

AQUARAY®

Solid State Lighting Systems

AQUARAY®
SOLID STATE LIGHTING
DESIGNED BY TMC

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INSTRUCTIONS FOR INSTALLATION AND USE

Important Safety Information - Please Read Carefully

- AquaRay Solid State Lighting systems comprise an AquaRay lamp unit with a separate mains power supply unit (PSU) which supplies a constant DC (low voltage) power supply to the lamp unit.
Power supply for AquaBeam/GroBeam 500 Single lamp unit:
INPUT-100-240 VAC 50-60Hz 0.15A OUTPUT-19.5 VDC 0.7A
Power supply for AquaBeam/GroBeam 500 Twin lamp unit:
INPUT-100-240VAC 50-60Hz 0.3A OUTPUT 1-19.5VDC 0.7A
OUTPUT 2-19.5 VDC 0.7A
Power supply for AquaBeam/GroBeam 1000 lamp unit:
INPUT-100-240VAC 50-60Hz 0.3A OUTPUT 1-19.5VDC 0.7A
OUTPUT 2-19.5 VDC 0.7A

Caution: Do not use any other power supply unit with an AquaRay lamp unit as the lamp unit may not work and this may cause irreparable damage to the lamp unit. If the PSU supplied with the unit needs to be replaced then please obtain an authentic AquaRay PSU supplied by one of Tropical Marine Centre's local stockists.



- Always isolate the PSU from the mains electricity before installing or carrying out any maintenance to the AquaRay lamp unit.

Caution: The power supply unit (PSU) is not waterproof and therefore must not be mounted above the aquarium or in any position where it may accidentally fall into water or be splashed by water.

Caution: Do not position the PSU in an enclosed space. Ventilation must be provided to ensure it does not overheat.

Caution: Do not operate this appliance if any part of it has a damaged cord or plug, is malfunctioning, or has been dropped, immersed in water or damaged in any way.



- This unit is designed to be used indoors and is not suitable for any outdoor applications.

Caution: Ensure the AquaRay lamp unit is securely installed above the tank before operating.

Caution: DO NOT SUBMERGE THE AQUARAY LAMP UNIT. If the unit is submerged the lamp unit guarantee will be invalidated.

Caution: Always leave a drip-loop in the DC supply cable to the AquaRay lamp unit to prevent water running down the cable and reaching the PSU (see picture below).

- When in operation, the grooved aluminium heat sink on the back of the AquaRay lamp unit will get hot ($\pm 60^{\circ}\text{C}$) to the touch. This is normal and is an essential feature of protecting the lamp unit from over-heating.

Caution: Do not cover, or obstruct in any way, the rear aluminium surface of the AquaRay lamp unit which should always have a minimum of 10mm clearance from the nearest surface to allow free circulation of air around it.

Caution: Operation of the AquaRay unit in a confined or unventilated space, or where there is an additional heat source, could cause the ambient operating temperature to rise above 35°C , reducing the useable life of the unit.

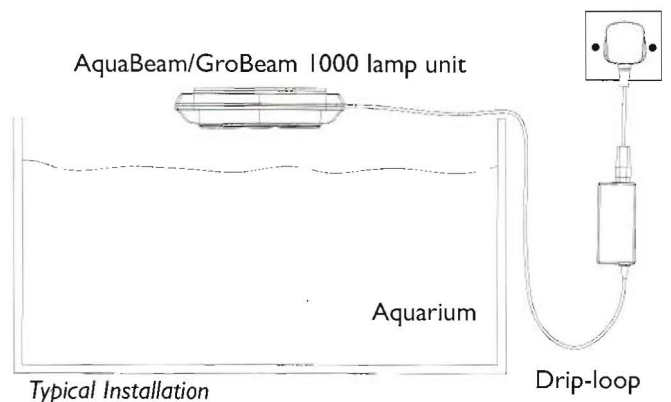
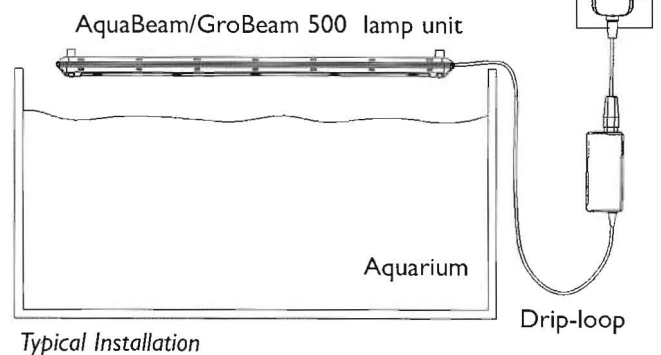
- Dispose of this unit responsibly. Check with your local authority for disposal information.



