



# Multi-SeaLite

## User Manual, Rev. 02/26/99



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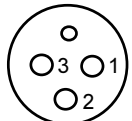
**MULTI-SEALITE PRE- AND POST-DEPLOYMENT CHECKLIST:** Each Multi-SeaLite is shipped ready for immediate use. To ensure that the light will perform reliably, please observe the following maintenance guidelines:

1. Rinse the light with fresh water after use in salt water.
2. Always check to make sure that the rear bulkhead connector assembly is secure before deployment.
3. Check for condensation inside the glass dome, especially after changing lamps. If any condensation is evident, unscrew the connector/socket assembly from the body and remove the lamp. Place the connector/socket assembly and lamp inside a warm oven (at least 100 C or 212 deg F) for at least 30 minutes to bake out any moisture that may present. If possible, purge with dry nitrogen while reassembling the light.
4. After each deployment, examine the power cable and rear connector for damage.

**Warning:** After each deployment, carefully check to make sure the light has not flooded. It is possible for the light to partially flood and then reseal itself while underwater. Upon surfacing, the light can become internally pressurized, which may be potentially dangerous. Additionally, if the power remains on when the light has partially flooded, it is possible for electrolytic generation of an explosive mixture of hydrogen and oxygen gases. **If a light appears flooded upon removal from the water, it should be treated as potentially dangerous. Point the light away from persons and valuable equipment and verify whether or not it is internally pressurized. Make sure that the power is disconnected as soon as a flooded condition is suspected.**

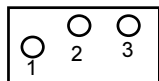
**LAMP CHANGING PROCEDURE:** To change the lamp, first disconnect the cable by unscrewing the plastic locking sleeves and pulling the connector halves apart. Unscrew the socket/connector assembly from the light body and remove the old lamp by twisting counter-clockwise. When installing the new lamp, be sure not to get any fingerprints on the surface of the lamp. Use a piece of tissue or other clean paper to hold the lamp while installing it. Fingerprints can be cleaned from the surface of the lamp with isopropyl (rubbing) alcohol.

**CONNECTOR OPTIONS:** Four different industry standard underwater connectors can be used with the Multi-SeaLite: BH3MP, LPBH3MP, XSG3BCL, and 1503. The standard connector pin-outs are illustrated below.



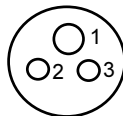
**BH3MP**

1 = Hot  
2 = Neutral  
3 = Ground to shell



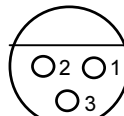
**LPBH3MP**

1 = Hot  
2 = Neutral  
3 = Ground to shell



**XSG3BCL**

1 = Ground to shell  
2 = Hot  
3 = Neutral



**1503**

1 = Hot  
2 = Neutral  
3 = Ground to shell

**ELECTRICAL AND THERMAL WARNINGS:** A Ground Fault Interrupt should be used whenever high voltage lights are being utilized; when divers are in the water this is especially critical! **Do not operate AC-powered lights without a GFCI!** Additionally, all high voltage lights should be case grounded for safety. It is also important not to burn the Multi-SeaLite in air for more than 20 seconds, as it relies on the surrounding water to provide cooling. When an underwater light is burned in air, the resulting heat buildup can pose a fire hazard. If the light is operated for testing purposes in air, be sure to let it cool down for a couple of minutes before immersing it in water. It is also a good idea to turn the light off a few seconds prior to removing it from the water.

### SPARE LAMPS (MINI-CAN SCREW BASE)

Low voltage lamps (12V and 24V) are re-based, and are available only from DeepSea Power & Light.

