

# SL125

## 5-7 nm LED lantern series

*This equipment complies with requirements of the U.S. Coast Guard in 33 CFR part 66*



### The Sealite Advantage

- 5-7 nautical mile range
- Red, green, yellow, white or blue
- 256 user-adjustable flash characteristics
- 4 adjustable intensity settings
- Includes bird deterrent spike
- Installs in minutes and operates maintenance-free
- IP68 waterproof

**The SL125 LED marine lantern is maintenance-free and used by many of the world's busiest ports, and largest militaries.**

### SL125 Technology

The SL125 is the most advanced LED marine lantern on the market. Utilising the latest software and microcircuitry developments, the lantern boast a huge number of features including flash-memory and the most efficient power conversion available.

The tough polycarbonate lens is specifically designed for use with LEDs, and incorporates an environment-friendly spike - deterring unwelcome bird life.

The unit is sealed using polycarbonate bonding compounds similar to those used by major automobile manufacturing companies. This also enables a waterproof rating of IP68 - unmatched by other manufacturers.

### Lantern Operation

The SL125 is ideal to fit on existing structures, or can be supplied as a complete unit with external solar modules and battery compartment.

The large industry-standard base, and 1 metre of included cable allows the SL125 to be readily fitted to any 12 volt power supply.

Once installed, the SL125 requires no operator intervention. The flash characters are easily adjusted on-site by the user, and the lantern will automatically begin operation at dusk - once the ambient light threshold drops sufficiently.



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Up to 4 tiers of 36 LEDs are available to increase the light intensity of the SL125 unit.

The SL125-2, SL125-3 and SL125-4 have 72, 108 and 144 LEDs respectively.

Each LED tier utilises the Sealite omnidirectional LED Reflector (US Pat. No. 6,667,582. AU Pat. No. 778,918) to increase the intensity and uniformity of the horizontal output.

Multiple focal points on the lens then create superior divergence specifications to suit regulations worldwide.

Remote monitoring and control capabilities are available from the SL125 lantern allowing the performance of the units to be monitored from remote sites.

Systems status including battery condition, flash characters, operational confirmation and lantern/buoy position may be monitored through radio or satellite communications.

The SL125 4-Tier lantern utilises a unique heat-dissipating domed lens to achieve maximum LED intensity output over a wider range of environmental conditions.

In addition, each LED array incorporates temperature control mechanisms to ensure maximum operational performance.



# SL125

## 5-7 nm LED lantern series

### SPECIFICATIONS •

Model	Description	Intensity (peak)	Colour	LED	Power Amp/hour	Voltage
SL125-1.R	LED Marine Lantern	87	RED	36	0.420	12v
SL125-1.G	LED Marine Lantern	86	GREEN	36	0.320	12v
SL125-1.W	LED Marine Lantern	61	WHITE	36	0.320	12v
SL125-1.Y	LED Marine Lantern	65	YELLOW	36	0.420	12v
SL125-2.R	LED Marine Lantern	169	RED	72	0.840	12v
SL125-2.G	LED Marine Lantern	168	GREEN	72	0.640	12v
SL125-2.W	LED Marine Lantern	119	WHITE	72	0.640	12v
SL125-2.Y	LED Marine Lantern	125	YELLOW	72	0.840	12v
SL125-3.R	LED Marine Lantern	252	RED	108	1.280	12v
SL125-3.G	LED Marine Lantern	249	GREEN	108	0.960	12v
SL125-3.W	LED Marine Lantern	173	WHITE	108	0.960	12v
SL125-3.Y	LED Marine Lantern	182	YELLOW	108	1.280	12v
SL125-4.R	LED Marine Lantern	332	RED	144	1.700	12v
SL125-4.G	LED Marine Lantern	329	GREEN	144	1.280	12v
SL125-4.W	LED Marine Lantern	228	WHITE	144	1.280	12v
SL125-4.Y	LED Marine Lantern	280	YELLOW	144	1.700	12v

• Specifications subject to change or variation without notice

Intensity (cd)	Range (nm) AT=0.74	Range (nm) AT=0.85
1	1.0	1.1
5	2.0	2.3
15	3.0	3.5
25	3.6	4.3
35	4.0	4.8
55	4.6	5.7
65	4.8	6.0
75	5.0	6.2
90	5.3	6.7
110	5.5	7.1
130	5.8	7.4
150	6.0	7.8
170	6.2	8.1
200	6.5	8.5
270	7.0	9.3
300	7.2	9.6
360	7.5	10.0