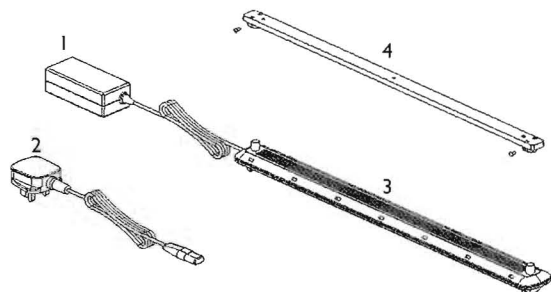
The AquaRay lamp unit is mercury free.

PRODUCT INFORMATION

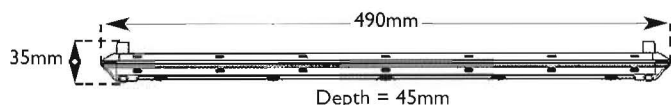
- This unit is manufactured and conforms to:-
Safety: BS EN 60598-1: 2000. BS EN 60598-2-11: 2005
EMC: BS EN 55015: 2001. BS EN 61000-3-2: 2006.
- This unit is CE approved.



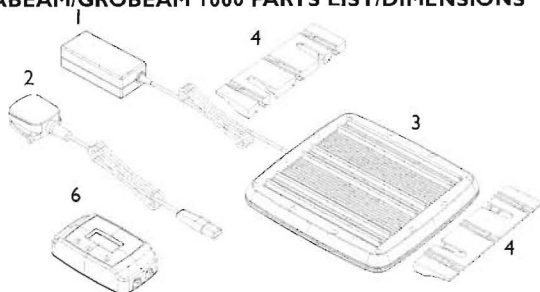
AQUABEAM/GROBEAM 500 PARTS LIST/DIMENSIONS



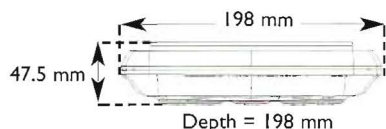
1. Power supply unit (PSU) - with single or twin DC outlets.
2. Mains power supply cord with UK, European or USA plug configuration.
3. AquaBeam/GroBeam 500 lamp unit - double or single lamp units with 3m (10ft) cable complete with matching plug connector to the DC outlet from the PSU.
4. Batten fixing bracket - one supplied per lamp unit.
5. Fixing kit (not shown).



AQUABEAM/GROBEAM 1000 PARTS LIST/DIMENSIONS



1. Power supply unit (PSU) - with twin DC outlets.
2. Mains power supply cord with UK, European or USA plug configuration.
3. AquaBeam/GroBeam 1000 lamp unit - with 3m (10ft) cable complete with matching plug connectors to the DC outlets from the PSU.
4. Fixing bracket - two supplied per lamp unit.
5. Fixing kit (not shown).
6. AquaRay PowerControl unit (only supplied with "AquaBeam/GroBeam 1000 PowerControl" lamp units).



ASSEMBLY

AquaRay lamp units are fully assembled and ready to use.