| Model Number | Part Number | Volts** | Watts | Hours | Color Temp | Lumens |
|--------------|-------------|---------|-------|-------|------------|--------|
| MC-12/50     | 460-00018   | 12      | 50    | 2000  | 3000K      | 950    |
| MC-12/100    | 460-00026   | 12      | 100   | 1000  | 3100K      | 2,200  |
| MC-24/100    | 460-00099   | 24      | 100   | 2000  | 3000K      | 1,800  |
| MC-24/150    | 460-00034   | 24      | 150   | 70    | 3400K      | 5,000  |
| MC-24/250    | 460-00118   | 24      | 250   |       |            |        |
| MC-24/300    | 460-00097   | 24      | 300   |       |            |        |
| MC-120/100   | 460-00053   | 120     | 100   | 1500  | 2700K      | 1,600  |
| MC-120/150   | 460-00055   | 120     | 150   | 1500  | 2850K      | 2,400  |
| MC-120/250   | 460-00059   | 120     | 250   | 2000  | 2900K      | 4,750  |
| MC-120/325   | 460-00061   | 120     | 325   |       |            |        |
| MC-120/500   | 460-00064   | 120     | 500   | 2000  | 2950K      | 9,930  |
| MC-230/100   | 460-00124   | 230     | 100   | 2000  | 2850K      | 1,600  |
| MC-220/150   | 460-00079   | 220     | 150   | 1300  | 2800K      | 2,100  |
| MC-220/250   | 460-00080   | 220/230 | 250   | 2000  | 2900K      | 4,500  |
| MC-240/250   | 460-00082   | 240     | 250   | 2000  | 2900K      | 4,200  |
| MC-240/500   | 460-00084   | 240     | 500   | 2000  | 2950K      | 9,500  |

\*\* 220/230V, 230V, and 240V lamps are used to meet a nominal 240V requirement.

### MULTI-SEALITE SPECIFICATIONS

#### MECHANICAL

|                         |                                                                  |
|-------------------------|------------------------------------------------------------------|
| Housing Material:       | Anodized aluminum, electro-polished stainless steel, or titanium |
| Diameter:               | 79 mm (3.1 inches)                                               |
| Length:                 | 155 mm (6.1 inches) (with BH3MP connector)                       |
| Lens:                   | Clear tempered borosilicate                                      |
| Reflectors:             | Proprietary design spot, medium flood or wide flood              |
| Depth Rating:           | 1,000 meters (3,280 feet) of seawater                            |
| Air Weight-- Aluminum:  | 519 g (18 oz.)                                                   |
| Stainless Steel:        | 952 g (34 oz.)                                                   |
| Water weight--Aluminum: | 170 g (6 oz.)                                                    |
| Stainless Steel:        | 624 g (22 oz.)                                                   |

#### OPTICAL

Beam patterns (full angle measured to half power point using 120 volt/250 watt lamps):

|                     |                    |
|---------------------|--------------------|
| Wide Flood (WFL):   | 59 degrees conical |
| Medium Flood (MFL): | 40 degrees conical |
| Spot (SP):          | 16 degrees conical |

#### TROUBLESHOOTING:

| PROBLEM                | POSSIBLE CAUSE            | RECOMMENDED ACTION                                                   |
|------------------------|---------------------------|----------------------------------------------------------------------|
| Light doesn't turn on. | Not plugged in.           | Secure all connections.                                              |
|                        | GFI tripped.              | Reset GCFI.                                                          |
|                        | Lamp burned out.          | Change lamp.                                                         |
|                        | Cable defective.          | Check continuity from one end to the other. Meg test if possible.    |
|                        | Insufficient voltage      | Make sure battery is fully charged. Verify power supply is adequate. |
| Light flooded.         | Connector loose.          | Tighten. If still leaking, replace.                                  |
|                        | Damaged O-ring.           | Replace as required.                                                 |
|                        | Glass cracked or chipped. | Return to DeepSea.                                                   |

**GENERAL NOTES AND WARNINGS**

- Do not burn a Multi-SeaLite out of water for more than about 20 seconds.
- Do not operate any high voltage electrical equipment without using a Ground Fault Interrupt circuit for safety, especially when divers are in the water!
- Do not operate a lamp at higher than recommended voltage. The lamp filament will melt with severe over-voltage, and slight over-voltage drastically reduces lamp life.
- Be sure that any fingerprints are cleaned off the lamp with isopropyl alcohol before use.

**FLOODED LIGHT REPAIR**

If the light is leaking, first suspect that there is a damaged O-ring, or that the glass envelope is cracked or has a chipped edge.

When looking for the source of a leak, first check if the rear connector is loose. If the connector is secure, check for a sliced or otherwise damaged O-ring; make sure the O-ring sealing surfaces are clean. If there is no apparently damaged O-ring, remove the glass dome and inspect the edge of the glass. If the edge is chipped, this is probably the source of the leak, and the dome should be replaced.

If a light is flooded and/or damaged, we recommend that the light be returned to DeepSea Power & Light for repair or replacement; DeepSea Power & Light cannot be responsible for any damage incurred during emergency field repairs. Such repairs should be undertaken only as a last resort and by qualified personnel. Spares kits are available from DeepSea Power & Light.

