

QtLED QTS-100-Ti- RGB+W

- * The **QTS-100-Ti** underwater light fixture has a Titanium front face, a flush mounted borosilicate glass lens and a DC/AC powered external driver. The fixture also allows for an increase in LED power for extra light output.
- * Never feel trapped by this fixture as the LED projector is designed for RGB+W, White, Blue or Dual colour and can be easily removed for servicing and upgrades without the hassle of hauling your boat.
- * With its 140 degree beam angle, the flush fixture provides a perfect spread of light.
- * The **QTS-100 LED** can be installed in Carbon Fibre, GRP, Timber and metal hulls yachts of 20 meter+.
- * Distance between lights can vary from (transom) 1 - 1.5m and (port & starboard) 2-5 meters for the best illumination.
- * The **QTS-100** has Lloyd's Register Approval and ABS Design Appraisal on all components. Using the latest technology allows our underwater lights to perform well in the harshest environment.
- * The **QTS-100** is made from Titanium and 5083 Aluminium for extra protection.
- * Standard cable length for the lights is 6m for connection to the driver.



Maintenance

Inside the hull



Control Option

DMX-Color change



Driver

Remote



Growth Resistant Lens

Borosilicate Glass



Power

24 VDC
110-240 VAC



Installation

Thru- Hull



AVAILABLE
YES

Test pressure 20 Bar

Design pressure 5 Bar

Hull Material

GRP/Carbon



Boat Size

20+m



Lumens

N.A



Kelvin

N/A



Beam Angle

140 Degrees



IPX8
Underwater

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

Type-QTS-100 RGB+W, Issue 'A', Date-11-7-2019





QTS-100 RGB+W

Thru-Hull - Led serviced From inside

Mounting

Hull Material	Carbon Fibre, GRP, Timber, Aluminium & Steel
Boat size	20 +meters (65+ft)
Spacing	1/1.5 M - 3/5M Port & STB
Beam Angle	140°
Installation Angles	Flush to hull

Technical

Lumens	N.A
Kelvin	6,500
Typical LED Life Expectancy	40,000 hrs
Operating Voltage	24vdc/ 110-240vac
Maximum Managed Power (Watts)	144 Watts
Driver Type	Remote
Current/ Amp Draw	6.1 Amps/1.3-0.7 Amps
Control Options	Color Change and DMX
Bonding	Locking Ring

Physical

Length of fixture	140mm (5.5")
Diameter of fixture	100 mm (4")
Profile (height) of fixture	5 mm (0 3/16")
Removal Space Required	170 mm (6 11/16")
Total weight	2.4KG (5.3lbs)
DMX Driver Dimensions (L x W x H)	260 x160 x 90 mm(AC)
DMX Driver Dimensions (L x W x H)	180 x120 x 90 (DC)
Cable Length	6 meters (19ft68)
Hole Cut-out	74 mm (2.91")
Material	Titanium & 5083 Aluminium
Growth Resistant Lens	Borosilicate Glass
Maximum Hull Thickness	80mm (3 1/4")

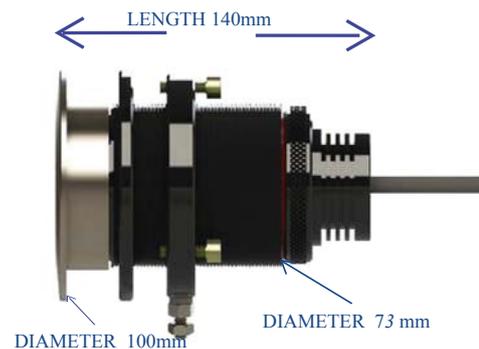
Color

RGB+W



Part Number

QTS100RGBW DC
QTS100RGBW AC



Your Local Dealer



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QtLED QTS-100 Install

***QTS LED 100 Installation (Maximum hull thickness 80mm) and Operation instructions.**

The QTS 100 RGB+W is a “through- hull” submersible marine light using 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 led is driven by an external 24vdc driver (4 channels @72vdc) or a mains Driver 110/240 vac.

***Qualified/Approved personnel must be used to carry out installation**

Before cutting a 74mm hole in the hull, check the hull wall thickness is not greater than 80mm. 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 (5) to 4Nm. / 3ft. lbs.

*It is not necessary to remove the heat sink parts (2, 5 & 7) when carrying out installation.

*To remove the heat sink (2) unscrew the clamp ring (5).

*Before fitting the new LED heat sink (2) ensure the barrel part of the body (1) and the lens is clean. Use silicone spray 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. Maximum cable length should not exceed 6m due to voltage drops. 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.

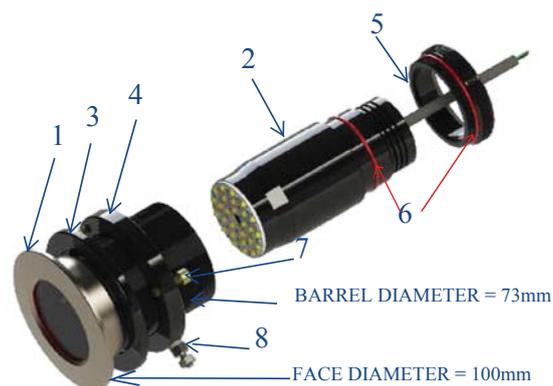
***EARTHING LIGHT FOR CATHODIC PROTECTION**-tighten the earth screw (8) on the securing ring (4) so that it bites into the screwed barrel. Check there is continuity to the front face. This prevents galvanic corrosion.