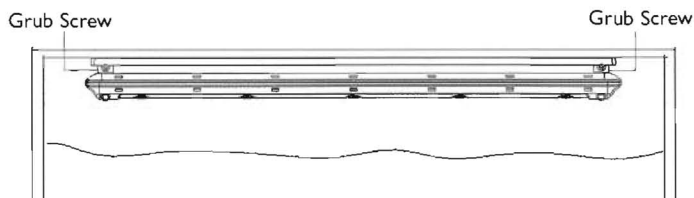
INSTALLATION

Please note: These lamp units are **NOT** designed to be operated partially or fully submerged. They must be **SECURELY** mounted not less than 15mm from the maximum water level of the aquarium.

The versatile, compact and light-weight design allows the AquaRay lamp units to be installed above your aquarium in a variety of ways to suit any application. The design of the lamp units means they are able to be fitted in close proximity to the surface of the aquarium. However, mounting further from the surface of the aquarium will maximise the spread of light from the AquaRay's unique wide-angled beam.

1. AQUABEAM/GROBEAM 500

- A. Using an AquaBeam/GroBeam 500 batten fixture (supplied) for more permanent attachment with three screws to the INSIDE or UNDERSIDE of a wooden or metal hood or other enclosure.**



Caution: To securely attach the fixing batten to the wooden or metal hood or other enclosure, all **three** screws must be used.

Caution: Once the batten fixture has been attached to the wooden or metal hood or other enclosure **using all three screws**, push-fit the lamp unit onto the batten then tighten the two grub screws to secure the lamp unit to the batten fixture.

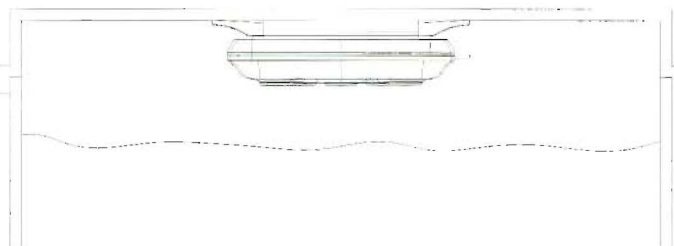
Please note: the stainless steel grub screws supplied with the batten and suspension fixtures should be fully tightened to secure the AquaBeam/GroBeam 500 lamp unit to the batten.

- B. Without any fixtures, by resting the AquaBeam/GroBeam 500 lamp unit on the specially designed front lens face for installation ON TOP of a transparent cover glass or plastic condensation tray.**



2. AQUABEAM/GROBEAM 1000

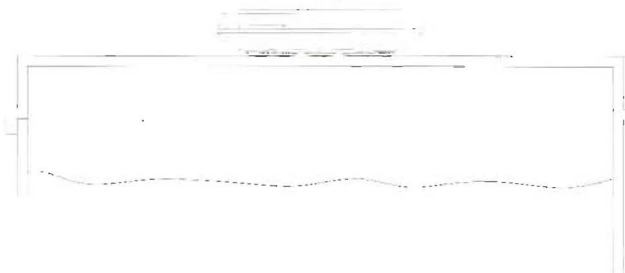
- A. Using the AquaBeam/GroBeam 1000 brackets (supplied) for more permanent attachment with six screws (stainless steel self tap, or nylon nut and bolt - all supplied) to the INSIDE or UNDERSIDE of a wooden or metal hood or other enclosure.**



Caution: Before the brackets have been attached to the wooden or metal hood or other enclosure using all six screws, make sure that they are fully pushed onto all of the AquaBeam/GroBeam 1000's heat sink attachments.

Caution: To securely attach the bracket to the wooden or metal hood or other enclosure, all six screws must be used.

- B. Without any fixtures, by resting the AquaBeam/GroBeam 1000 lamp unit on the specially designed front lens face for installation ON TOP of a transparent cover glass or plastic condensation tray.**



Further mounting options are available. Please refer to the AquaRay Modular Mounting System leaflet included with this unit. For other tips and answers to some frequently asked questions visit: www.tropicalmarinecentre.co.uk and click on "Aquarium Products" - "Lighting" - "AquaRay FAQs".

OPERATION

Once mounted above the aquarium according to one of the recommended installation methods detailed above, the lamp unit(s) may be connected to the power supply unit (PSU) and then the PSU connected to the mains using the power cord supplied, and switched on. The lamp unit must not be connected to, or used with, any PSU other than that supplied by Tropical Marine Centre.

