



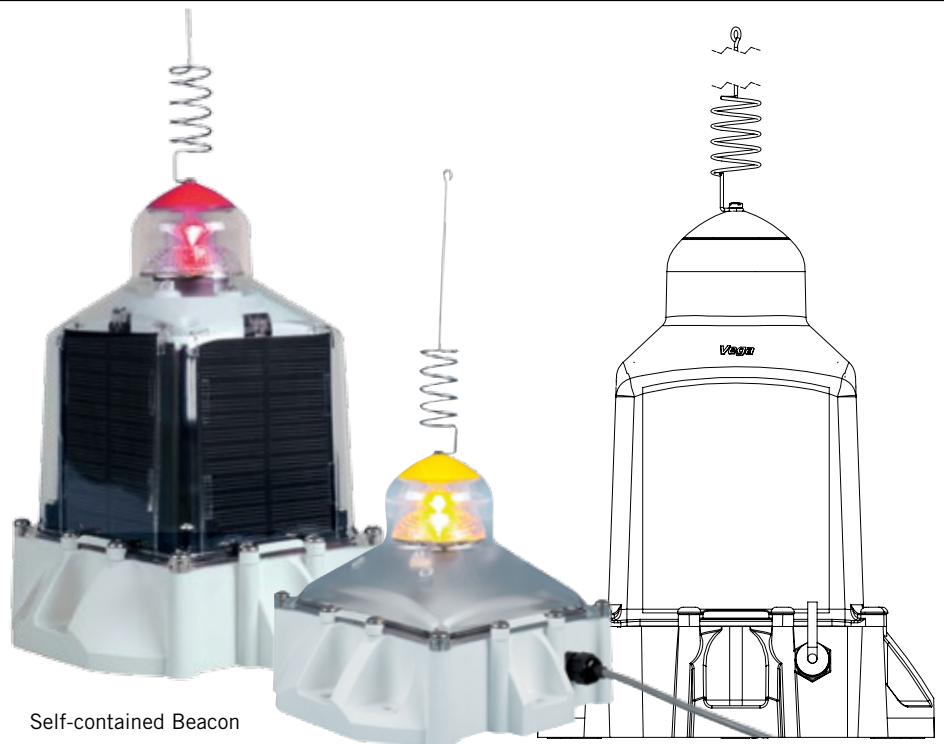
VLB-3 LED SOLAR MARINE BEACON

SHORT-RANGE LANTERN 1-3NM AT 0.74T

USCG APPROVAL CFR 33 PART 66 AND PART 67

The **VLB-3** is a high capacity smart solar marine beacon providing **3 nautical mile** performance and long battery autonomy in high latitude environments.

Borrowing much of the smarts for our flagship product, this short range marine beacon has been **completely upgraded** and **re-engineered** to deliver optimal performance in this short range market.



Self-contained Beacon

Stand-alone Beacon



Approved for use as Class C lights for artificial island and structures in
USCG CFR 33 Part 66 and Part 67

OUTSTANDING FUNCTIONALITY AND FEATURES

The VLB-3 smart beacon is part of the high performing Vega LED marine beacon family and is designed for installation on buoys, fixed poles and land locations. This beacon is ideal for high latitudes regions (such as Alaska) with limited winter sunlight. Use the Vega calculator (example below) to decide whether the standard (SS with 9Ah battery) or extended (ES with 18Ah battery) will suit your needs.

The VLB-3 from Vega:

- redesigned housing providing a strengthened unit that will perform in the toughest environments
- is fully waterproof (IP 68). Its newly designed flexible gasket provides extra protection in temperature extremes
- optional GPS synchronising available
- includes a larger battery capacity suitable for high latitude location with limited winter sunlight

Features include:

- uses long life GEL lead acid batteries that will continue to charge at -20°C and provide continuous operation at -30°C
- offers high autonomy (days with no solar charge) in a completely sealed, self-contained unit, with an expected design life of 12 years
- five colours meeting IALA requirements
- low energy design
- externally powered 3.5-16VDC model available (Stand-alone) days

Programming features (with infrared remote control) include:

- intensity setting 0.5 – 15 Candela

- nine options for day to night transition light levels
- in excess of 256 flash characteristics
- a custom flash characteristic if required
- setting storage mode
- low battery voltage cut off
- read battery voltage
- LED type and firmware version

To check how the beacon will perform in your planned location use the solar calculator on our website (www.vega.co.nz). Enter the intensity, range and flash character you require and the calculator will take into account the lowest solar month as well as temperature and provide details of expected solar autonomy based on the worst conditions likely to be encountered.

