VLB-67
LED MARINE BEACON

SHORT RANGE BEACON 2-5NM AT 0.74T / 2.25-6NM AT 0.85T

* 8 Watt solar panel
* 12 Ah long life battery

* 16 Watt solar panel
* 12 or 24 Ah long life battery

Standalone Beacon

Standard Self Contained Beacon

Large Self Contained Beacon

ISO 9001
BUREAU VERITAS
Certification
The VLB-67 LED beacon forms part of the Vega LED marine beacon family and is designed for applications required a 2 to 5NM range at 0.74T. The beacon is available in 5 colours: red, green, white, yellow and blue. All colours meet the IALA chromaticity requirements.

The VLB-67 LED beacon is available in 3 models:

- **Standalone** for use with an external power supply
- **Self Contained** with solar power
- **Large Self Contained** for high latitude or high duty applications

The use of high efficient optics and electronics has resulted in a high energy efficient beacon. The low energy need reduces the solar panel and battery requirements in the overall design. Vertical divergence of the lens at 50% of the peak intensity is better than 7°.

The VLB-67 LED beacon is a feature rich product that has been designed to provide flexibility in the use of the product. There are additional options that can be included at that time of order:

- RS-232 or RS-485 Data Port
- GPS synchronisation
- Hard wire synchronisation for Self Contained unit (standard on Standalone unit)
- Hard wire synchronisation converter (to work with positive transition sync signals)
- Alarm/monitor wire (beacon healthy)
- External charging plug

The design life of the VLB-67 LED beacon is 12 years. Features include:

- 3 or 4-hole mounting on a 200 PCD
- Waterproof body to IP68
- Ability to replace batteries on the Self Contained units

The base of the VLB-67 beacon contains a waterproof cavity that can be used to extend the functionality of the beacon. On the Standalone unit this space may be used for the fitting of a power supply to create a mains powered lantern (Base will take a Traco AC/DC converter, RS component part # RS 3221840).

The Self Contained unit has been sized to allow the VLB-67 LED beacon to be used over a wide range of locations and applications.

For applications that need a bit more solar and battery capability the Large Self Contained unit is available. This option allows the beacon to be used in high latitude and high duty applications.

The Self Contained units use a long life GEL lead acid battery capable of being charged down to a temperature of -20°C Celsius.

Vega provides a web based VLB-67 selection calculator allowing customers to confirm to beacons suitability at a particular location.

The calculator can be found at [www.solar.vega.co.nz/VLB67calc.aspx](http://www.solar.vega.co.nz/VLB67calc.aspx)

### EASY PROGRAMMING

There are two methods of programming the VLB-67 LED marine beacon:

1. Using the Vega TVIR programmer (Remote-02). This allows the beacon to be programmed one feature at a time. The VLB-67 confirms the settings by flashing the programming code back to the user.
2. Using a computer and the IRDA interface (Prog-01). This allows all the VLB-67 settings can be displayed on a screen and downloaded or retrieved in a single action.

### MONITORING

Monitoring of the VLB-67 LED beacon can be provided in a number of ways:

2. Utilising the factory data port option. This can be RS-232 or RS-485.
3. Using the alarm/monitor connection option.

### SPECIFICATIONS

#### Optical Performance

<table>
<thead>
<tr>
<th>Model</th>
<th>Solar W</th>
<th>Battery AH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standalone</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Self Contained</td>
<td>7</td>
<td>12</td>
</tr>
<tr>
<td>Large Self Contained</td>
<td>16</td>
<td>12 or 24</td>
</tr>
</tbody>
</table>

The peak intensity is better than 7°.

Colours meet IALA chromaticity requirements.