The PSU may be connected to the mains via a suitable 24 hour timer device (not supplied) to regulate when the lamp unit is switched on or off. The PSU may also be connected to an AquaRay Control unit (supplied only with the "AquaBeam/GroBeam 1000 PowerControl" units, but also available separately - please ask your local TMC Stockist) to simulate sunrise, sunset and moonlight.

Caution: Do not attempt to control or regulate in any way the DC supply from the PSU to the AquaRay lamp unit. Any attempt to do so may invalidate the 5 year guarantee on your AquaRay lamp unit.

MAINTENANCE

Caution: To avoid possible electric shock, special care should be taken when using this electrical appliance near water.

Caution: Always isolate the PSU from mains electricity before installing or carrying out any maintenance to the AquaRay lamp unit.

Caution: Do not attempt to open the plastic case of the PSU. This will invalidate the 1 year guarantee on the PSU.

Caution: Do not attempt to open the plastic casing of your AquaRay lamp unit. This will damage the waterproof sealing and invalidate the 5 year guarantee on the lamp unit.

An AquaRay lamp unit and associated power supply unit (PSU) are sealed units and are not customer serviceable parts. The lamp array inside the lamp unit is also not a customer serviceable part and the whole lamp unit is to be disposed of at the end of its life (>50,000 hours).

An AquaRay lamp unit should need little or no maintenance once set up. However due to salt deposits and the high calcium level in marine aquariums it is common for deposits to build up on the body of the unit.

Therefore it is recommended that:-

- The lens face of the AquaRay lamp unit is cleaned periodically with a warm, damp cloth.
- The heat sink on the rear of the unit is kept free of large particles of salt and other films or deposits which might obstruct the free movement of air around the vanes of the heat sink. Occasional cleaning with a small brush and/or dry, lint-free cloth is recommended.

TROUBLE SHOOTING

Problem: The AquaRay lamp unit does not switch on.

Solution: Check cable connection between lamp unit and PSU.

Solution: Check power cord is firmly connected to PSU.

Solution: Check (and replace if necessary) the fuse in the power cord plug (UK only). If the lamp unit is still not switching on, return the PSU and lamp unit to your local stockist for further testing and replacement if necessary.

Problem: The AquaRay lamp unit starts flashing.

Solution: Return the PSU to your local stockist for replacement with an authentic Tropical Marine Centre part.

Problem: One or more lamps in the AquaRay lamp unit do not come on or cease to work.

Solution: Return lamp unit to your local stockist for replacement with an authentic Tropical Marine Centre part.

Problem: The AquaRay lamp unit has been accidentally immersed.

Solution: Immediately switch off the mains supply to the PSU and remove the lamp unit from the water while holding the unit vertically with the cable entry end uppermost.

Disconnect the AquaRay lamp unit from the PSU via the connector located 150mm/6" from the PSU. If immersed it is normal for some water to be held around the outside edge of the AquaRay lamp unit and this can be removed by gently shaking the unit vertically and then drying carefully with a lint-free cloth.

When fully dry, check to see if any water or drips are visible inside the main body of the unit when observed through the front lens cover. Holding the unit vertically with the cable entry end uppermost will ensure that any water will move to the opposite end of the unit, where it may be more easily observed and will do the least damage should the unit need to be returned to Tropical Marine Centre for repair. If you are in any doubt as to whether water has penetrated the unit then do not reconnect to the PSU and immediately return the unit to your local stockist for further inspection by Tropical Marine Centre.

Please Note: Accidental immersion or partial/fully submerged installation of the lamp unit will invalidate the guarantee on the lamp unit.

For further information, please see our "AquaRay FAQs" section on our website: www.tropicalmarinecentre.co.uk

Systèmes d'Éclairage Transistorisés

AQUARAY®

NOTICE D'INSTALLATION ET MODE D'EMPLOI

Notice de sécurité importante – A lire attentivement

- Les systèmes AquaRay d'éclairage à semi-conducteurs contiennent une lampe AquaRay et un bloc d'alimentation indépendant qui alimente la lampe en courant continu (basse tension).

