



# **SL80 Solar LED Barge Light Installation and Service Manual**

Version 3.1



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### Introduction

Congratulations! By choosing to purchase a Sealite lantern you have become the owner of one of the most advanced LED marine lanterns in the world.

Sealite Pty Ltd has been manufacturing lanterns for over 20 years, and particular care has been taken to ensure your lantern gives years of service.

As a commitment to producing the highest quality products for our customers, Sealite has been independently certified as complying with the requirements of **ISO 9001:2000** quality management system.

Sealite lanterns comply with requirements of the US Coast Guard in 33 CFR part 66 for Private Aids To Navigation.

By taking a few moments to browse through this booklet, you will become familiar with the versatility of your lantern, and be able to maximise its operating function.

Please remember to complete the Sealite warranty registration card accompanying your lantern.



## **Operating Principle**

The solar module of the lantern converts sunlight to an electrical current that is used to charge the battery. The battery provides power to operate the lantern at night.

The flasher unit has very low current requirements. A microprocessor drives an array of ultra bright LED's through a DC/DC converter, which enables the LED's to operate within the manufacturer's specifications. The battery is protected from over-charging within the circuit to ensure maximum battery life.

On darkness, the microprocessor will initiate a program check and after approximately 1 minute begin operation as a steady-on light.

## **Technology**

### Electronics

Sealite employs leading in-house electronic engineers in the design and development of software and related circuitry. All individual electronic components are sourced directly by Sealite procurement staff ensuring that only the highest quality components are used in our products.

### LED Technology

All marine lanterns use the latest advancements in LED (Light Emitting Diode) technology as a light source. The major advantage of LED's over traditional light sources is well established in that they typically have an operational life in excess of 100,000 hours, resulting in substantial savings to maintenance and servicing costs.

### Precision Construction

Commitment to investing in the design and construction of injection-moulded parts including optic lenses, light bases and a range of other components ensures that all Sealite products are of a consistent and superior quality.

### Optical Performance

Sealite manufactures a range of marine LED lenses moulded from multi-cavity dies. Complex shapes such as the SL70 lens are a testament to the company's superior in-house lens manufacturing capabilities and outstanding optical performance.

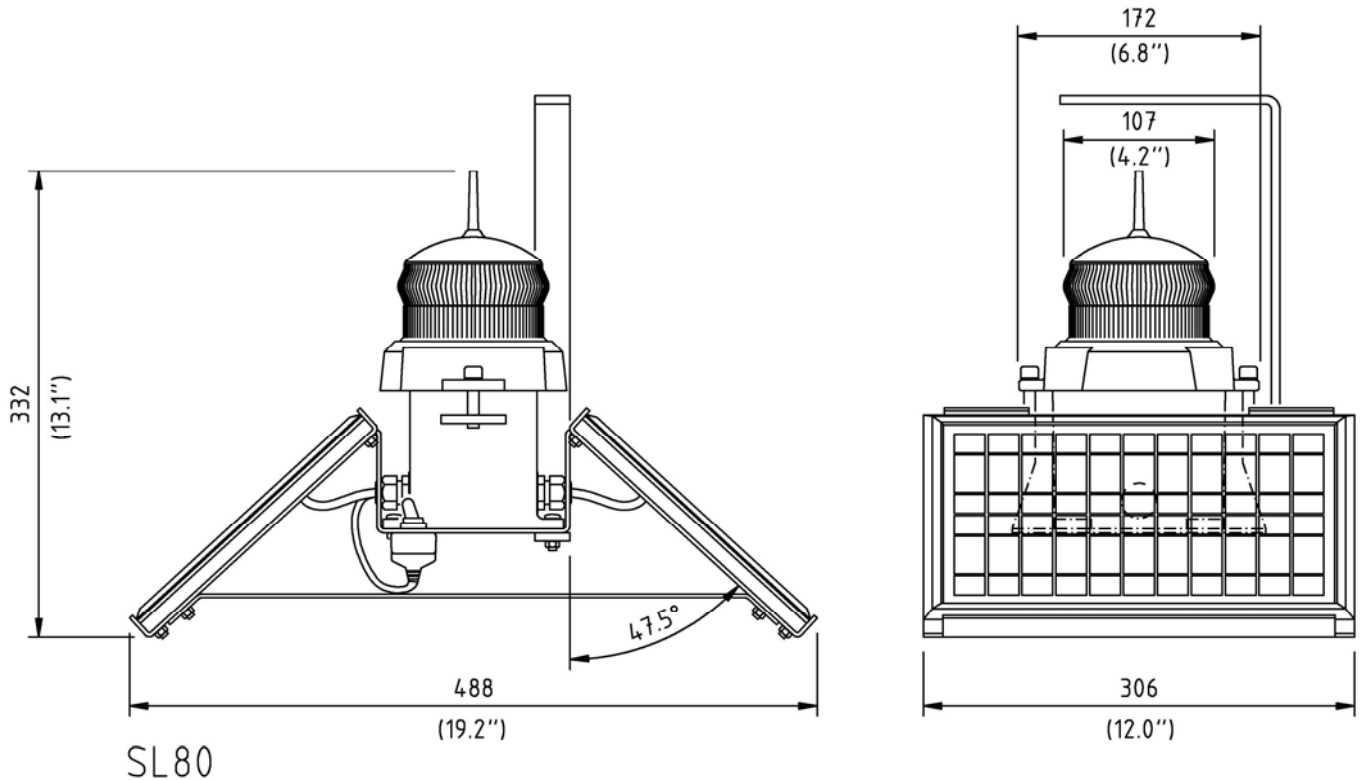
### Award-winning, Patented Technology

Several United States and Australian patent registrations are held on Sealite's range of innovative designs, with other regional patents pending in Canada, United Kingdom and Europe.



