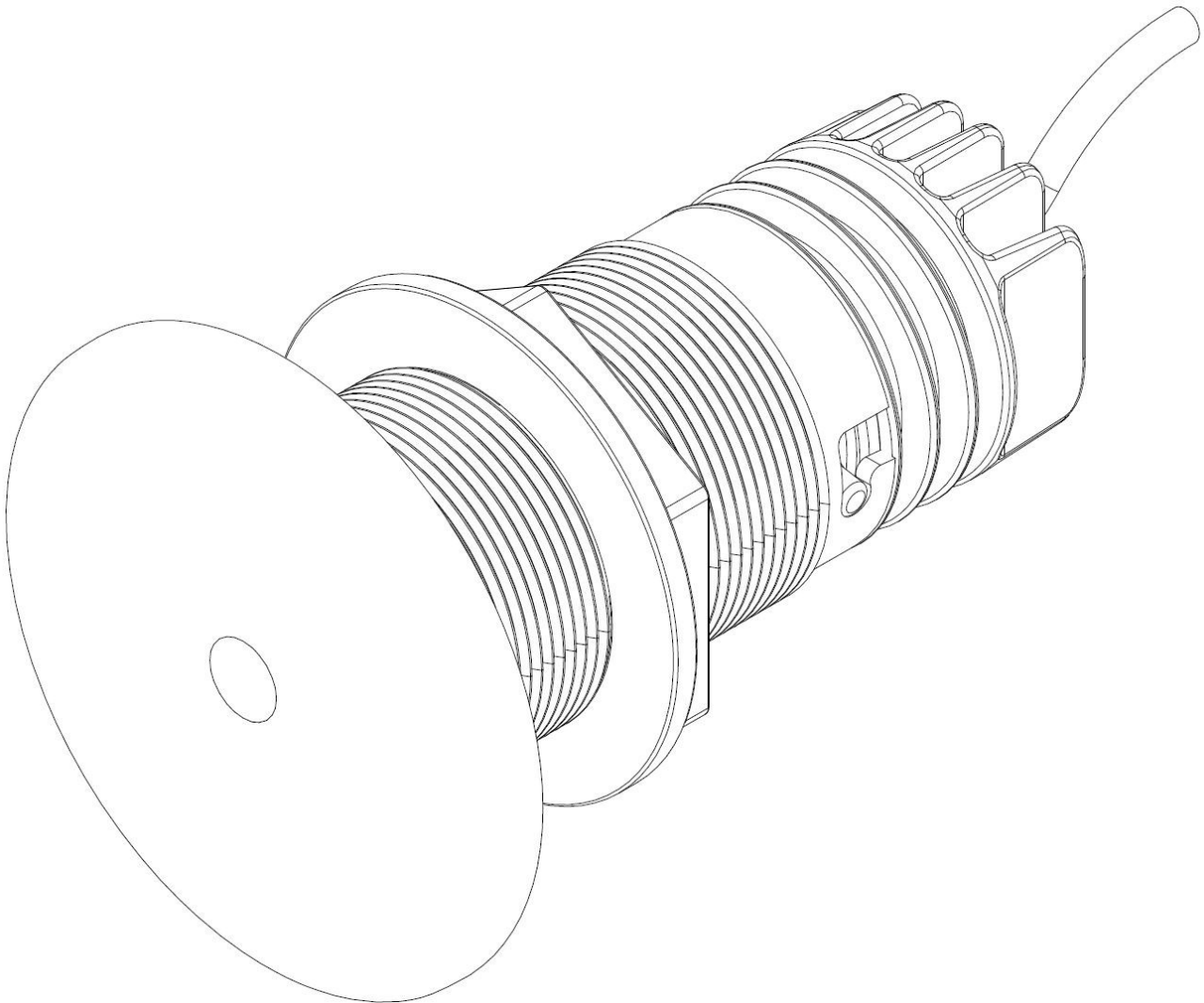




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THRU HULL



GEN 4 – 6, 12 and 18 SERIES

Warranty & Installation Instructions



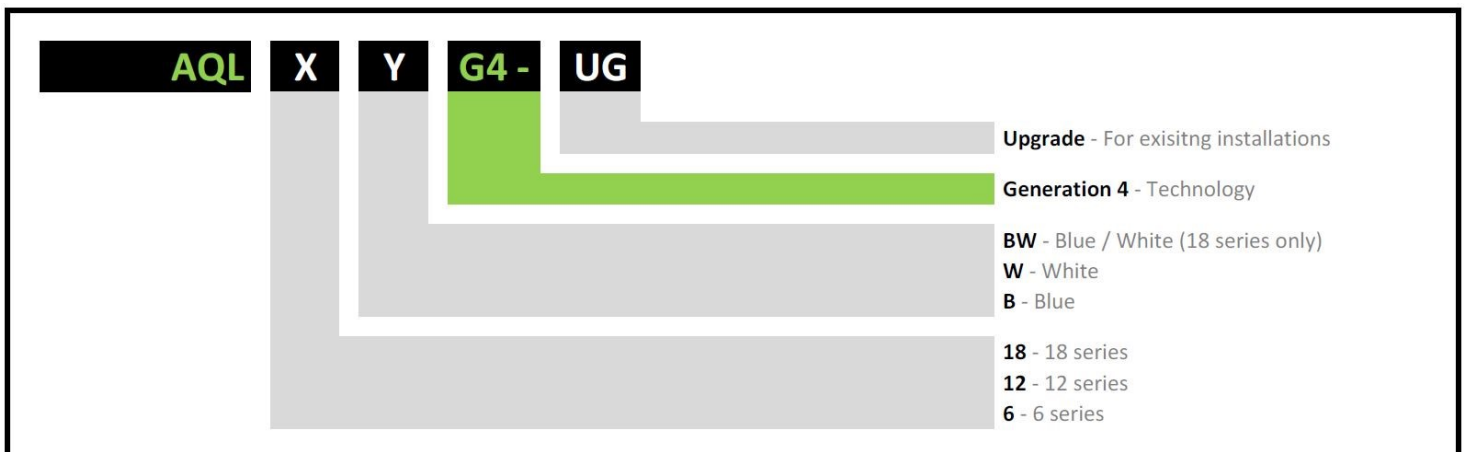
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Congratulations on purchasing your Australian Designed & Manufactured underwater light from Aqualuma LED Lighting.