Alimentation d'une lampe simple AquaBeam/GroBeam 500 :

ENTREE-100-240 VCA 50-60 Hz 0,15A SORTIE-19,5 VCC 0,7A

Alimentation d'une lampe double AquaBeam/GroBeam 500 :

ENTREE -100-240 VCA 50-60 Hz 0,3 A SORTIE 1-19,5 VCC 0,7A SORTIE 2-19,5 VCC 0,7 A

Alimentation d'une lampe AquaBeam/GroBeam 1000 :

ENTREE-100-240 VCA 50-60 Hz 0,3 A SORTIE 1-19,5 VCC 0,7 A SORTIE 2-19,5 VCC 0,7 A

- **Attention :** Ne pas utiliser la lampe AquaRay avec d'autres blocs d'alimentation car il se peut qu'elle ne fonctionne pas et qu'elle soit endommagée de manière irréparable. Si le bloc d'alimentation fourni avec l'unité doit être remplacé, veuillez obtenir un bloc d'alimentation AquaRay authentique auprès d'un distributeur de produits Tropical Marine Centre.



- Débranchez toujours le bloc d'alimentation du courant de secteur avant d'installer la lampe AquaRay ou de procéder à un entretien.

Attention : Le bloc d'alimentation n'est pas étanche et ne doit donc pas être installé au-dessus de l'aquarium ou à tout autre endroit où il pourrait accidentellement tomber dans l'eau ou être éclaboussé.

Attention : Ne pas installer le bloc d'alimentation dans un endroit enclos. L'espace doit être bien aéré pour veiller à ce que le bloc d'alimentation ne surchauffe pas.

Attention : N'utilisez pas cet appareil si l'une de ses pièces a un cordon ou une fiche endommagée, s'il ne fonctionne pas correctement, s'il a subi une chute, s'il a été immergé dans de l'eau ou endommagé d'une manière quelconque.



- Cette unité est prévue pour usage dans un endroit couvert et ne convient pas aux applications en plein air.

Attention : Veillez à ce que la lampe AquaRay soit installée en toute sécurité au-dessus de l'aquarium avant de l'utiliser.

Attention : N'IMMERGEZ PAS LA LAMPE AQUARAY. L'immersion de la lampe annulera la garantie.

Attention : Veillez à toujours inclure une boucle d'égouttement dans le câble d'alimentation cc de la lampe AquaRay pour empêcher que l'eau ne coule le long du câble et n'atteigne le bloc d'alimentation (voir l'illustration ci-dessous).

- Lorsque l'unité est en marche, le dissipateur thermique en aluminium rainuré situé à l'arrière de la lampe AquaRay devient chaud ($\pm 60^{\circ}\text{C}$) au toucher.

Ceci est normal et indispensable pour que la lampe ne surchauffe pas.

Attention : Veillez à ne pas couvrir ou bloquer la surface arrière en aluminium de la lampe AquaRay. Il doit toujours y avoir un espace minimum de 10 mm entre la lampe et la surface la plus proche, pour permettre la libre circulation d'air autour de la lampe.

Attention : Le fonctionnement de l'unité AquaRay dans un espace restreint ou non aéré, où dans un endroit où il y a une source de chaleur supplémentaire, peut entraîner une augmentation de la température ambiante au-delà de 35°C , ce qui risque de réduire la durée de vie utile de l'unité.

- Veuillez éliminer cette unité correctement. Vérifiez le mode d'élimination recommandé auprès de vos autorités locales.

La lampe AquaRay ne contient pas de mercure.



INFORMATIONS SUR LE PRODUIT

- Ce produit a été fabriqué conformément aux normes suivantes :-
Sécurité : BS EN 60598-1 : 2000. BS EN 60598-2-11 : 2005
EMC : BS EN 55015 : 2001. BS EN 61000-3-2 : 2006.
- Cette unité est certifiée CE.