



**SL-BR DC Model**  
**Bridge Light**  
**Installation & Service Manual**



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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 25 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 ISO9001:2008 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.

## Technology

***Sealite is the world's fastest growing manufacturer of marine aids to navigation. We employ leading mechanical, optical, hardware & software engineers to create innovative products to service the needs of our customers worldwide, and offer the widest range of solar-powered LED lanterns in the marketplace.***

### **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 & superior quality.

### **Optical Performance**

Sealite manufactures a range of marine LED lenses moulded from multi-cavity dies. The company has superior in-house lens manufacturing capabilities to support 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.



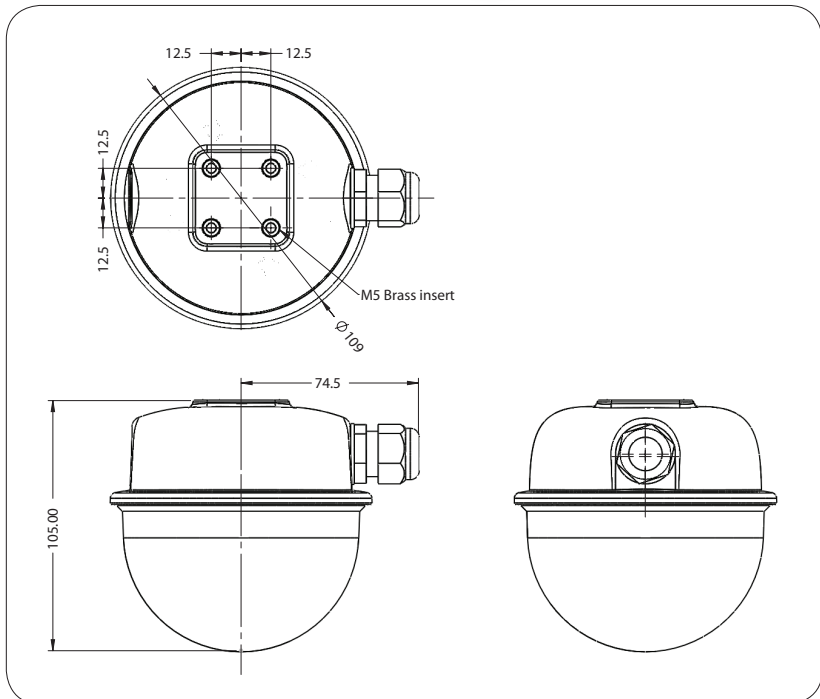
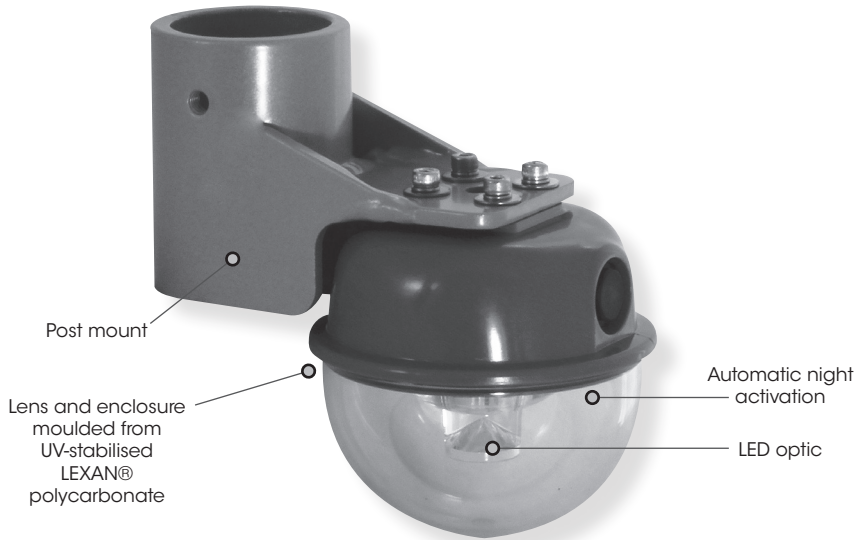
## **SL-BR Bridge Light DC Model**

The SL-BR is an LED Bridge Light specifically designed to clearly mark bridges and structures extending over navigable waterways and is used extensively throughout the USA. The SL-BR has been designed to offer superior visibility with up to 4NM visible range, and operates in conjunction with existing power supplies.