VLB-3 solar power details:

Model	Solar	Battery
Stand-alone (SA)	N/A	N/A
Standard Self-contained (SS)	3.2W	9Ah 4V
Extended Self-contained (ES)	3.2W	18Ah 4V

This high capacity marine beacon uses the high efficiency optics and electronics that Vega is well known for and provides new levels of energy efficiency and autonomy for the utmost in reliability in the most extreme of weather conditions. With the latest technology on board, the VLB-3 is excellent value for money, offers low lifetime and maintenance costs and comes with an optional extended warranty of 5 years. With thousands of these smart beacons already in locations worldwide, this new VLB-3 is setting a new standard for 3NM solar marine beacons.

EXAMPLE CALCULATION FOR ANCHORAGE, ALASKA

Latitude	61° North
Flash	1 second on, 9 seconds off
Colour	White
Distance	3NM
Divergence	7°
Effective Intensity	15.2 Candela
Autonomy	32 days – Standard (SS) 65 days – Extended (ES)

INCLUDED COMPONENTS



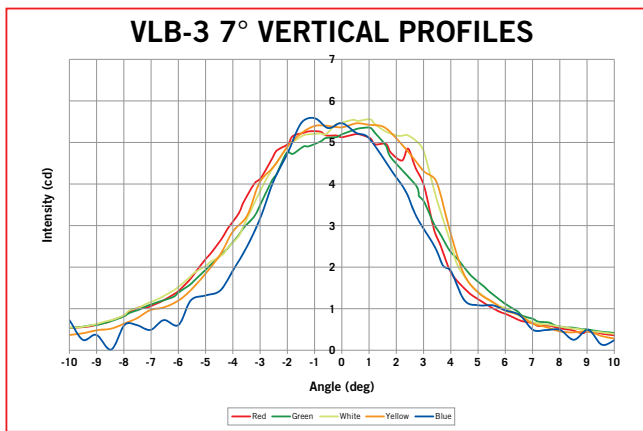
Infrared remote

Base with one or two 9Ah 4V batteries fitted

SPECIFICATIONS

OPTICAL SPECIFICATION

Intensity	0.5 – 15 Candela LEDs are temperature monitored to control intensity. Light intensity automatically adjusts with flash character setting (Schmidt-Clausen)
Horizontal Divergence	USCG 33CFR-83
Vertical Divergence	7° at 50% of peak intensity
Chromaticity	Colours meet IALA chromaticity requirements



ELECTRICAL PERFORMANCE

Reverse polarity	Protected
Battery	GEL lead-acid battery 9Ah 4V or 18Ah 4V (2x9Ah)
Charging	Stops at -20°C
Solar Panels	4 Mono Crystalline panels

TYPICAL BATTERY AUTONOMY (Q 1S 0.3)

Model	Red	Green	White	Yellow
9Ah (SS)	7 days	7 days	8 days	5 days
18Ah (ES)	15 days	15 days	17 days	11 days

*Typical battery autonomy for Chicago USA (using the longest night hours)

ENVIRONMENTAL

Temperature	-30°C to +50°C
Cooling	Convection
Pressure Equalisation	Membrane in solar body
Salt	Continuous exposure saltwater and spray

Wind	140kt
Ice Loading	22kg/m ²
Shock/Vibration	75g shock in all directions; 5g vibration in all directions

MATERIALS

Lens	Moulded acrylic (PMMA)
Bird Spike	Stainless steel centre spike
Body	UV stabilised transparent Nylon
Base	UV stabilised Nylon with 30% mineral fill
Solar Panels	Mono Crystalline silicon
Top Cap	UV stabilised ASA
Mounting	3 or 4-hole on 150mm PCD or 2 hole on 128mm PCD
Expected Service Life	12 years excluding battery
Warranty	1 year
Extended Warranty	Options available up to 5 years (excluding battery), refer to Vega warranty conditions

STANDARDS

Marine Navigation Lights: USCG Approval CFR 33 Part 66 and Part 67 for artificial island and structures

Electromagnetic compatibility (EMC) / electromagnetic interference (EMI):

