Vega guides the way

VLB-67
LED MARINE BEACON

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

Standalone Beacon

Standard Self Contained Beacon

* 8 Watt solar panel
* 12 Ah long life battery

Large Self Contained Beacon

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

IALA AISM

ISO 9001
BUREAU VERITAS Certification

BUREAU VERITAS 1828

CE

VLB-67 LED MARINE BEACON

The VLB-67 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

Model	**Solar** W	**Battery** AH
Standalone	N/A	N/A
Self Contained	8	12
Large Self Contained	16	12 or 24

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 unit uses a long life GEL lead acid battery capable of being charged down to a temperature of -20° Celsius.

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

- particular location
- range
- color, and
- flash character

The calculator can be found at 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.

The VLB-67 LED marine beacon supports the standard features found on Vega marine LED beacons.

- Automatic Schmidt-Clausen intensity correction for short flashes
- Multiple effective intensity settings
- Day/night transition level settings
- Programmable flash characters
- One programmable custom character
- Synchronisation control including master/slave options and sync delay
- Optional on/off control by grounding the synchronising wire
- Programmable sleep and test modes
- Programmable transport mode so that the VLB-67 can be programmed before deployment
- Calendar operation to put the beacon into hibernation. Five date pairs to turn the beacon off and on
- Programmable low battery voltage cut out.
- Program control of the IRDA and RS-232 data port.

MONITORING

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

1. Using the Vega Mini VegaWeb internet monitoring unit.
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

Candela	**Red**	**Green**	**White**	**Yellow**	**Blue**
Peak	140	129	150	94	45
Effective	77	77	77	77	25

- Vertical divergence at 50% intensity better than 7°
- Colours meet IALA chromaticity requirements
- LEDs monitored for excess temperature
- Automatic Schmidt-Clausen intensity correction

Electrical Performance

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

Current for fixed character:

mA	**Red**	**Green**	**White**	**Yellow**	**Blue**
3NM	25	20	25	40	110
4NM	65	50	60	90	N/A
Peak CD	155	160	125	250	N/A

- Night off Current 2.5mA (4.5mA with GPS)
- Day Current 0.3mA
- For specific current usage refer to the product manual or Vega website
- The GPS sync options requires 10mA for 2 minutes every 20 minutes (1mA average)
- Calendar clock accuracy. Better than 6 hours per year over full operating temperature range

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
Wind	140Kt
Ice Loading	25kg/m²
Shock/Vibration	75g shock in all directions; 5g vibration in all directions

Material for Beacon

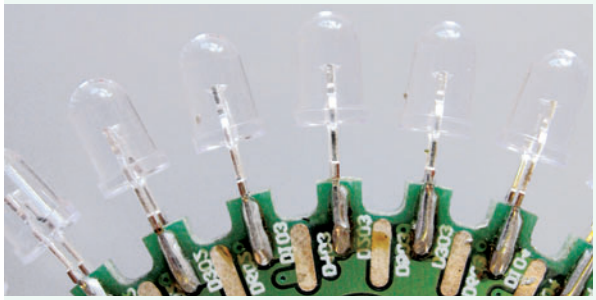
Lens	Moulded acrylic (PMMA)
Sealing	Lens glued in position
Bird Spikes	Plastic centre spike, 4 x stainless outer spikes

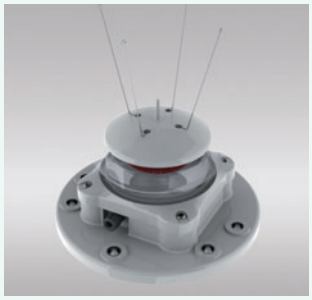
Material for Solar Power Pack and Base

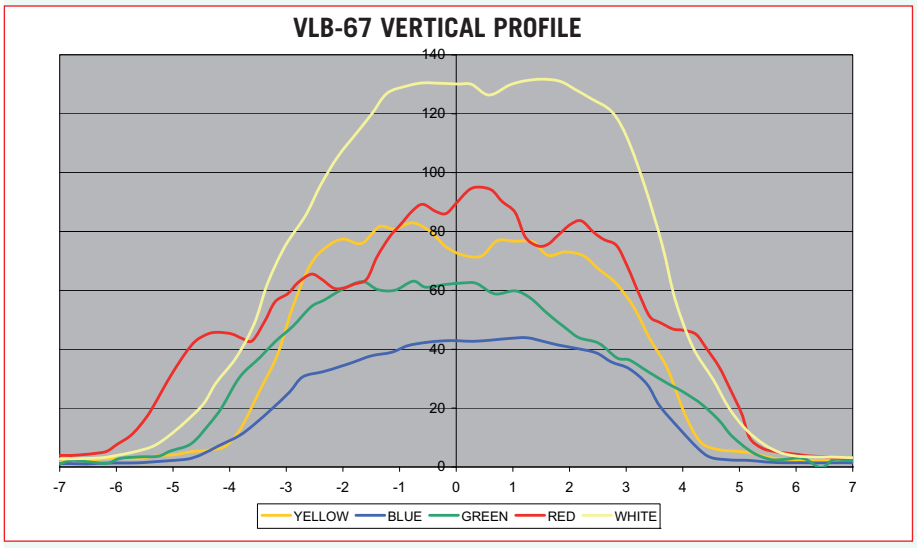
Body and Base	Injection moulded UV stabilised Nylon 6/6 with 30% glass fibre.
Top Cap	moulded UV stabilised ASA.
Sealing	O-ring
Weight & Dimensions	See drawings
Mounting	3 or 4-hole on 200mm PCD
Service Life	12 years excluding battery
Warranty	1 year. Refer Vega warranty conditions.