***ALL EXISITING WIRING, BREAKERS & FUSES MUST BE CHECKED BEFORE UPGRADING BY A REPUTABLE INSTALLER OR SURVEYOR**

***The light must be installed onto a flat (not curved) surface. Mount on transom or side hull only.**

***The light is supplied with the LED heatsink (2) done up tight. You must check this is still done up hand tight with the clamp ring (5) after install whether you remove the insert or not**

QTS 100 Description	Qty.
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



TECHNICAL SPECIFICATION

- *Supply Voltage 24vdc. Maximum 150w- current 6.1 Amps
- *Supply Voltage 110-240vac. Maximum 150w-current 1.3-0.7 Amps
- *LED Driver Remote
- *BODY Materials Titanium & 5083 ALU.

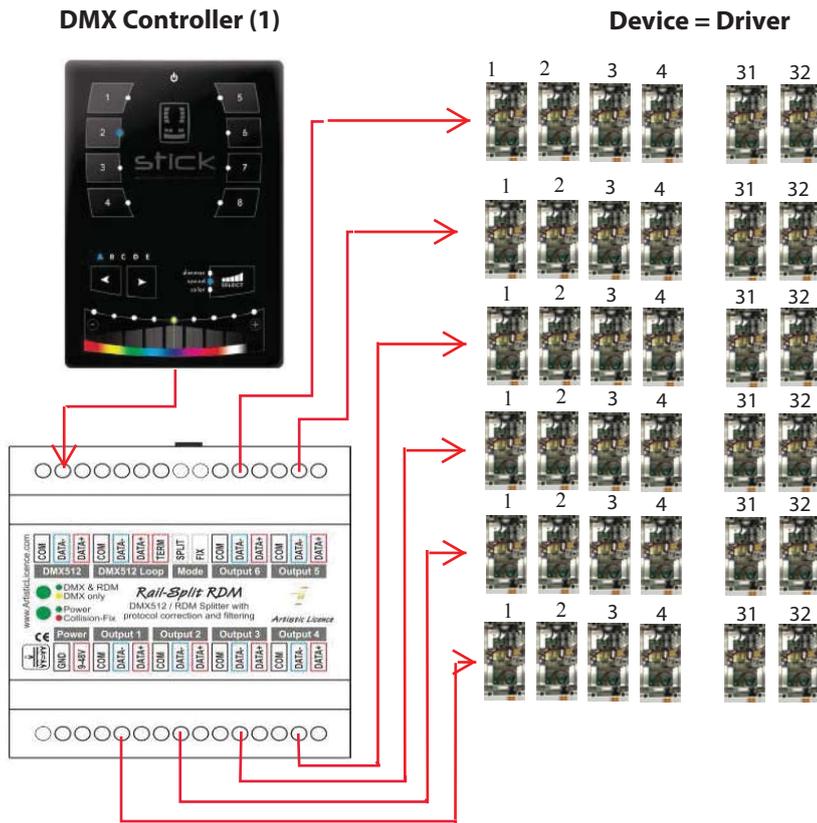




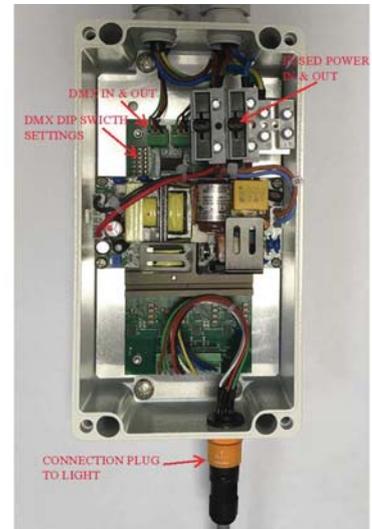
DMX AND LIGHT CONNECTION

ELECTRICAL INFORMATION

- * Shown below is a simple connection diagram for the DMX Controller (1), the six channel SPLITTER (2), Four channel DRIVER (3) also shown as 'Device' and the RGB+W underwater lights (4).
- * **Single light connection-** Every light has six meters of cable and a IP 68 plug ready to plug into the drivers aluminium driver enclosure which has a IP 68 socket for plug and play. A longer cable can be used if needed
- * **DMX connection-** All DRIVERS (3) are connected in series to a six channel SPLITTER (2). Each channel can have 32 DRIVERS connected but we recommended to use ALL channels to reduce the number of drivers per channel to avoid the possibility of capacitance and magnetic interference in the cable.
- * The DMX controller (1) is connected to the six channel SPLITTER (2).
- * **DMX cable -** Shown below is the recommended DMX 120 ohm impedance cable specification. The termination resistance is 120 ohm. This cable must be used for connecting the Devices, Splitter and DMX controller. Cable lengths from driver to light - standard 3m and 6m. Can be extended to 24 meters (80ft)
- * **Four channel DMX driver-** Shown installed into an IP 66 enclosure (**dimensions 220 x 120 x 90mm**)