The light is available as a 180° sectored red model or 360° green model and comes fixed-on as standard. The fixtures are also available with a range of factory-set flash characteristics and sectoring requirements to suit local regulations.



**SL-BR**



**SPECIFICATIONS\* \***

**SL-BR**

**Light Characteristics**

Light Source  
Available Colours  
Visible Range (NM)

Horizontal Output (degrees)  
Vertical Divergence (degrees)  
Available Flash Characteristics  
LED Life Expectancy (hours)

**Electrical Characteristics**

Current Draw (mA)  
Circuit Protection  
Nominal Voltage (V)

Temperature Range

**Physical Characteristics**

Body Material  
Lens Material  
Lens Diameter (mm/inches)  
Lens Design  
Mounting  
Height (mm/inches)  
Width (mm/inches)  
Mass (kg/lbs)  
Product Life Expectancy

**Certifications**

CE  
IALA  
Quality Assurance  
Waterproof

**Intellectual Property**

Patents  
Trademarks

**Warranty \***

**Options Available**

LED  
Red, Green, other colours available on request  
AT @ 0.74: 2 (nominal)  
AT @ 0.85: 2,3  
360 or 180  
9  
Steady-on (standard). Other factory set flash patterns available on request  
>100,000

VDC Model: 40 @ 12 VDC  
Integrated  
VDC Model: 12-48 VDC  
VAC Model: 110-240 VAC  
-40 to 80°C

LEXAN® Polycarbonate - UV-stabilised  
LEXAN® Polycarbonate - UV-stabilised  
107 / 4<sup>1</sup>/<sub>4</sub>  
LED optic  
50mm OD pole  
105 / 4  
109 / 4<sup>1</sup>/<sub>4</sub>  
1.2 / 2<sup>5</sup>/<sub>8</sub>  
Up to 12 years

EN61000-6-3:1997, EN61000-6-1:1997  
Signal colours compliant to IALA E-200-1  
ISO9001:2008  
IP67

US Pat. No. 6,667,582, AU Pat. No. 778,918  
SEALITE® is a registered trademark of Sealite Pty Ltd  
3 years

- Mounting assemblies
- Solar/battery systems
- Light sectoring
- Additional cable
- GPS Synchronisation (DC Model)
- GSM Monitoring and Control System (DC Model)



• Specifications subject to change or variation without notice  
\* Subject to standard terms and conditions



# Unpacking, Installation, Wiring & Setup

## Unpacking

Unpack all hardware and inspect for damage. If there is any damage, please contact your Sealite Office. Retain original packing material for possible future use in shipping.

## Installation & Wiring

Before proceeding with installation or service, make sure the following conditions are met:

- Ensure the tower or mast is grounded (NO RF HAZARD)
- Check the mast lighting circuit is not faulty
- Ensure power lines are not 'live' (NO ELECTRICAL HAZARD)
- Avoid touching live circuits!

**NOTE:**

- Make sure the mounting pole is vertically aligned to guarantee the required beam pattern of the bridge light
- Make sure the light's beam pattern is not disturbed by any nearby obstacles
- Ensure the cable gland is tightly sealed around the cable





### **Charging the Battery**

*New lanterns powered by solar should be left in the sun for 1-2 days to ensure battery is charged before placing in service.*

### **Preferred Installation Location**

*For best lantern performance, ensure any solar modules are not covered and are in clear view of the sky with no shadows.*

### **Lantern Operation**

1. Lantern is activated by connecting the battery terminals:

$V_{\text{BATT}+}$  to +12VDC

$V_{\text{BATT}-}$  to -12VDC

2. The unit is now ready for normal operation, once placed in darkness.
3. To test, place dark cover (towel or jacket) on top of light to activate sensor, light will come on within one minute.
4. Ensure that the lantern is secured to the mounting unit.



## Optional GPS Synchronisation

The light may be fitted with GPS and provide the user with the ability to install independently operating lanterns that all flash in synchronisation.

**Note:** Flash settings must be specified at the time of order.

No additional power supplies, aerials or control systems are required, and with its microprocessor-based system, the GPS option is specifically designed to provide maximum reliability and performance over a wide range of environmental conditions.

### Operating Principle

Each light operates independently and requires no operator intervention. A minimum of 4 satellites need to be in view for the built-in GPS receiver to collect time data. At dusk, the light sensor will turn the light on. If time data is available the light will come on synchronised to every other light with the same selected flash code.