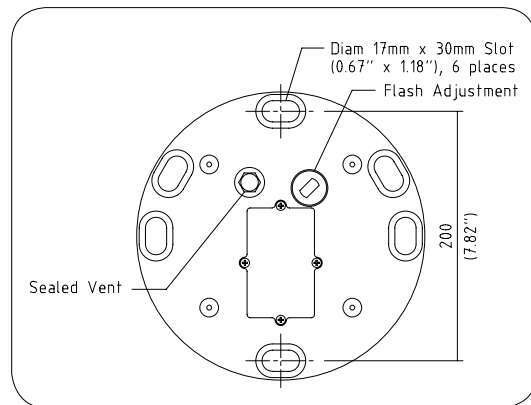
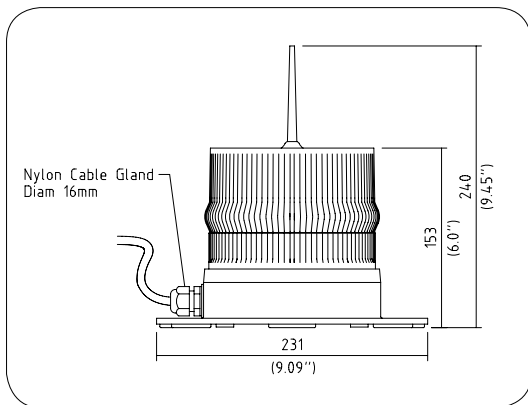


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### SPECIFICATIONS •

Light Source	SL125 / SL125-GPS 36 Ultra high intensity LEDs - SL125-1 72 Ultra high intensity LEDs - SL125-2 108 Ultra high intensity LEDs - SL125-3 144 Ultra high intensity LEDs - SL125-4
Colours available	Red, Green, White, Yellow, Blue
Range	5-6 nautical miles
Vertical Divergence	9 degrees
Horizontal output	360 degrees
Reflector Type	360° LED Reflector (U.S. Pat. No. 6,667,582, AU Pat. No. 778,918)
Available flash characteristics	256 IALA recommended, user-adjustable without the need for external devices
Synchronisation	Optional via hardwire or GPS
Intensity Setting	100% standard. Adjustable by user to suit sunlight conditions
Input Voltage	8vdc - 28vdc
LED Life	Up to 100,000 hours
Service life	Up to 12 years
Lens Diameter	140mm
Lens Material	LEXAN® Polycarbonate - U.V. stabilised
Lens Design	External optics with interior flute design
Lantern Dimensions	Refer to drawing
Base	LEXAN® Polycarbonate - U.V. stabilised
Mounting	200mm OD industry standard circle
Sealing	Permanent lens to base bond. Membrane pressure vent.
Waterproof	IP68
Quality Assurance	ISO9001:2000
CE Assurance	EN61000-6-3:1997, EN61000-6-1:1997
Mass	SL125-1: 0.8kg SL125-2: 0.9kg SL125-3: 1.0kg SL125-4: 1.2kg
Warranty	3 years



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# SL125 / C Complete Lantern Assembly

*This equipment complies with requirements of the U.S. Coast Guard in 33 CFR part 66*



## **The SL125 Complete Lantern Assembly provides a complete solution for visual navigation requirements.**

The SL125/C offers unique flexibility, and is available in varying configurations to suit a range of installation and intensity requirements.

The powder-coated 3mm aluminium housing is laser-cut, and robotically folded for guaranteed precision every time.

1 or 2 20watt solar module(s) are fitted as standard, and the unit can be readily equipped with up to 2 individual 40watt modules to power longer-range requirements or ancillary equipment.

A modular design, all components of the systems are replaceable in the unlikely event of damage to the unit.

The battery is accessed through the top of the lantern assembly, via a robust swing-hinge.

Access to the user-adjustable flash and intensity settings is also achieved through this design.

The solar modules are extendable to 51degrees as standard, with the option to increase in equatorial regions.

SL125-1/C-1  
SL125-1/C-2  
SL125-2/C-1  
SL125-2/C-2  
SL125-3/C-1  
SL125-3/C-2  
SL125-4/C-1  
SL125-4/C-2

SL125 1-Tier. Complete Lantern Assembly. Single 20w Solar Module.  
SL125 1-Tier. Complete Lantern Assembly. Dual 20w Solar Modules.  
SL125 2-Tier. Complete Lantern Assembly. Single 20w Solar Module.  
SL125 2-Tier. Complete Lantern Assembly. Dual 20w Solar Modules.  
SL125 3-Tier. Complete Lantern Assembly. Single 40w Solar Module.  
SL125 3-Tier. Complete Lantern Assembly. Dual 40w Solar Modules.  
SL125 4-Tier. Complete Lantern Assembly. Single 40w Solar Module.  
SL125 4-Tier. Complete Lantern Assembly. Dual 40w Solar Modules.

ie: SL125-1/C-1/R-GPS: Denotes SL125 1-Tier. Complete Lantern Assembly. Single Solar Module. RED. GPS Synchronised.