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 FCC 47 CFR Section 15 Class A
Optical Test	IALA Recommendation E-122(2001) and E-200-3 Part 3 (2008)
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
Shock	MIL-STD-202G Method 213B Cond H
Vibration	MIL-STD-202G Method 204D Cond B
Immersion	MIL-STD-202G Method 104A Cond B withstands immersion to 1m depth

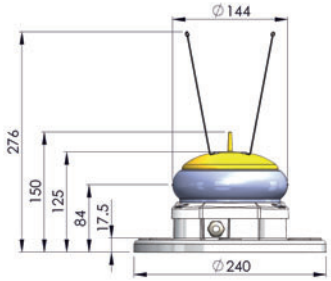


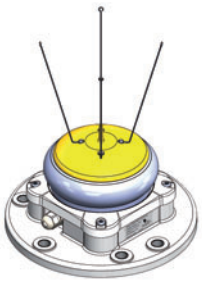


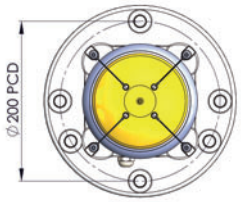


Approved for use as Class B & C lights for artificial island and structures in USCG 8th District under CFR 33 Part 67. USCG compliant under CFR 33 Part 66 for 3 and 5 mile private navigation aids.

DIMENSIONS

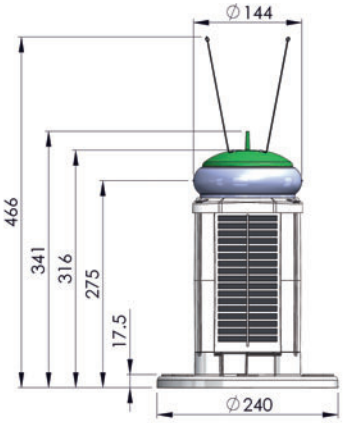


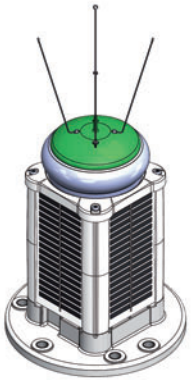


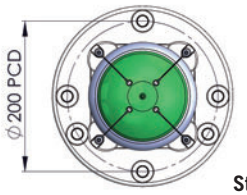


Weight = 1kg
Ship = 1.5kg

Standalone Beacon

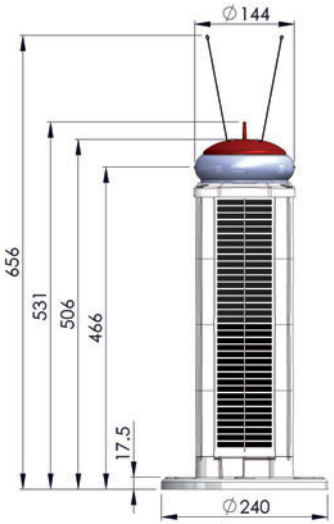


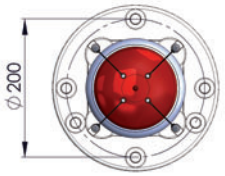




Weight = 6kg
Ship = 7kg

Standard Self Contained Beacon





LS1 Weight = 7.5kg
Ship = 8.5kg
LS2 Weight = 11kg
Ship = 12kg

Large Self Contained Beacon

PARTS FOR ORDERING

DESCRIPTION	CODE
VLB-67 LED Marine Beacon	VLB-67-C07-YY
• Optional GPS sync	add "-GS"
• Data port, Alarm/Monitor, and Sync Wire Option	add "-DP/AL/SW"
• Charging Plug and Sync wire for self contained SS and LS	add "-CP/SW"
• Replacement battery	EBAT-VGA-SL12-12U
• Sync Signal Converter (receive only)	167-600
• IR Programmer	Remote-02
• Computer Programmer	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)

DISTRIBUTOR

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