In 2004, we revolutionized underwater lighting with the Thru Hull range of underwater lights. It was the world's first and is still today the only underwater light with a patented, one piece, corrosion-proof and chemically resistant polymer housing. It has no lenses or seals which typically deteriorate.

This unique design also allows all servicing and upgrades to occur without the need for a costly haul out. As LED technology advances, we release 'generational upgrades', allowing previous customers to install these into their existing housings.

- Warranty & Installation Instructions:** May 2019
- Product Brand:** Aqualuma LED Lighting
- Product Name:** Thru Hull Light – Generation 4
- Product Code:** (refer to your purchase records for your exact model)



PLEASE READ THESE INSTALLATION INSTRUCTIONS CAREFULLY BEFORE INSTALLING, OPERATING OR MAINTAINING THIS LUMINAIRE.

THIS PRODUCT MUST BE MAINTAINED AND OPERATED IN ACCORDANCE WITH THESE INSTALLATION INSTRUCTIONS, FAILURE TO DO SO MAY DAMAGE THE PRODUCT, REDUCE ITS EFFECTIVENESS, LIFE EXPECTANCY, AND MAY VOID THE WARRANTY.



1. WARRANTY:

All Aqualuma Thru Hull Lights have a commercial warranty covering the product from the date of purchase. The terms set out below:

Terms of Warranty:

The Aqualuma Thru Hull commercial warranty insures the product to be free of defects in workmanship and materials for a period of Ten (10) years on the housing and Three (3) years on all internal parts.

Warranty covers:

Aqualuma reserves the right to view proof of purchase prior to replacement or repair.
Aqualuma reserves the right to inspect the defective luminaire prior to replacement or repair.
Aqualuma offers at their discretion, either a complete and full replacement, or repair of the faulty luminaire, including return freighting of the replacement or repaired luminaire.
Aqualuma will not be held accountable for any costs associated with the removal or return of the defective luminaire, nor the subsequent re-installation of the replacement luminaire.

Warranty does not cover:

Installation which is not carried out in accordance with the instructions contained in this document, maintenance other than contained in this document, misuse, neglect, improper installation or natural disasters such as flood, fire, lightning, power spikes, etc.

ANY UNAUTHORIZED REPAIRS OR MODIFICATIONS TO THE LUMINAIRE WILL VOID THE WARRANTY.

Liability:

Aqualuma's liability in all claims and events is limited to and shall not exceed the purchase price of the Aqualuma product. No affirmation of fact or warranty expressed or implied other than that set out in the warranty statement above is made or authorized by Aqualuma. Aqualuma disclaims any liability claims that are due to misapplication, improper selection or misuse. Any liability for consequential or accidental damages or costs is expressly disclaimed.

In the unlikely event that you have an issue with your Aqualuma product, please contact Aqualuma or your dealer for repair or replacement information.



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2. SPECIFICATION:

Product Brand:	Aqualuma LED Lighting
Product Name:	Thru Hull
Technology:	Generation 4
Housing:	Patented, Corrosion and Chemically Resistant Polymer
Weight:	6 series – 720 grams / 1.59 lbs 12 series – 1070 grams / 2.36 lbs 18 Series – 1100 grams / 2.45 lbs
DC Supply Voltage:	12 or 24 volt DC ONLY
Operating Temperature:	- 10 ° C to + 60 ° C Lights stabilize and run at approximately 12°C above ambient
Instant On/ Off:	Standard in all models
Cable:	3.7 m / 12 ft – tinned marine cable 20mm Minimum Bend Radius

PERFORMANCE:

Aqualuma Thru Hull	6 Series	12 Series	18 Series	18 Tri Series	
Hole Size	60mm / 2 3/8"	75mm / 3"	75mm / 3"	75mm / 3"	(mm / inch)
Cable Length	3.7m / 12 ft	3.7m / 12 ft	3.7m / 12 ft	3.7m / 12 ft	(meter / ft)
	White Blue	White Blue	White Blue	White Blue Blue / White	
Current Draw @12v DC	1.0	< 2.0	< 2.6	< 1.3	(Amps)
@24v DC	0.5	1.0	1.3	0.7	
Colour Details	9000 470	9000 470	9000 470	9000 470 490	K or nm
Fixture Lumens	770 295	1525 570	2150 835	1075 418 1493	(photopic lumens)
Fixture Lumens - Lowlight	1725 4900	3608 9990	4920 14100	2475 7050 9525	(scotopic lumens)