Synchronisation is achieved using an internal algorithm based on the highly accurate time base and time data received from the satellites. The satellite data is provided from a number of earth stations using atomic clocks as the time base. Continuous self-checking ensures that the light will continue to run in synchronisation.

### Light Activation

At power-up the microprocessor checks that the internal GPS module is programmed correctly and is able to provide valid time base and time data.

Once outside with a clear view of the sky, valid data should become available within 20 minutes.

### Daylight Operation

During daylight hours the microprocessor is in idle mode to reduce power consumption. Time data continues to be updated once per second. The microprocessor will automatically exit the idle mode as soon as dark conditions are detected.

### Dark Operation

When dark conditions are detected the light:

- Checks for valid time data and is turned on after a delay based on the current time and the length of the selected flash code;
- If valid time data is not detected the light will turn on after approximately 10 seconds. This light will not be synchronised.
- If the light turns on unsynchronised it will continually check for valid time data. Once valid data is found the light will automatically synchronise.

**Note:** Lights will not synchronise if different flash codes are selected.

# Optional GSM Monitoring & Control System

The light is also available with GSM Cell-Phone Monitoring and Control – enabling users to access real-time diagnostics data and change lantern settings via cell-phone. The system can also be configured to send out alarm SMS text messages to designated cellular telephone numbers. users can also have alarms and reports sent to designated email addresses.

Please contact Sealite for further information and instructions.

## Maintenance & Servicing

Designed to be maintenance free the Bridge Lights require minimal attention, though the following maintenance and servicing information is provided to help ensure the life of your Avlite product.

- Occasional cleaning of the dome lens may be required using a cloth and warm soapy water.

## 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 and light head 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. <i>Sealite products typically require 2.5 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.</i></li> <li>• Ensure solar module is clean and not covered by shading during the day.</li> </ul>

## Sealite LED Light Warranty V2.2

### Activating the Warranty

Upon purchase, the Sealite Pty Ltd warranty must be activated for recognition of future claims. To do this you need to register on-line. Please complete the Online Registration Form at:

[www.sealite.com](http://www.sealite.com)

**Sealite Pty Ltd will repair or replace your LED light in the event of electronic failure for a period of up to three years from the date of purchase, as per the terms & conditions below.**

**Sealite Pty Ltd will repair or replace any ancillary or accessory products in the event of failure for a period of up to one year from the date of purchase, as per the terms & conditions below.**

**The unit(s) must be returned to Sealite freight prepaid.**

### Warranty Terms

1. Sealite Pty Ltd warrants that any Sealite marine products fitted with telemetry equipment including but not limited to AIS, GSM, GPS or RF ("Telemetry Products") will be free from defective materials and workmanship under normal and intended use, subject to the conditions hereinafter set forth, for a period of twelve (12) months from the date of purchase by the original purchaser.
2. Sealite Pty Ltd warrants that any BargeSafe™ Series of LED barge light products ("BargeSafe™ Products") will be free from defective materials and workmanship under normal and intended use, subject to the conditions hereinafter set forth, for a period of twelve (12) months from the date of purchase by the original purchaser.
3. Sealite Pty Ltd warrants that any LED area lighting products ("Area Lighting Products") but not including sign lighting products will be free from defective materials and workmanship under normal and intended use, subject to the conditions hereinafter set forth, for a period of twelve (12) months from the date of purchase by the original purchaser.
4. Sealite Pty Ltd warrants that any ancillary products and accessories, not mentioned in other clauses in this section, will be free from defective materials and workmanship under normal and intended use, subject to the conditions hereinafter set forth, for a period of twelve (12) months from the date of purchase by the original purchaser.
5. Sealite Pty Ltd warrants that any LED sign lighting products ("Sign Lighting Products") will be free from defective materials and workmanship under normal and intended use, subject to the conditions hereinafter set forth, for a period of three (3) years from the date of purchase by the original purchaser.
6. Sealite Pty Ltd warrants that any Sealite marine lighting products other than the Telemetry Products, BargeSafe™ Products, and Area Lighting Products ("Sealite Products") will be free from defective materials and workmanship under normal and intended use, subject to the conditions hereinafter set forth, for a period of three (3) years from the date of purchase by the original purchaser.
7. Sealite Pty Ltd will repair or replace, at Sealite's sole discretion, any Telemetry Products, BargeSafe™ Products, Area Lighting Products or Sealite Products found to be defective in material and workmanship in the relevant warranty period so long as the Warranty Conditions (set out below) are satisfied.
8. If any Telemetry Products, BargeSafe™ Products, Area Lighting Products or Sealite Products are fitted with a rechargeable battery, Sealite Pty Ltd warrants the battery will be free from defect for a period of one (1) year when used within original manufacturer's specifications and instructions.
9. Buoy products are covered by a separate 'Sealite Buoy Warranty'.

