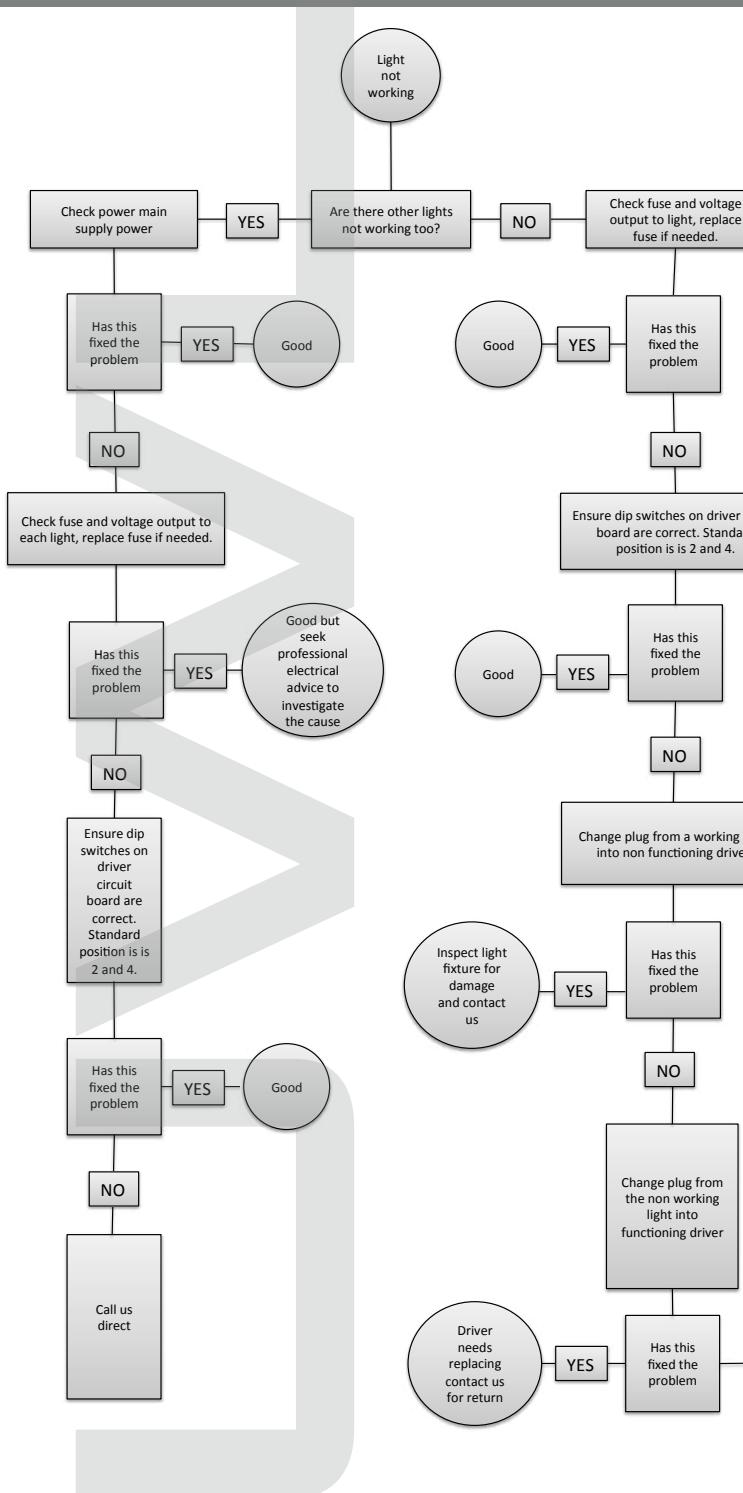
Basic Troubleshooting

Single Color Light



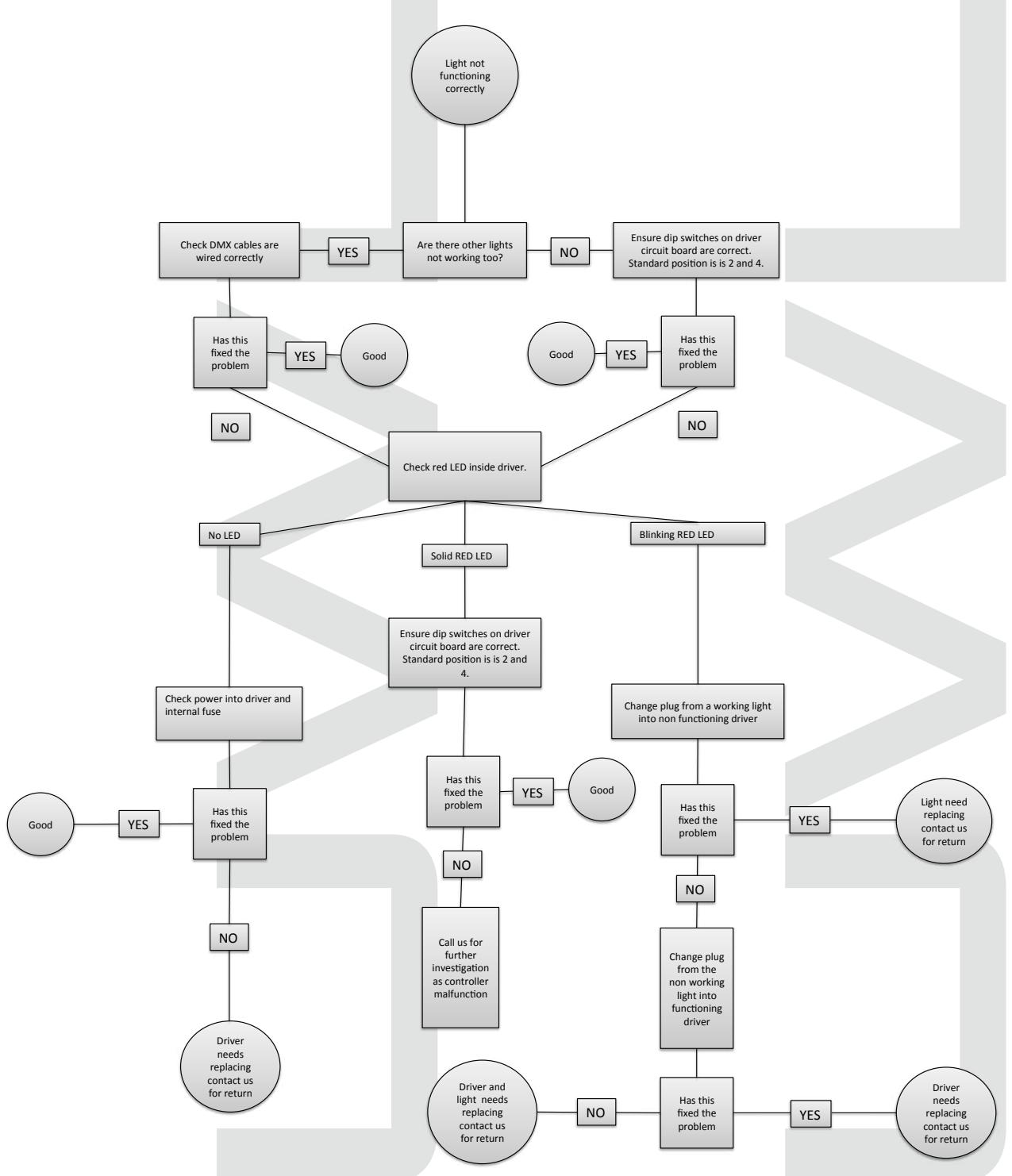
Basic Troubleshooting

Color Change Light



Basic Troubleshooting

Color Change Light



Warranty Statement

Underwater Lights Limited (UWL) stands by its products. In general terms, the company gives a full 2 year's manufacturer's warranty on all of its products from the date of sale, provided that the products have been registered within 60 days of purchase via the companies website, www.underwaterlights.com.

To claim, please contact an authorized UWL dealer and complete the troubleshooting guidelines and warranty claim form (available from www.underwaterlights.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 UWL cannot be held responsible for corrosion-related defects, this includes but is not limited to 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 has not been correctly undertaken; or if stray currents are active in the vicinity of the 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 when installed next to existing lights. UWL does not warrant this color variation on lights.

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

1: WARRANTY OF QUALITY

1.1 In the case of LED goods manufactured and sold by UWL, a company incorporated in England and Wales (registered number 2348038) and whose registered office is at The Great Dunton Forge, London Road, Dunton Green, Kent, United Kingdom, TN13 2TD (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), that (subject to the other provisions of these) the 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; embargoes; strikes, lock-outs or other industrial actions or trade disputes (whether involving employees of the Company or of a third party); restrictions 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 correct a defect in 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 were 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 tortious act or omission including negligence arising in or 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:

Warranty Statement

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 or party 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 therefrom 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 RETAIL 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, UWL will not honor the warranty of products purchased via the grey market through internet resellers. The following notice is stated on UWL's warranty cards, website and all internet sellers will be required to post the same notice.

WARRANTY NOTIFICATION: UWL products purchased by an end-user from a United States dealer via the Internet are covered by this warranty, only if the products are delivered and installed within the United States. The warranty is void if the product is delivered or installed outside the United States. Proof of purchase and installation will be required. Product installed by OEM will be warranted when shipped as part of a new boat package.