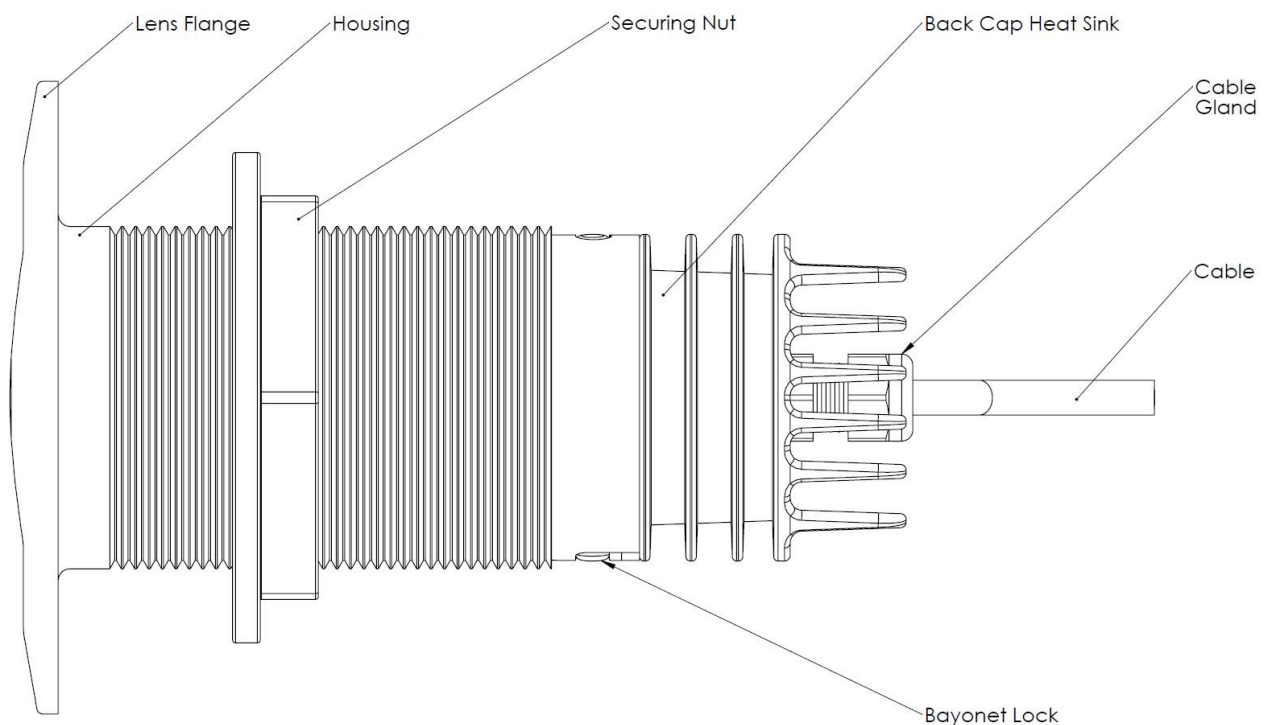


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3. CERTIFICATION:

RINA Certificate:	DIP000515WO	25 Sept 2015 – 24 th Sept 2020
Electrical Safety:	IEC 60598 <i>Luminaires General Requirements</i> IEC 60529 <i>Rules for the Classification of Yachts designed for Commercial Use, Rules for the Classification of Pleasure Yachts</i> SAE J1171 <i>External Ignition Protected</i>	
Electromagnetic Compliance:	AS/NZS CISPR 15 / FCC Part 15 / IEC 61000, 55015 + 61547	
Ingress Protection:	IP68 Front Mount: 200m (306psi) Rear Mount: 7.5m	
Impact Test Front:	IK 09 (actual test result - 13.7nm)	
Glow Wire Testing:	Both 650°C and 750°C to IEC 60335.1 clause 30.2	
Salt Spray Corrosion Resistance:	ASTM-B117 for 500 hours	
Hydrostatic Pressure Testing:	Front Mount: 3500 kPa (equivalent water depth 357m) Rear Mount: 530 kPa (equivalent water depth 54m)	

