

**DEEPPSEA**  
Power & Light®



# Micro SeaLaser®



## FEATURES

**<5 mW red or green laser, dot or line**

**Compact titanium housing**

**6,000 m depth rated**

**Dual mounting bracket available**

**Creates and maintains parallel beams**

**Excellent for scaling and measurement**

**Accommodates most SeaCam® cameras**

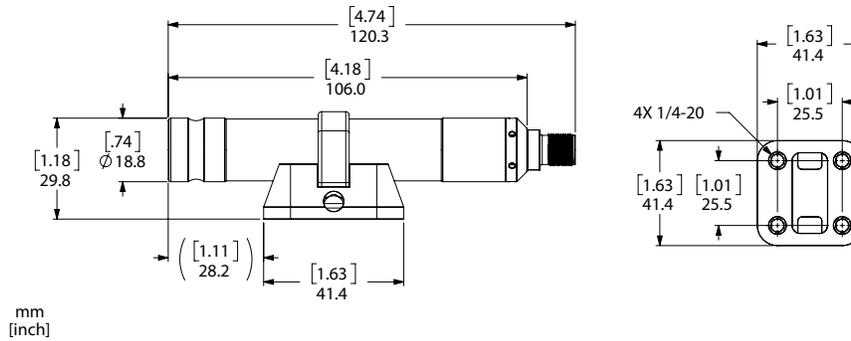
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# Specification Overview



Micro SeaLaser	
<b>Laser</b>	
Type	Continuous Wave Semi-conductor laser diode Class III-A
Beam Diameter	1.8 mm x 0.5 mm
Wavelength	635 nm
Beam Divergence	0.09 mRadians x 0.19 mRadians
Beam Power	<5mW
<b>Environmental Specifications</b>	
Depth Rating	6,000 m
<b>Electrical Specifications</b>	
Voltage	7~30 VDC
Current	47 mA
<b>Mechanical Specifications</b>	
Housing	Titanium 6AL-4V
Port	Sapphire, anti-reflective coated
Outer Diameter	18.8 mm [0.74 in]
Overall Length	120.3 mm [4.74 in]
Weight in Air	75 g [2 oz]
Weight in Water	40 g [1 oz]
<b>Connector</b>	
Default	Impulse Sub-Miniature Connector IE55 (Titanium), 2-pin
Pinout	1 = Ground 2 = Power
<b>Accessory</b>	
Accessory	Dual Micro SeaLaser Mount

\* Specifications subject to change without notice.

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## Safety Symbols

In this operator's manual and on the product, safety symbols are used to communicate important safety information. This section is provided to improve understanding of these symbols.



This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.



**DANGER** indicates a hazardous situation which, if not avoided, could result in death or serious injury.



**WARNING** indicates a hazardous situation which, if not avoided, could result in damage to the product or bodily harm.



**CAUTION** indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.



**NOTICE** indicates information that relates to the protection of property.



This symbol means read the operator's manual carefully before using the equipment. The operator's manual contains important information on the safe and proper operation of the equipment.



This symbol means always wear safety glasses with side shields or goggles when handling or using this equipment to reduce the risk of eye injury.



This symbol indicates the risk of electrical shock.



This symbol indicates a risk of exposure to high brightness.



Laser radiation can cause eye injury. Avoid exposure to eyes.



This symbol indicates high voltage.



This symbol indicates a potentially hot surface that may cause burns or ignition.

## General Notes & Warnings

The Micro SeaLaser is a low-cost, lightweight underwater scaling, range finding, and aiming device that uses a high-quality solid state laser diode module. It can be used in pairs or arrays of parallel-aligned beams to determine sizes and scale of viewed objects.

An internal power regulation board protects the laser diode from most voltage transients, overheat condition, reverse voltage, and cold temperature start-ups. It is internally fused. This is helpful for applications using long cables or those that might have switching transients. It has a scratch-resistant sapphire optical port.



Avoid looking directly into the laser beam, especially when wearing reading glasses or other optical magnifiers. Laser radiation is emitted from this device. Be careful of laser bounce off the water, a

wet deck, portholes, and other reflective surfaces. Though generally safe, a Class IIIA laser can produce spot blindness under the right conditions. It is recommended the laser be operated for only brief periods of time in air to provide both personnel safety and adequate heat sinking of the laser module.



The green laser module has a higher optimum operating temperature than the red laser. DeepSea Power & Light recommends turning on the green Micro SeaLaser 2-3 minutes prior to its intended use for the laser module to come to its stable operating temperature.

System integrators can test the Micro SeaLaser using their system under expected operational conditions to determine a more precise warm-up time for their specific application.

## Pre & Post Dive Inspection

Each Micro SeaLaser is shipped ready for immediate

use. To ensure that the laser will perform reliably, please observe the following maintenance guidelines:

1. Rinse the laser with fresh water after use in salt water.
2. Always check to make sure that the rear bulkhead connector is secure before deployment.
3. After each deployment, examine the power cable and rear connector for damage.

### **WARNING**

**If a laser appears flooded, disconnect the power immediately. If water is determined to be present, carefully loosen the rear connector to vent any possible internal pressure and return to the factory for possible repair using the RMA return procedure below.**

## RMA Procedure for Repair

For warranty and non-warranty repairs, please contact DeepSea Power & Light for an RMA number prior to returning the item. Please have the light model number, serial number, and any other pertinent information along with a description of the problem on hand when calling, or include them in a fax or e-mail.

When shipping the item, be sure that the freight is pre-paid (CODs will not be accepted) and that the RMA number is clearly printed on the outside of the box.

All shipments should be sent to the address below:

**DeepSea Power & Light**  
**Attn: RMA #####**  
**4033 Ruffin Road**  
**San Diego, CA 92123-1817**  
**U.S.A**  
**Tel: 858-576-1261**  
**Fax: 858-576-0219**  
**Email: RMA@deepsea.com**

## Warranty Information

### Limited Warranty

Seller warrants that the goods (except internal electronic components) sold under this contract will be free from defect in material and workmanship for a period of two years from the date of shipment from the factory, if they have been properly used. Internal electronic components are warranted for 90 days from the date of shipment from the factory, if they have been properly used. This

warranty will be limited to the repair or replacement of parts and the necessary labor and services required to repair the goods. IT IS EXPRESSLY AGREED THAT THIS WARRANTY WILL BE IN LIEU OF ALL WARRANTIES OF FITNESS AND IN LIEU OF THE WARRANTY OF MERCHANTABILITY. This warranty is the exclusive and only warranty to pass with the goods under this contract. No agent, employee, or representative of the Seller has any authority to bind Seller to any information, representation, or warranty concerning the goods sold under this contract, and unless an affirmation, representation, or warranty made by an agent, employee, or representative is specifically included within this contract, it will not be enforceable by Buyer. If notice of defect is given to DeepSea Power & Light, Inc. within such 90 day or two-year warranty period, the sole obligation of DeepSea Power & Light, Inc. shall be to furnish new or repaired parts free of charge in exchange for parts which have been proved defective and does not include any other costs such as the cost of removal of the defective part, installation, labor, or consequential damages of any kind, the exclusive remedy being to require DeepSea Power & Light, Inc. to furnish such new parts. Under no circumstances shall the Buyer be entitled to recover any incidental damages as that term is defined in Commercial Code §2715.



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