**MULTI-SEALITE EMERGENCY FIELD REPAIR PROCEDURE**

Before any field replacement of a Multi-SeaLite component is initiated, the work area must be made as clean as possible. The surface used to work on should be dirt and lint free. Once a suitable work space has been established, use the following procedure:

- 1) Remove the plastic cowl, and die-cut retaining ring.
- 2) Once the cowl has been removed, the dome is readily accessed. Remove the existing dome from the Multi-SeaLite body.
- 3) Clean out any broken glass and debris from the body and cowl before installing the new dome. A very small piece of debris between the dome and body can cause the glass dome to crack when pressurized.
- 4) Inspect the O-ring under the dome. Check very closely for slices, tears, cracks, or rough spots. It is recommended to replace the O-ring with a new one, however the old O-ring may be reused if it is still in good condition.
- 5) Make sure the inside of the dome is clean before reassembling the cowl onto the body of the light.
- 6) With a fresh O-ring in place, carefully place the new dome into position on the front of the cowl.
- 7) When the dome is fully seated on the body, put the cowl and die-cut retaining ring in place and screw it onto the body.

**OPTIONS**

| Model Number | Part Number | Description                                                            |
|--------------|-------------|------------------------------------------------------------------------|
| IL3FS        | 140-00062   | BH3MP mating connector with male locking sleeve on 18" (0.5m) whip     |
| LPIL3FS      | 140-00094   | LPBH3MP mating connector on 18" (0.5m) whip                            |
| RMG3FS       | 140-00112   | XSG3BCL mating connector with female locking sleeve on 18" (0.5m) whip |
| ML-UV        |             | UV filter option. Works only with ML-1050 and ML-1060                  |
| UHMB         | 774-00011   | Universal helmet mounting bracket (works with YMB), (formerly ML-HMB)  |
| YMB          | 710-04059   | Yoke mounting bracket (formerly ML-YMB)                                |

**SPARE PARTS**

| Model Number | Part Number  | Description                                                               |
|--------------|--------------|---------------------------------------------------------------------------|
| ML-BOD       | 710-04001    | Aluminum body                                                             |
| ML-BOD-S     | 710-04061-01 | Stainless steel body                                                      |
| ML-BOD-T     | 710-04061-02 | Titanium body                                                             |
| ML-CWL       | 710-04065    | Utem plastic cowl                                                         |
| ML-CWL-S     | 710-04009    | Stainless steel cowl                                                      |
| ML-OR        | 710-04096    | O-ring kit for 325W light or less                                         |
| ML-OR-500    | 710-04097    | O-ring kit for 500W light                                                 |
| ML-GD        | 320-00006    | Glass dome                                                                |
| ML-FGD       | 320-00008    | Frosted glass dome                                                        |
| ML-SP        | 710-03002-01 | Spot reflector                                                            |
| ML-MFL       | 710-03002-02 | Medium flood reflector                                                    |
| ML-WFL       | 710-03002-03 | Wide flood reflector                                                      |
| ML-RS        | 400-00004    | Reflector spring                                                          |
| DS4-3WC      | 705-00014    | BH3MP connector/socket assembly with locking sleeve                       |
| DS4-3XS      | 705-00053    | XSG3BCL connector/socket assembly                                         |
| DS4-3LP      | 705-00048    | LPBH3M connector/socket assembly                                          |
| DS4-1503     | 705-00069    | Burton 1503 connector/socket assembly                                     |
| DS4-PEN      | 705-00042    | Penetrator/socket assembly                                                |
| ML-FLS       | 140-00031    | Female Delrin locking sleeve for bulkhead connector                       |
| ML-MLS       | 140-00032    | Male Delrin locking sleeve for mating connector                           |
| ML-DMC       | 710-04044    | Delrin plastic mounting collar                                            |
| ML-AMC       | 710-04058    | Aluminum mounting collar                                                  |
| ML-SG        | 710-04062    | Spring guide for titanium housing                                         |
| ML-FHB       | 714-04052    | Universal Filter holding bracket (must be used with stainless steel cowl) |
| ML-SHROUD    | 714-04051-02 | Shroud for UV option                                                      |
| ML-UV-FILTER | 714-04060    | UV filter                                                                 |