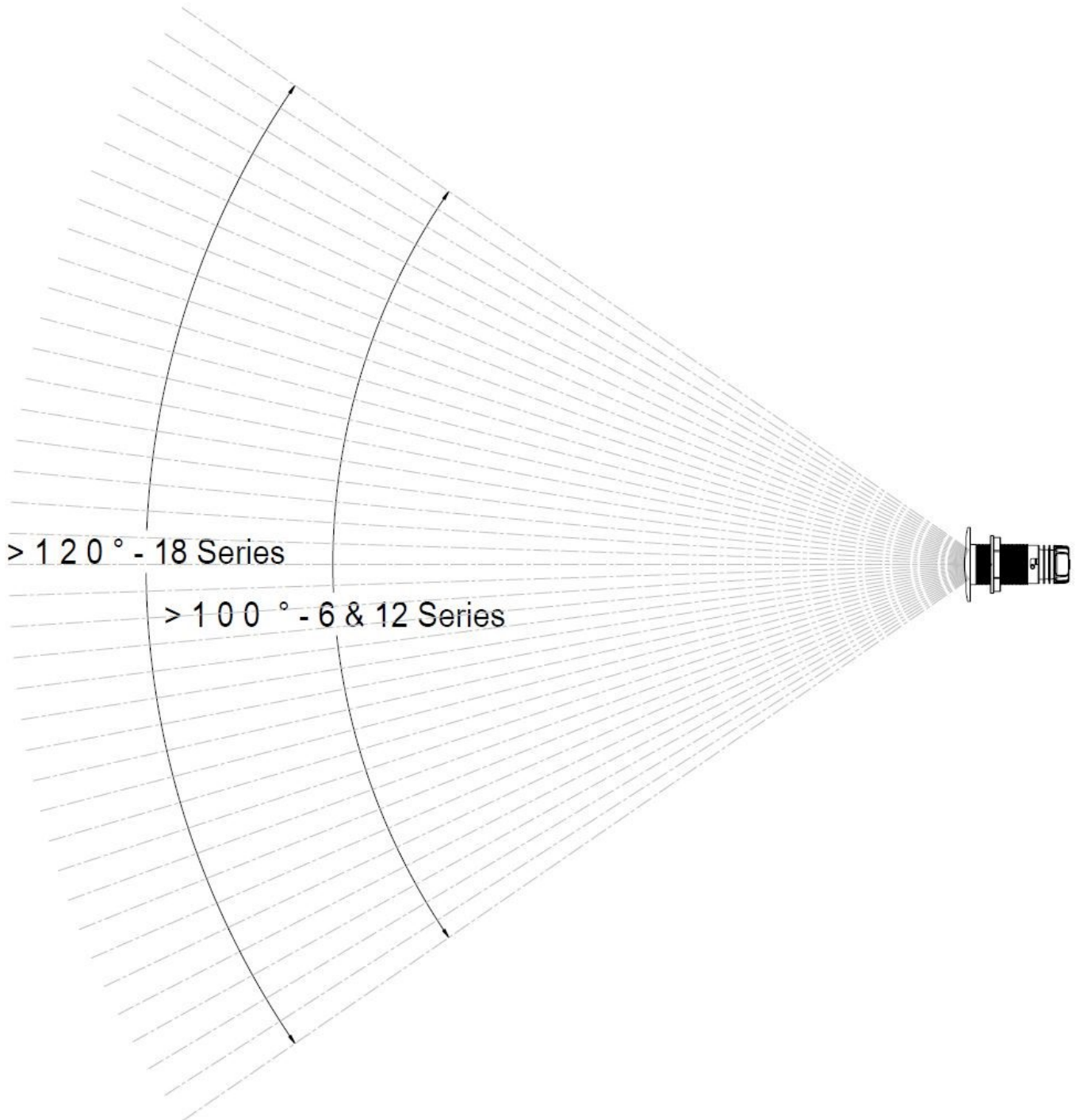
4. COMPONENTS:





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5. LIGHT THROW:



TOP VIEW – HORIZONTAL THROW



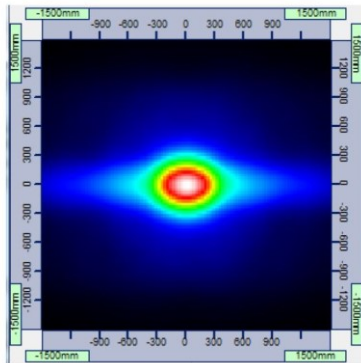
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6. PHOTOMETRICS:

Gen IV/ 6 LED

WHITE
SPREAD = 100°
MAX INTENSITY = 3,000cd
NET FLUX = 770lm

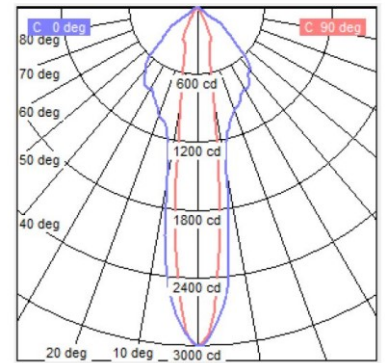
BLUE
SPREAD = 100°
MAX INTENSITY = 1150cd
NET FLUX = 295lm



Gen IV/ 6 LED

WHITE
SPREAD = 100°
MAX INTENSITY = 3,000cd
NET FLUX = 770lm

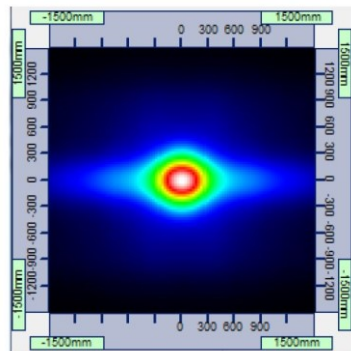
BLUE
SPREAD = 100°
MAX INTENSITY = 1150cd
NET FLUX = 295lm



Gen IV/ 12 LED

WHITE
SPREAD = 100°
MAX INTENSITY = 6,100cd
NET FLUX = 1525lm

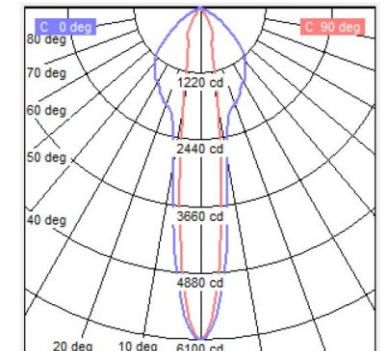
BLUE
SPREAD = 100°
MAX INTENSITY = 2380cd
NET FLUX = 570lm