## SL80 Model

Sealite's SL80 Solar LED Barge Light incorporates some of the most advanced technology available, and is designed to be maintenance-free and have a service life of over 5 years. The SL80 features an external ON/OFF toggle switch enabling ease of user operation, and when turned on the light will begin operation automatically at night once the ambient light threshold drops sufficiently.



### Installation of SL80 Model

The SL80 is activated by connecting battery wires, and then simply switching the external toggle switch located at the base of the lantern, to the ON position.

1. Unscrew the two socket cap screws located at either side of the lantern and remove lens cover.
2. To activate the lantern, connect the "Battery Negative (-)" wire to the negative terminal, and the "Battery Positive (+)" wire to the positive terminal of the battery, and the "Solar Negative (-)" wire to internal "Solar Negative (-)" wire, and the "Solar Positive (+)" wire to the internal "Solar Positive (+)" wire.
3. Next connect the toggle switch wires.
4. Replace lens cover back onto unit, making sure that wires are not protruding, and screw the two socket cap screws up tight.
5. To test place dark cover (towel or jacket) on top of light to activate sensor, light will come on.

***Care must be taken to observe the polarity of each wire before they are connected. To ensure waterproofing of the unit, make sure that no wires are protruding and that there is an even seal when reattaching the lens cover to the unit body.***



## Maintenance & Servicing

Designed to be maintenance free, the SL80 solar Barge Light requires minimal attention, though the following maintenance and servicing information is provided to help ensure the life of your Sealite product.

1. Cleaning Solar Panels- occasional cleaning of the solar panels may be required. Using a cloth and warm soapy water, wipe off any foreign matter before rinsing the panels with fresh water.
2. Battery Check- inspection of batteries should be performed every three years (minimum) to ensure that the charger, battery and ancillary electronics are functioning correctly. Using a voltage meter, check that the battery voltage is at least 12 volts under 100MA load, and ensure all terminals are clear of foreign matter.

### Replacing the battery

The SL80 Barge Light has a sealed battery compartment, which provides the user with the ability to change the battery after years of operation.

1. Unscrew the two socket cap screws located at either side of the lantern and remove lens cover.
2. Disconnect the positive and negative wires from the battery.
3. Discard old battery in a safe manner.
4. Reattach positive and negative wires to the new battery and then place back into case.
5. Replace lens cover back onto unit, making sure that wires are not protruding, and screw two socket cap screws up tight.
6. To test place dark cover (towel or jacket) on top of light to activate sensor, light will come on.

***Care must be taken to observe the polarity of each wire before they are connected.  
To ensure waterproofing of the unit, make sure that no wires are protruding and that there is an even seal when reattaching the lens cover to the unit body.  
Always discard old batteries in a safe manner.***

## Trouble Shooting

### Problem

### Remedy

Lantern will not activate.	<ul style="list-style-type: none"><li>• Ensure lantern is in darkness.</li><li>• Wait at least 60 seconds for the program to initialise in darkness.</li><li>• Ensure battery terminals are properly connected.</li><li>• Ensure battery voltage is above 12volts.</li></ul>
Lantern will not operate for the entire night.	<ul style="list-style-type: none"><li>• Expose lantern to direct sunlight and monitor operation for several days. Sealite products typically require 1.5 hours of direct sunlight per day to retain full autonomy. From a discharged state, the lantern may require several days of operational conditions to 'cycle' up to full autonomy.</li><li>• Ensure solar modules are clean and not covered by shading during the day.</li></ul>



## Sealite Lantern Warranty

### *Activating the warranty*

Upon purchase, the Sealite warranty must be activated for recognition of future claims. To do this you have two (2) options:

1. Postal registration
  - Please complete the Sealite Warranty Registration card and return to Sealite within 30 days of your purchase.
2. Online registration
  - Please complete the Online Registration form at;

[www.sealite.com.au](http://www.sealite.com.au) or [www.sealiteusa.com](http://www.sealiteusa.com)

Sealite Pty. Ltd. will repair or replace your lantern in the event of electronic failure for a period of three years from the date of purchase.

The unit must be returned to Sealite Pty. Ltd. freight prepaid.

### Warranty Conditions

1. The warranty is applicable to lanterns manufactured from 1/1/2000.
2. The lantern must be installed in accordance with Sealite instructions.
3. No modifications to the original specifications determined by Sealite shall be made without written approval of Sealite Pty. Ltd.
4. Input voltage shall not exceed those recommended for the product.
5. Warranty does not cover damage caused by the incorrect replacement of battery in the SL15, SL60 or SL70 lantern models.
6. Replacement of battery is excluded from the warranty.
7. No recognition shall be given to flooding, or damage incurred from misuse of lanterns.
8. Solar modules are covered by individual manufacturers' warranty.

Information in this manual is subject to change without notice and does not represent a commitment on the part of the vendor. Sealite products are subject to certain Australian and world-wide patent applications.



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