#### Electrical Performance

<table>
<thead>
<tr>
<th>Battery Voltage</th>
<th>12VDC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating Voltage</td>
<td>9 to 18VDC</td>
</tr>
<tr>
<td>Haze Solar Gel Battery</td>
<td>12Ah or 24Ah (2x12Ah)</td>
</tr>
<tr>
<td>Battery Life</td>
<td>6 years expected</td>
</tr>
<tr>
<td>Charging</td>
<td>Stops at -20°C</td>
</tr>
<tr>
<td>Solar Panels</td>
<td>Mono-crystalline</td>
</tr>
<tr>
<td>Solar Panel Orientation</td>
<td>Vertical; 4 panels 90° in azimuth</td>
</tr>
</tbody>
</table>

Current for fixed character:

<table>
<thead>
<tr>
<th>mA</th>
<th>Red</th>
<th>Green</th>
<th>White</th>
<th>Yellow</th>
<th>Blue</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.5NM</td>
<td>25</td>
<td>20</td>
<td>25</td>
<td>40</td>
<td>110</td>
</tr>
<tr>
<td>4NM</td>
<td>35</td>
<td>30</td>
<td>60</td>
<td>90</td>
<td>N/A</td>
</tr>
<tr>
<td>Peak CD</td>
<td>155</td>
<td>160</td>
<td>125</td>
<td>250</td>
<td>N/A</td>
</tr>
</tbody>
</table>

#### Program Capability

- 246 flash characters
- 1 custom character
- Battery low voltage cut off
- Day/night transition level
- Multiple effective intensity settings
- Master/slave sync options
- ON/OFF control using sync wire
- Sync delay 0.1 to 9.9 seconds
- Storage, test, or normal operation
- Transport modes for automatic installation
- Calendar control of beacon operation
- Control of IRDA and RS-232 Data Ports
- Optional security codes
- Read battery voltage
- Serial number, LED type etc. are stored in beacon

Environmental
- Temperature: -30° to +50° Celsius
- Intrusion: IP 68, 1 Hour immersion in 1.5 metres of water
- Cooling: Convection
- Pressure: Equalisation Membrane in solar body
- Salt: Continuous exposure saltwater and spray
- Ice Loading: 25kg/m²
- Wind: 140Kt
- Shock/Vibration: 75g shock in all directions; 5g vibration in all directions

Material for Beacon
- Lens: Moulded acrylic (PMMA)
- Sealing: Lens glued in position
- Bird Spikes: Plastic centre spike, 4 x stainless outer spikes

Material for Solar Power Pack and Base
- Body and Base: Injection moulded UV stabilised Nylon 6/6 with 30% glass fibre.
- Top Cap: moulded UV stabilised ASA.
- Sealing: O-ring
- Weight & Dimensions: See drawings
- Mounting: 3 or 4-hole on 200mm PCD
- Service Life: 12 years excluding battery
- Warranty: 1 year. Refer Vega warranty conditions.

Standards
- EMI/EMC: EN55015:2006 radiated and conducted emissions
  EN61000-4-2:2001 Electrostatic Discharge Immunity Level 4
  EN61000-4-3:2002 Radiation Immunity Class 1
  EN61000-4-5:1995 Class 3 Surge Immunity, 0.5KV lead to lead
- Optical Test: FCC 47 CFR Section 15 Class A
- Colour: IALA Recommendation E-200-1 Part 1
- Daylight: IALA Recommendation 1038
- Power Supply: IEC60945 Section 7 normal and peak voltage, and reverse polarity protection
- Ingress: IP68 to EN60529
- Vibration: MIL-STD-202G Method 204D Cond B
- Immersion: MIL-STD-202G Method 104A Cond B withstands immersion to 1m depth
**PARTS FOR ORDERING**

**DESCRIPTION**

VLB-67 LED Marine Beacon
- Optional GPS sync
- Data port, Alarm/Monitor, and Sync Wire Option
- Charging Plug and Sync wire for self contained SS and LS
- Replacement battery
- Sync Signal Converter (receive only)
- IR Programmer
- Computer Programmer

**CODE**

- VLB-67-C07-YY
- add “-GS”
- add “-DP/AL/SW”
- add “-CP/SW”
- EBAT-VGA-SL12-12U
- 167-600
- Remote-02
- Prog-01

**Note:** C is colour (G, R, W, Y, B), YY is size: SA (Standalone), SS (Standard Solar), LS1 (Large Solar Single 12AH Battery), LS2 (Large Solar Two 12AH Battery)