Gen IV/ 12 LED

WHITE
SPREAD = 100°
MAX INTENSITY = 6,100cd
NET FLUX = 1525lm

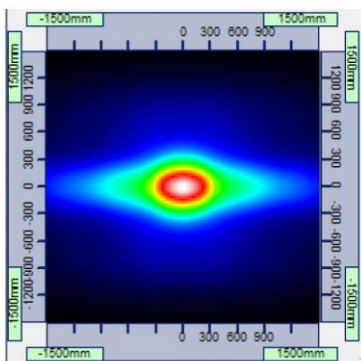
BLUE
SPREAD = 100°
MAX INTENSITY = 2380cd
NET FLUX = 570lm



Gen IV/ 18 LED

WHITE
SPREAD = 120°
MAX INTENSITY = 6,300cd
NET FLUX = 2,150lm

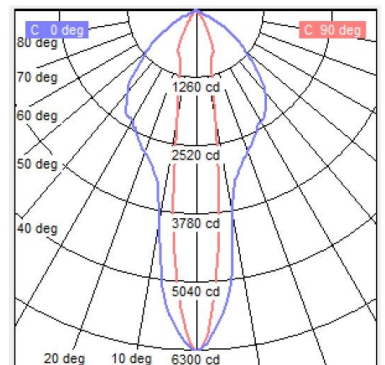
BLUE
SPREAD = 120°
MAX INTENSITY = 2450cd
NET FLUX = 835lm



Gen IV/ 18 LED

WHITE
SPREAD = 120°
MAX INTENSITY = 6,300cd
NET FLUX = 2,150lm

BLUE
SPREAD = 120°
MAX INTENSITY = 2450cd
NET FLUX = 835lm

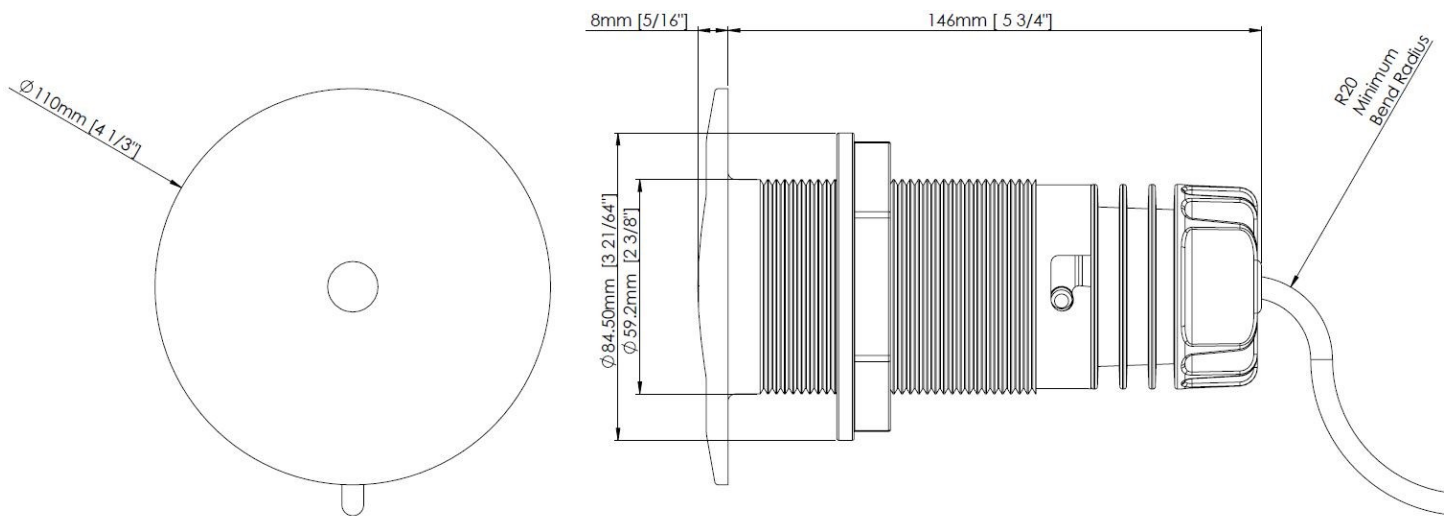




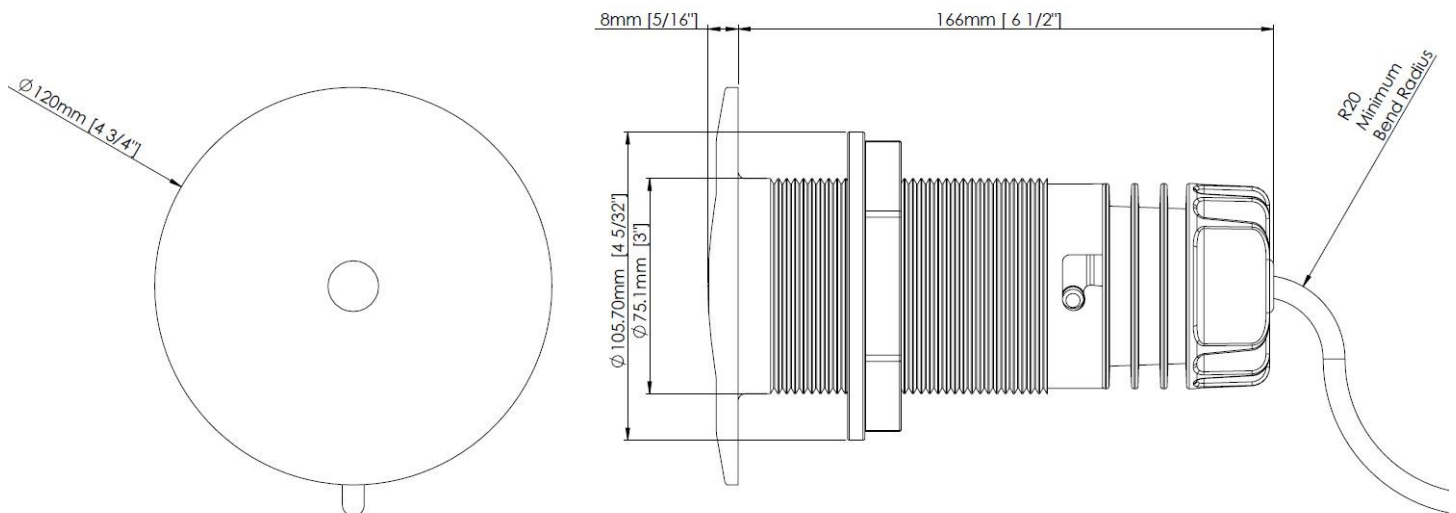
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7. DIMENSIONS:

6 Series:



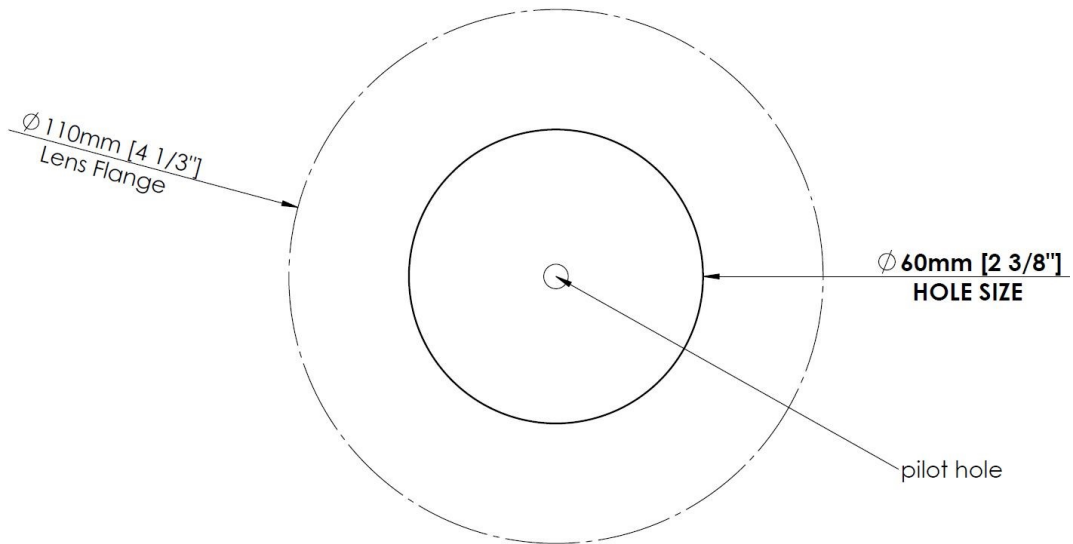
12 and 18 Series:



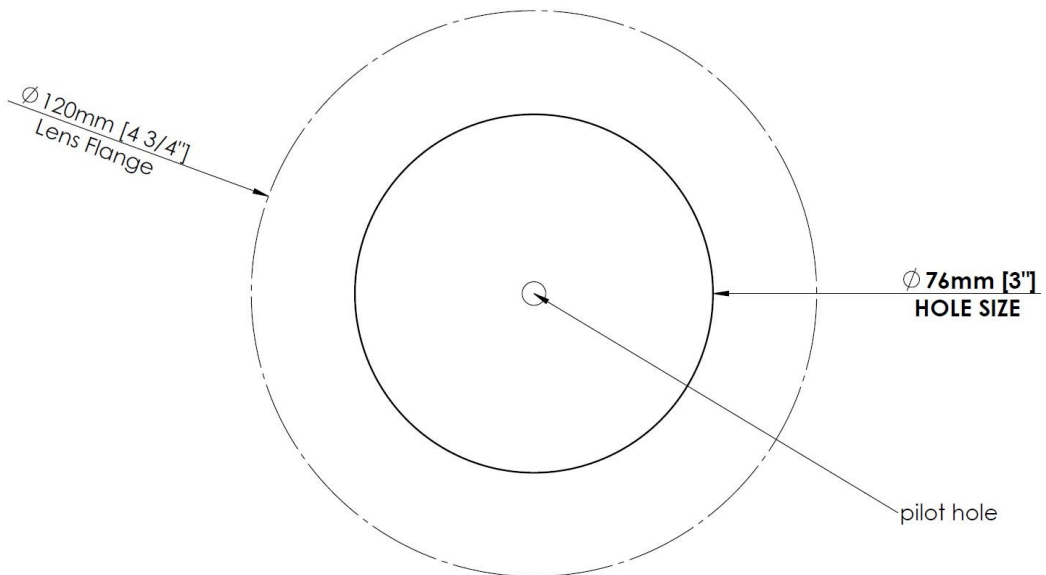


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8. HOLE TEMPLATE:



HOLE TEMPLATE
Gen 4 - 6 SERIES



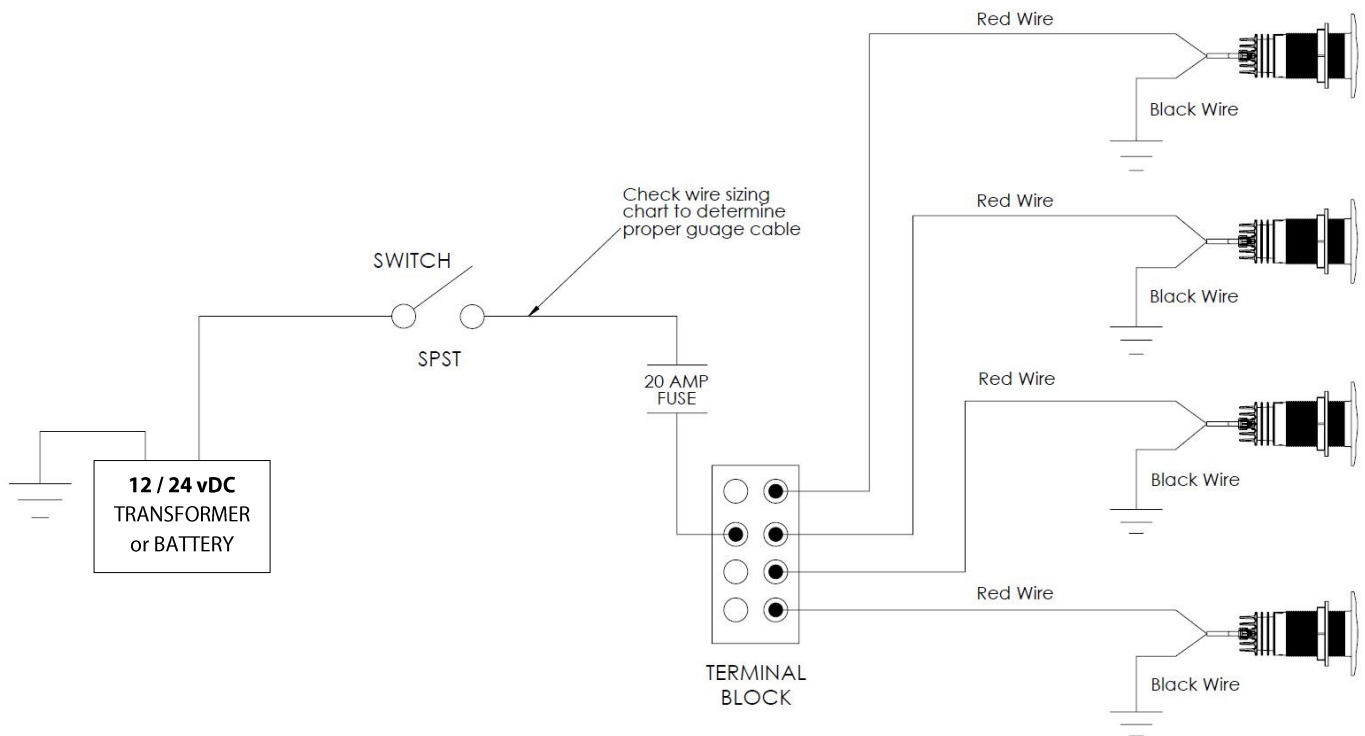
HOLE TEMPLATE
Gen 4 - 12 & 18 SERIES



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10. WIRING DIAGRAMS:

SPST Installation - 6, 12 and 18 Series



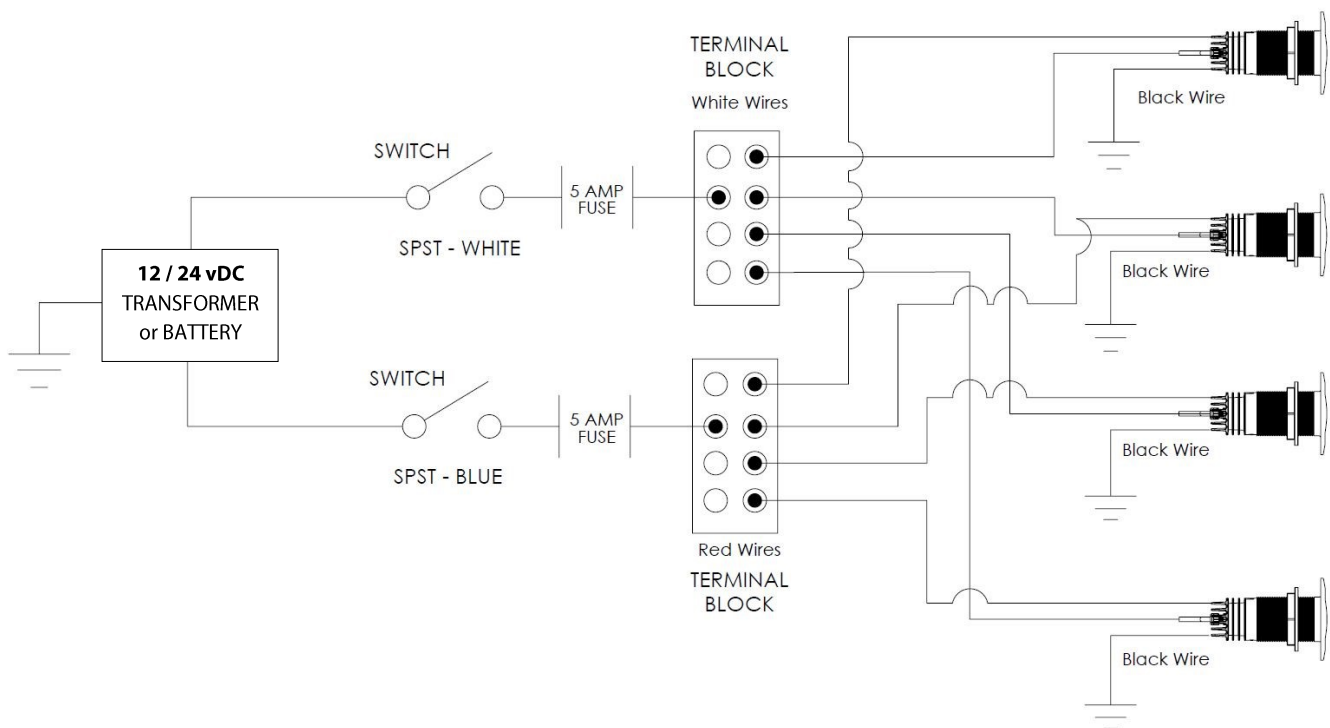
Ensure that marine cable chosen is sufficient to supply load to;

