



AL-01

Outdoor LED Luminaire Installation & Service Manual

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Introduction

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

Sealite Pty Ltd has been manufacturing lanterns for over 25 years, and particular care has been taken to ensure your luminaire 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.

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

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

Operating Principle

The AL-01 luminaire is designed to operate in conjunction with existing mains connection or purpose-built power supplies.

A microprocessor drives an array of ultra bright LED's through a DC/DC converter, which enables the LEDs to operate within the manufacturer's specifications.

On darkness, the microprocessor will initiate a program check and after approximately 1 minute of operation if this mode is set.

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. Complex shapes such as the SL70, BargeSafe™ and 16-segment multi-focus lenses 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.

AL-01 Model

Sealite's universal mains powered outdoor LED luminaire provides users with the perfect solution for lighting locations such as boat launching ramps, shelters, car parks and maintenance areas.

The assembly uses the latest technologies in Light Emitting Diodes (LEDs) as a light source, and provides excellent illumination over a wide projected area.



*Shown with
mounting bracket*

SPECIFICATIONS •

Light Characteristics

Light Source 8 ultra-high intensity white (warm daylight) LEDs
LED Life Expectancy (hours) >50,000

Photometry

Total Luminous Flux (lm) 1360
Luminous Efficacy (lm/W) 69.7

Electrical Characteristics

Voltage (V) 12.00
Current (A) 1.637
Power (W) 19.5
Power Factor 1.0
Circuit Protection Integrated
Temperature Range -40 to 55°C

Spectral Characteristics

CIE 1931 2 deg observer (x,y) ⁽¹⁾ (0.312, 0.336)
CIE 1976 2 deg observer (u',v') ⁽¹⁾ (0.195, 0.472)
Correlated Colour Temperature⁽¹⁾ 6500 K
Colour Rendering Index⁽¹⁾ 71
Colour Spatial Uniformity⁽²⁾ 0.0207

Physical Characteristics

Body Material Extruded aluminium chassis with LEXAN® polycarbonate glass filled end caps - UV-stabilised
Lens Material LEXAN® Polycarbonate - UV stabilised
Mounting Adjustable along 78mm parallel channels
Height (mm/inches) 85 / 3³/₄
Width (mm/inches) 108 / 4¹/₄
Length (mm/inches) 300 / 11⁷/₈
Mass (kg/lbs) 1.5 / 3.3
Product Life Expectancy Up to 12 years

Certifications

CE EN61000-6-3:1997, EN61000-6-1:1997
Quality Assurance ISO9001:2008
Waterproof IP68

Intellectual Property

Trademarks SEALITE® is a registered trademark of Sealite Pty Ltd
3 year

Warranty *

Options Available

- Setable Timer Light Control
- External ON/OFF Switch



• Specifications subject to change or variation without notice

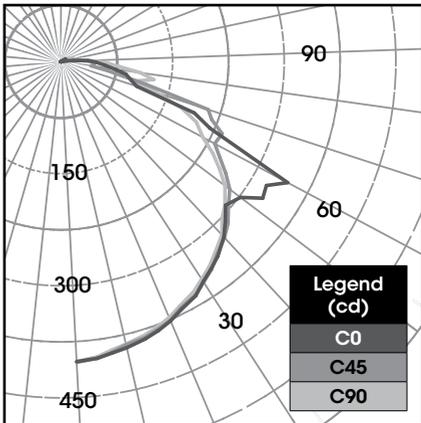
* Subject to standard terms and conditions

(1) Value is computed from the weighted average of the spatial measurements

(2) Value is the maximum deviation of the spatial u' and v' measurements from the weighted average

Spectral Characteristics

INTENSITY SUMMARY (cd)						
Gamma	C-Plane					Output Lumens
	C0	C22.5	C45	C67.5	C90	
0.0	409	409	409	409	409	
5.0	411	410	409	409	409	39
10.0	408	407	407	406	406	
15.0	402	401	403	402	402	114
20.0	396	395	395	393	392	
25.0	388	386	386	383	383	178
30.0	377	377	376	373	372	
35.0	362	363	361	359	356	225
40.0	343	342	344	338	339	
45.0	321	323	322	320	317	248
50.0	293	298	298	294	292	
55.0	327	309	267	263	257	250
60.0	345	316	234	227	216	
65.0	192	204	217	184	174	191
70.0	98	90	119	110	101	
75.0	73	64	41	124	108	82
80.0	47	44	47	61	59	
85.0	16	22	22	24	21	26
90.0	3	4	3	3	2	



ZONAL LUMENS AND PERCENTAGES			
Zone	Lumens	% Lamp	% Luminaire
0-30	331	N/A	24.3
0-40	556	N/A	40.9
0-60	1054	N/A	77.5
0-90	1352	N/A	99.4
40-90	796	N/A	58.5
60-90	298	N/A	21.9
90-180	8	N/A	0.6
0-180	1360	N/A	100.0

Light Output Ratio = N/A



Installation & Assembly

Product Components

Unpack your area light and check the contents of the package. Verify that all components and hardware have been received.

Please contact your Sealite office if any components are missing or damaged.

Installation Information

Only persons authorized by legislation or licensed electricians should install this luminaire.

Installation should be carried out in accordance with the latest edition of the wiring regulations of the country for which the installation takes place.

Ensure that ALL electrical connections are tight with no loose strands, including factory made connections.

This luminaire is designed to operate in wet areas.

Ensure that there is adequate free air circulation around the luminaire. All luminaires run hot. It is the installer's responsibility to consider fire risk and take appropriate precautions.

The luminaire must not be covered by any insulation material, and the luminaire must not be installed close to flammable materials.

Before commencing installation, ensure electricity is switched OFF at the mains source.

Installation Instructions

1. Secure the light fixture to the desired mounting pole using bolts provided. The light is supplied with a mounting bracket which must be used to comply with safety requirements.
2. Connect the pre-wired 3 core cable to the pole internal junction box.
3. Connect Black to terminal active or live (A or L).
4. Connect White to terminal Neutral or (N).
5. Connect Green to terminal Earth (E).
6. Ensure that there are no exposed conductors or trapped insulation.

The nearest illuminated surface must be at least 0.5M from the luminaire output.

The luminaire is a non-serviceable item, and under no circumstances should the product be opened. Opening the device will invalidate the warranty and exposure to lethal voltages may result.

In the event that the luminaire fails, the device must be safely disconnected from the electricity supply and returned to the manufacturer.



Maintenance & Servicing

Designed to be maintenance free, the AL-01 requires minimal attention, however to help ensure the life of your Sealite product and for optimal light output please ensure the light remains clean.

Using a cloth and warm soapy water, wipe off any foreign matter before rinsing with fresh water.

Please return the luminaire to Sealite for servicing.

Trouble Shooting

Problem	Remedy
Light will not activate	<ul style="list-style-type: none">• Ensure light is in darkness• Wait 60 seconds for the program to initialise• Ensure power is available



Sealite LED Light Warranty V2.1

Activating the Warranty

Upon purchase, the Sealite Pty Ltd 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

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.

The unit 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 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.
5. 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.
6. 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.
7. 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.

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 section 68A of the Trade Practices Act 1974 (Cth), 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
(1-12nm+)**



**Monitoring
& Control Systems**



Bridge & Barge Lights



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



Area Lighting



**Mooring Systems
& Accessories**



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