Four channel DMX driver (3)
One for each light
Power supply- 110-240vac - 144 watts



<p>Tourflex Datasefe 4B Two Pair LSOH 1000v Insulated DMX Cable</p> <p>Product Code: TFDS4BEU</p>	<p>Used in permanent installations to transport two independent universes of DMX / RDM.</p> <p>Data Pairs: 0.35mm² - 20 strands of 0.15mm oxygen-free tinned copper conductors</p> <p>Data Pair Colour: P1 - White & Black, P2 - Red & Green</p> <p>Overall Diameter: 7.2mm (+/- 0.1mm)</p> <p>Weight per 1m: 60 grams / 2.12 ounces</p> <p>Operating Temperature: -30°C to +75°C</p> <p>Minimum Bend Radius: 8 x O.D.</p>
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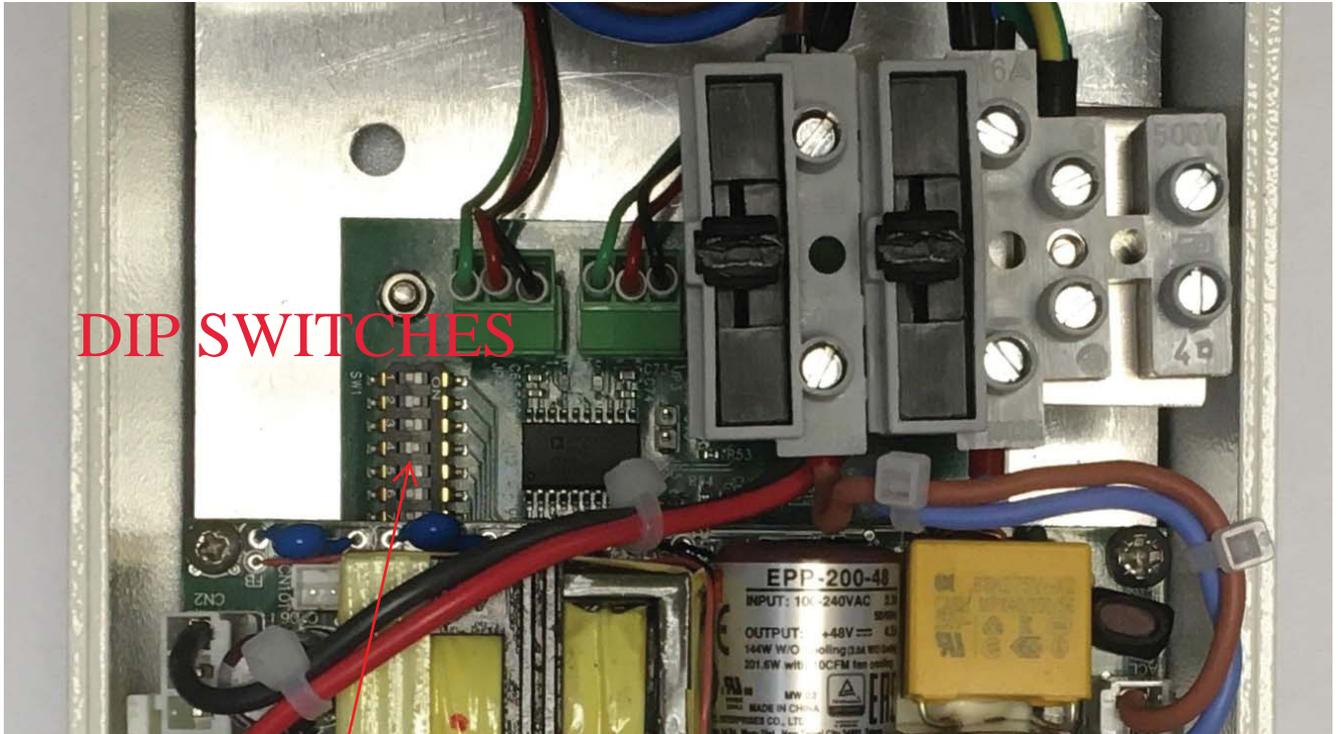


Underwater light (4)



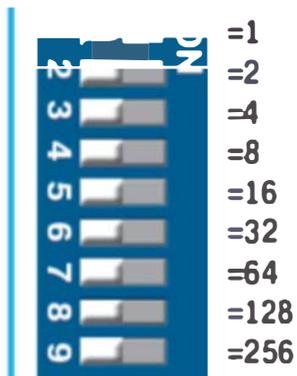
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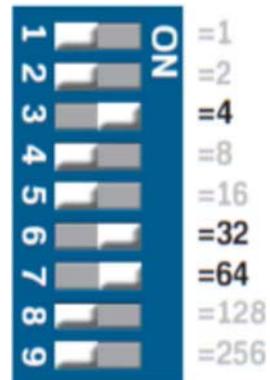
DIP SWITCHES

DMX address



Add values of 'ON'
for DMX address

e.g.



4 32 + 64 = 100
D X address 100