- quantity of lights
- cable length
- current draw



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SPST Installation - 18 TRI Series



Ensure that marine cable chosen is sufficient to supply load to;

- quantity of lights
- cable length
- current draw



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11. WARNINGS:

Ensure that the supply voltage is the same as the rated fixture voltage – 12 or 24v DC ONLY.

Aqualuma Thru Hull lights are external ignition protected.

Aqualuma Thru Hull lights are reverse polarity protected.

No damage will occur to the light engine if they are wired incorrectly, however they will not operate.

12. INSTALLATION:

All Aqualuma Thru Hull lights have been tested before shipping.

Gen 4 Series Thru Hull lights can be operated when the vessel is out of water.

There is no bonding to anodes required.

Aqualuma recommends that you use a qualified boat builder / marine electrician to work out placement and fitting of your new underwater lights.

You will require the following to install your Aqualuma Thru Hull lights:

- Hole Saw 6 series – 60mm (2 3/8")
 12 & 18 series – 76mm (3")
- Wire Connectors
- Fuse or Circuit Breaker
- Sealant; any sealant approved for below water line use
- Marine Cable; sufficient to supply load of; qty of lights + cable length + current draw

Step 1

With boat on hardstand or trailer calculate the spacing's based on the width of the boat and the number of lights you want to fit. All lights should be 250-300mm (10 in") below water line.

Recommended light spacing:

- Transom / Stern 800mm (32 in")
- Side / Port or Starboard 1500mm (60 in")

Mark the hole centres with a marker, be careful to check the inside of the boat for any obstacles in the area you want to drill, with that done you can now drill a small pilot hole then **double check inside the boat again for anything that may obstruct the housing and retaining nut.** Once you are sure you have the correct position you can drill through the hull with specified hole saw.



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Step 2

Remove the light housing from box, remove the retaining nut from the housing and clean the inside surface of the flange, clean the surface of the hull removing all antifouling from flange area and wipe clean.

Step 3

You are now ready to install the complete light fitting into the hull - there is no need to disassemble light fitting. Apply a generous amount of sealer to the inside flange of the housing and carefully slide the housing into the hole with someone inside the boat ready to attach the nut. Apply a small amount of sealer to inner surface around hole inside the perimeter of the flange, then holding the housing flush with the outside surface of the boat, tighten the nut by hand until tight. The nut should only be hand tightened. Correct lens alignment;



Step 4

Clean excess sealant from around the housing and check to make sure you have a seal all the way around the flange to the outside edge of the housing.

Remove any sealant from the face of the housing and lens area prior to drying.

Wiring – 6, 12 & 18 Series

Take the power wire and run to a known 12, or 24 volt DC fused and switchable power source with a 5 amp fuse, as each light uses less than 2 amps @ 12 volts DC. Do not use higher fuse.

Connect the red wire to positive and the black wire to negative.

Wiring – 18 TRI Series

Connect the black wire to ground (this is common ground). Connect the red positive wire (blue light) to one switch and the white positive wire (white light) to second switch. Each switch will turn on one colour independently or both switches on will turn both colours on together.



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13. UPGRADES:

All generations of Aqualuma Thru Hull internals can be upgraded to the latest generation with the simple process shown below. This can be done while the vessel is in the water.



Leave the existing Housing and Securing Nut in place – they require no modification. Disconnect existing wiring, then twist existing end cap clockwise and remove all internals.



Clean the internals of the housing, ensuring any dust or debris is removed.
Slide new generation internals into housing.



Twist end cap anti clockwise, then connect new wiring. You are Done!



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14. MAINTENANCE:

NO USER SERVICEABLE PARTS INSIDE THE LUMINAIRE.

ANY UNAUTHORIZED REPAIRS OR MODIFICATIONS TO THE LUMINAIRE WILL VOID THE WARRANTY.

OPENING OF THE LUMINAIRE SHOULD ONLY BE UNDERTAKEN AT TIME OF UPGRADE.

CLEANING LENSES:

Aqualuma highly recommends the application to the external lens with a clear coat of either Prop Speed or Light Speed at time of install, and at each annual maintenance.

Lenses should be regularly cleaned by hand with a soft brush.

Cleaning schedule will depend on water quality and temperature.

ACCURACY:

The accuracy or completeness of all statements, technical information and recommendations contained herein was correct at time of print. The purchaser should determine the suitability of the product for his intended use and assumes all risk and liability whatsoever in connection therewith.