EN55015:2006 +A1:2007, +A2:2009 radiated and conducted emissions;
EN61547:2009;
EN61000-4-2:2008. Electrostatic Discharge, Immunity Level 4 (10KV air 6KV contact);
EN61000-4-3:2006 +A1:2007, +A2:2010 Radiation Immunity Class 1 (10V/m);
EN61000-4-5:2005 Class 3 Surge Immunity, 0.5KV lead to lead
EN61000-4-6:2008 conducted susceptibility;
FCC Part 15

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 & Immersion: IP68 1.5m depth immersion for 1 hour

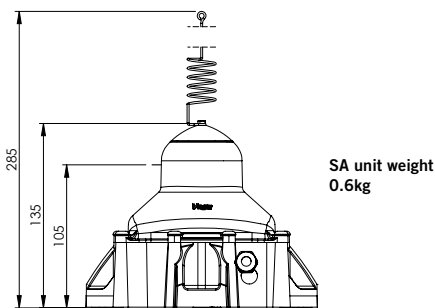
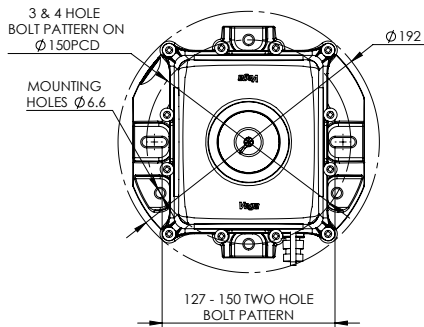
Shock: MIL-STD-202G method 213B Condition H

Vibration: MIL-STD-202G method 204D Condition B

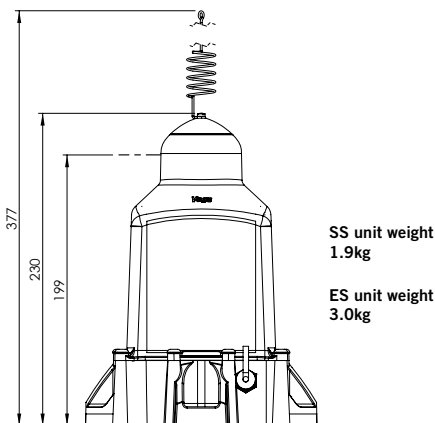
Hail: N/A. Solar panels are internal to body

DIMENSIONS & WEIGHTS

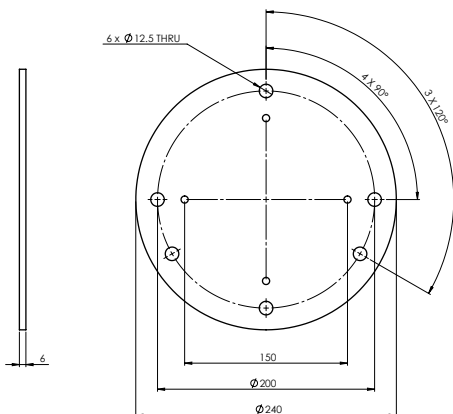
Stand-alone Unit (SA)



Self-contained Unit (SS and ES)



Optional 200mm PCD Adaptor Plate



PARTS FOR ORDERING

DESCRIPTION

VLB-3 LED Marine Beacon

PRODUCT CODE

VLB-3-C07-YY

WHERE

- C** = G (Green Light)
 = R (Red Light)
 = W (White Light)
 = Y (Yellow Light)
 = B (Blue Light)
- YY** = SA (Stand-alone)
 = SS (Standard 9Ah Battery)
 = ES (Extended 18Ah Battery)

FACTORY SPECIFICATIONS

Battery	EBAT-HZY4-9
External Charging Plug and Sync Wire (SS and ES)	CP/SW
Battery holder (to convert from 1 to 2 batteries)	VLB-2-K01
Sync Signal Converter (receive only)	136-600
200mm PCD mounting plate (including bolts)	202-500
Infrared Remote	Remote-02
Computer Programmer	Prog-01

NOTE: Refer to our website (www.vega.co.nz) if you require additional components or parts.



Telephone: +64 4 238 0200 Fax: +64 4 237 4392

Email: sales@vega.co.nz www.vega.co.nz

21 Heriot Drive, Porirua 5022
 PO Box 50443, Porirua 5240 Wellington, New Zealand

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