6: MAKING A CLAIM

6.1 irrespective of how the products were fitted or by whom when you discover that there may be a problem with the products you must notify either your local dealer or ourselves within 14 days.

6.1.1 When you discover a problem we ask that the products that have a problem are not used. This will minimize any further damage. We recommend the product be disconnected to prevent accidental use by removing the power feed covering the end of the power lead with a waterproof solution (e.g. a taped up plastic bag) to prevent water entering the cable connectors.

6.1.2 If a claim is accepted the part will be replaced on a "like for like basis". No refunds will be given.

6.1.3 If you feel unhappy with any part of the process of claiming please let us know.

6.2 Products supplied and fitted by a dealer

6.2.1 If you had the products installed by one of our dealers we ask that you contact them and ask that they check the installation and establish the cause of the problem. If you are not local to the installer please visit our website (www.underwaterlights.com) to find the authorized dealer closest to you. This is because many problems are due to issues with the installation or the electrical aspects external to the lighting system, and can be resolved without the need for the removal of the product.

6.2.2 You should locate your purchase invoice for the products when you believe there is a problem and contact the dealer you purchased the products and / or who fitted them.

6.2.3 Your dealer will contact us and together we will resolve your issues and together we will investigate the part.

6.2.4 If the problem is found not to be due to the manufacture of the product, this will fall outside of the warranty cover and the buyer will be liable for all costs.

6.3 Products supplied by a dealer but fitted by the Buyer

6.3.1 If you installed the products yourself before making contact we ask that you follow the troubleshooting chart for your product, when following the appropriate troubleshooting chart we find that it is helpful to complete the appropriate warranty claim information sheet. Copies can be found in the troubleshooting section of the manual included with the product or alternatively it can be download from our website.

6.3.2 If after following the troubleshooting guide, you still believe that the problem still exists with our product you will need to contact the dealer that you purchased the product(s) from, however if you are unable to do this you may contact any dealer / distributor in your local area (a list can be obtained either from our website (www.underwaterlights.com) or by contacting our Head Office).

6.3.3 You will be required to provide the information recorded on the warranty claim information sheet and have the copy of your purchase invoice for the products.

6.3.4 When contacting your dealer you will be asked for the details on the warranty claim information sheet. During this time the dealer will complete the appropriate warranty claim form that will be returned along with the part.

6.3.5 When you have made contact with the dealer please follow their instructions.

6.3.6 If you are unable to contact a dealer you may wish to contact UWL directly. To contact the Service Manager either call our UK office on +44 (0) 1732 455753 or email uw@underwaterlights.com.

6.4 If you are unable to locate a dealer closer by or purchased directly from UWL

6.4.1 Before making contact we ask that you follow the troubleshooting chart for your product, when following the appropriate troubleshooting chart we find that it is helpful to complete the appropriate warranty claim information sheet. Copies can be found in the troubleshooting section of the manual included with the product or alternatively it can be download from our website (www.underwaterlights.com).

6.4.2 If after following the troubleshooting guide, you still believe that the problem still exists with our product you will need to contact the Service Manager at UWL.

Please contact the Warranty Department at our UK Head Office at:

Underwater Lights Limited

The Great Dunton Forge, London Road, Dunton Green, Kent, United Kingdom, TN13 2TD

Tel: +44 (0) 1732 455753

Fax: +44 (0) 1732 453233

Email: uw@underwaterlights.com

6.4.3 When you contact us you will be required to provide the information recorded on the warranty claim information sheet and have the copy of your purchase invoice for the products where you believe there is a problem. The Service team will review with you your problem and where possible advise on any further checks that may be required to be done. If from the test results you do appear to have a problem you will be issued with a Warranty Claim Number. The Claim number is unique to your claim and should be used in all correspondence and attached to the returned parts.

6.4.4 You will be required to return the faulty part with the attached WC number to the appropriate address in section

6.4.5 The return of the part is at your expense.

6.4.6 The part will be investigated and if the cause is established to be a manufacturing error or a problem with the components we will return a replacement part to you.

6.4.6 If you require a part urgently from us, you would be required to purchase a new one from us. You then have a maximum of 30 days to return the faulty part to us. We will investigate and if the product has a problem due to our manufacturing will provide a full refund. If you do not think that you can return the part to us within the 30 days please contact the Service Manager. If the product is not returned within the time limit the claim will be closed and no refund given.

6.4.7 If we are unable to find a problem with the part, we will inform you of the outcome. We can provide guidance to possible reasons for the fault. Unfortunately we are not liable for or can fix problems with equipment & installations that are not purchased from UWL. The returned product can be returned to you at your request.

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