### Warranty Conditions

This Warranty is subject to the following conditions and limitations;

1. The warranty is applicable to lanterns manufactured from 1/1/2009.
2. The warranty is void and inapplicable if:
  - a. the product has been used or handled other than in accordance with the instructions in the owner's manual and any other information or instructions provided to the customer by Sealite;
  - b. the product has been deliberately abused, or misused, damaged by accident or neglect or in being transported; or
  - c. the defect is due to the product being repaired or tampered with by anyone other than Sealite or



authorised Sealite repair personnel.

3. The customer must give Sealite Pty Ltd notice of any defect with the product within 30 days of the customer becoming aware of the defect.
4. Rechargeable batteries have a limited number of charge cycles and may eventually need to be replaced. Typical battery replacement period is 3-4 years. Long term exposure to high temperatures will shorten the battery life. Batteries used or stored in a manner inconsistent with the manufacturer's specifications and instructions shall not be covered by this warranty.
5. No modifications to the original specifications determined by Sealite shall be made without written approval of Sealite Pty Ltd.
6. Sealite lights can be fitted with 3rd party power supplies and accessories but are covered by the 3rd party warranty terms and conditions.
7. The product must be packed and returned to Sealite Pty Ltd by the customer at his or her sole expense. Sealite Pty Ltd will pay return freight of its choice. A returned product must be accompanied by a written description of the defect and a photocopy of the original purchase receipt. This receipt must clearly list model and serial number, the date of purchase, the name and address of the purchaser and authorised dealer and the price paid by the purchaser. On receipt of the product, Sealite Pty Ltd will assess the product and advise the customer as to whether the claimed defect is covered by this warranty.
8. Sealite Pty Ltd reserves the right to modify the design of any product without obligation to purchasers of previously manufactured products and to change the prices or specifications of any product without notice or obligation to any person.
9. Input voltage shall not exceed those recommended for the product.
10. Warranty does not cover damage caused by the incorrect replacement of battery in solar lantern models.
11. This warranty does not cover any damage or defect caused to any product as a result of water flooding or any other acts of nature.
12. There are no representations or warranties of any kind by Sealite or any other person who is an agent, employee, or other representative or affiliate of Sealite, express or implied, with respect to condition of performance of any product, their merchantability, or fitness for a particular purpose, or with respect to any other matter relating to any products.

### **Limitation of Liability**

To the extent permitted by acts and regulations applicable in the country of manufacture, the liability of Sealite Pty Ltd under this Warranty will be, at the option of Sealite Pty Ltd, limited to either the replacement or repair of any defective product covered by this Warranty. Sealite will not be liable to Buyer for consequential damages resulting from any defect or deficiencies.

### **Limited to Original Purchaser**

This Warranty is for the sole benefit of the original purchaser of the covered product and shall not extend to any subsequent purchaser of the product.

### **Miscellaneous**

Apart from the specific warranties provided under this warranty, all other express or implied warranties relating to the above product is hereby excluded to the fullest extent allowable under law. The warranty does not extend to any lost profits, loss of good will or any indirect, incidental or consequential costs or damages or losses incurred by the purchaser as a result of any defect with the covered product.

### **Warrantor**

Sealite Pty Ltd has authorised distribution in many countries of the world. In each country, the authorised importing distributor has accepted the responsibility for warranty of products sold by distributor. Warranty service should normally be obtained from the importing distributor from whom you purchased your product. In the event of service required beyond the capability of the importer, Sealite Pty Ltd will fulfil the conditions of the warranty. Such product must be returned at the owner's expense to the Sealite Pty Ltd factory, together with a photocopy of the bill of sale for that product, a detailed description of the problem, and any information necessary for return shipment.

**Other Sealite Products Available**



**Marine Lanterns  
(1-19NM)**



**Monitoring  
& Control Systems**



**Bridge & Barge Lights**



**Marine Buoys  
(up to 3mt in diameter)**



**Area Lighting**



**Mooring Systems  
& Accessories**



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