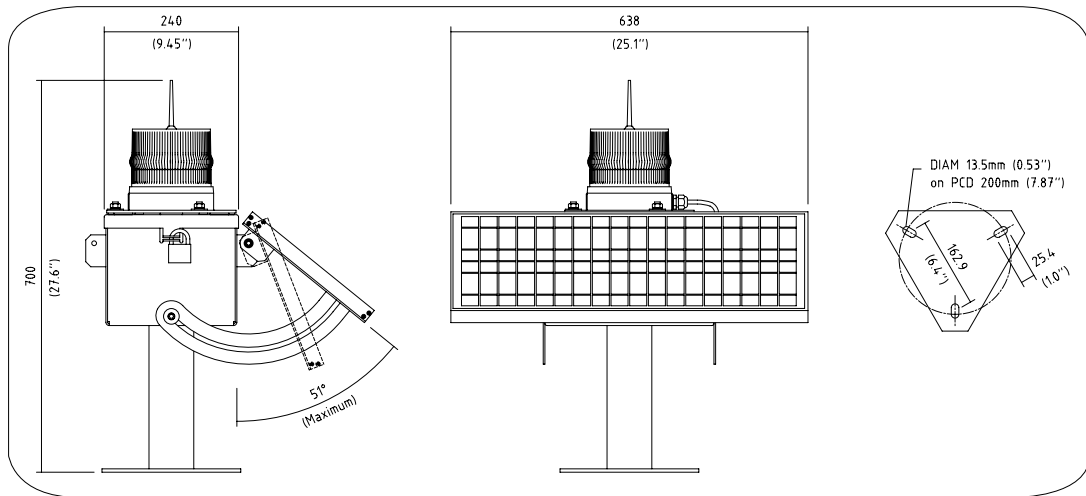
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# SL125 / C Complete Lantern Assembly



## SPECIFICATIONS •

Light Source	SL125 Series LED Marine Lantern
Colours available	Red, Green, White, Yellow, Blue
Reflector type	Omnidirectional 2-part LED reflector (U.S. Pat. No. 6,667,582. AU Pat No. 778,918)
Available flash characteristics	256 IALA recommended, user-adjustable without the need for external devices
Autonomy	>20 days
Solar Panel	Multicrystalline, 20watt 12volt. 40watt 12volt module for larger configurations. Tedlar - EVA - Tempered glass c/w anodised frame
Solar Panel Efficiency	14%
Charging Regulation	Microprocessor controlled
Battery type	Sealed Lead Acid
Nominal voltage	12V
Capacity	24Ah
Synchronisation	Optional via hardwire or GPS
Lens Diameter	140mm
Lens Material	LEXAN® Polycarbonate - UV stabilised
Lens Design	External optics with interior flute
Lantern base	LEXAN® Polycarbonate - UV stabilised
Dimensions	Refer to drawing
Mass	18kg
Mounting	200mm OD base pattern. 10mm mounting holes
Waterproof	IP68 light-head. IP67 battery compartment.
Quality Assurance	ISO9001:2000
CE Assurance	EN61000-6-3:1997, EN61000-6-1:1997
Life Expectancy	Up to 12 years
Warranty	3 years



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# SL125-GPS

## Synchronised LED Lantern



### The Sealite Advantage

- Synchronisation of flashing SL125 lanterns to clearly mark channels and entrances.
- no limitations on distance or objects between lights.
- Inbuilt, allowing for easy installation and IP68 rating for water immersion

Utilising latest advancements in GPS technology, Sealite has developed an internal synchronisation system for the popular SL125 5 & 6 nautical mile range of lanterns.

The SL125-GPS beacon provides the user with the ability to mark a channel, port or river with independent operating beacons that all flash in synchronisation. This provides a clear outline of the channel each time the lanterns flash, and is particularly effective in overcoming background lighting.

With advances in electronics, Sealite has been able to produce a light that incorporates a Global Positioning System (GPS) receiver. No additional power supplies, aerials or control systems are required. The SL125-GPS is a microprocessor-based system that has been designed to provide maximum reliability and performance of the beacon over a wide range of environmental conditions.

Using overhead satellites, multiple SL125 units set to the same flash pattern will synchronise anywhere in the world.



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# SL125-GPS Synchronised LED Lantern

## SeaFlare™ Technology

The inbuilt GPS receiver and advanced software of the Sealite synchronised lanterns allow for the adoption of SeaFlare™ channel marking - a unique system that cascades the synchronisation of channel lanterns in a uni or bi-directional flash pattern.

In Australia, the Port of Melbourne Corporation has adopted this technology from Sealite to clearly identify the channel leading into station pier - an area that regularly accommodates some of the world's largest passenger vessels including the QE2.

The neighbouring Port of Geelong utilise this technology to safely guide Aframax Tankers among other large sized vessels into harbour.

Call Sealite for a free video CD documentary of the GPS synchronised lanterns in operation.

## How does it work?

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.

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.

The light then checks for day/night. If it is daylight the internal microprocessor will go to idle mode after approximately 10 seconds. This reduces the overall power consumption when the light is not required.

Each light operates independently and requires no operator intervention.

3 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.

