QTS-100 HP3 White

*The **QTS-100-HP3** underwater light fixture uses a high impact borosilicate glass with a flat lens for a 140 degree wide beam angle. 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 White and Blue or RGB+W and can be easily removed for servicing and upgrades without the hassle of hauling your boat.

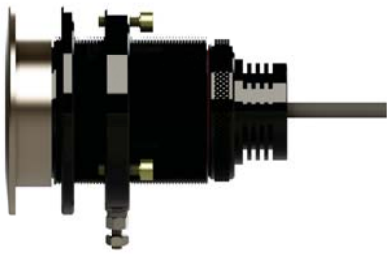
*The cool white LED has an output of 20,000 lumens. With its 140 degree beam angle, the flush fixture provides a perfect illumination.

*The **QTS-100-HP3** is recommended for GRP, Carbon Fibre and Wooden hull yachts of 20m +.

*Distance between lights on the transom can vary from 1 to 1.5m and from 1 to 5m for port and Starboard.

*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 anodized Aluminium and titanium for extra protection.



Maintenance
Inside the hull

Control Option
On/Off Switched

Driver
Remote

Growth Resistant Lens
Borosilicate Glass

Power
110-240 vac

Installation
Thru Hull

Hull Material
GRP/Carbon Fibre

Boat Size
20m+

Lumens
Up to 25,000

Kelvin
6,500K

Beam Angle
140 Deg

AVAILABLE

YES

IPX8
Underwater

www.underwaterlights.com

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

QTS- 100 HP3

Thru-Hull - Led serviced From inside

Color	Part Number
White	QTS- 100-HP3W

Mounting

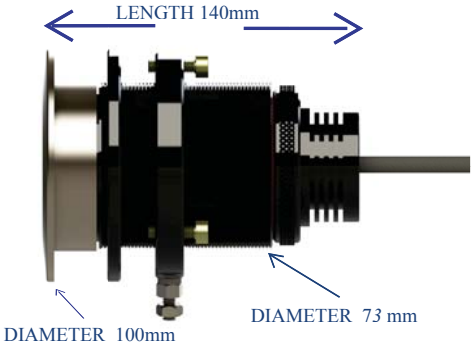
Hull Material	GRP / Fiberglass/Carbon Fibre
Boat size	20meters+ (65ft+)
Spacing	1-1.5M /1-5M port & Starboard
Beam Angle	140°
Installation Angles	Flush

Technical

Lumens	20,000+
Kelvin	6,500
Typical LED Life Expectancy	40,000 hrs
Min-Max Operating Voltage	110-240 V AC
Current / Amp draw	1.4-0.7 amp
Driver Type	Remote
Driver Output	55VDC-2.8A
Control Options	On / Off Switch
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	1.7KG (3.74lbs)
Driver Dimensions (L x W x H)	220 X 120 X 90MM
Cable Length	6 meters (19,68 ft)
Hole Cut-out	74mm (2 .91")
Material	Titanium + 5083 aluminium
Growth Resistant Lens	Borosilicate Glass
Maximum Hull Thickness	80mm (3 1/4")



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QTS-100 INSTALL

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

The QTS100 is 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 led is driven by an external AC driver (110-240vac). The white LED produces 20,000+ lumens.

***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 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). 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. Check there is continuity to the front face. This prevents galvanic corrosion. Connect the earth cable supplied to the earth screw(8) and make sure the cable to your fuse/hub/junction box is connected to the cathodic protection system.

*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

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

TECHNICAL SPECIFICATION

***Supply Voltage**	110-240vac. **Maximum current @ 110vdc= 1.4amps**
***LED Driver**	Remote
***BODY Materials**	Titanium and black anodized 5083 ALU.

ITEM 8

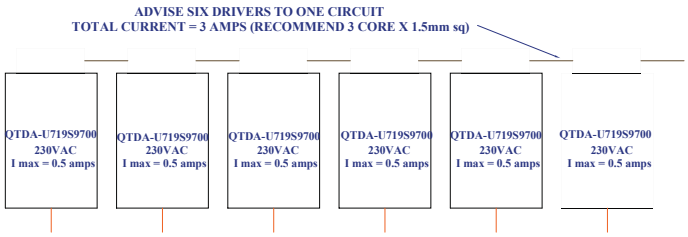
EARTH SCREW

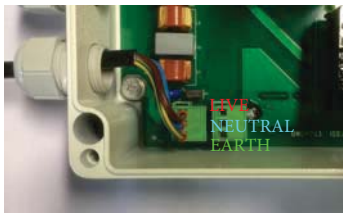
QtLED 150W DRIVER

ELECTRICAL INSTALLATION INSTRUCTIONS FOR QTS 100

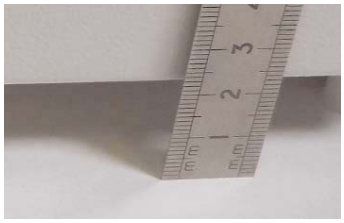
Qualified/Approved personnel must be used to carry out electrical installation.

- **POWER SUPPLY TO DRIVER 110-240 VAC 50/60 Hz**
- **RECOMMEND ONLY SIX LIGHTS PER CIRCUIT. SEE DIAGRAM BELOW.**
- **THE DRIVER ENCLOSURE MUST HAVE A MINIMUM DISTANCE OF 50 CM FROM THE LED PROJECTOR**
- **THE DRIVER ENCLOSURE MUST BE FITTED MIN 60CM ABOVE TANK TOP OR BILGE**
- **THE DRIVER ENCLOSURE MUST HAVE AIR FLOW ON ALL SURFACES. USE THE 2 CM SPACERS FOR THE BACK SURFACE WHEN SECURING.**
- **THE DRIVER ENCLOSURE MUST BE INSTALLED VERTICALLY AS SHOWN IN PICTURE BELOW.**
- **THE MAXIMUM AMBIENT TEMPERATURE OF 45C MUST NOT BE EXCEEDED**
- **THE LED PROJECTOR IS SUPPLIED WITH 3.0 METERS OF CABLE WITH THE PLUG AND SOCKET ALREADY CONNECTED. THIS CABLE CAN BE EXTENDED.**
- **THE POWER LED SHOWN ON THE STANDARD DRIVER PICTURE INDICATES WHEN LIT THAT THE DRIVER IS SUPPLYING POWER TO THE LED. IF THE LED IS OUT AND THERE IS POWER, THE DRIVER HAS FAILED.**





POWER CONNECTION FOR DRIVER



DRIVER ENCLOSURE SPACE DISTANCE

DRIVER AND ENCLOSURE

Part no QTDA-U719S9700

- **QTS 100 EARTH LIGHT INSTRUCTIONS FOR CATHODIC PROTECTION- Tighten the earth screw on the securing ring so that it bites into the screwed barrel. Connect this to the hull anode or cathodic protection system.Check there is continuity to the front face. This prevents galvanic corrosion.**

EARTH TAB AND SCREW