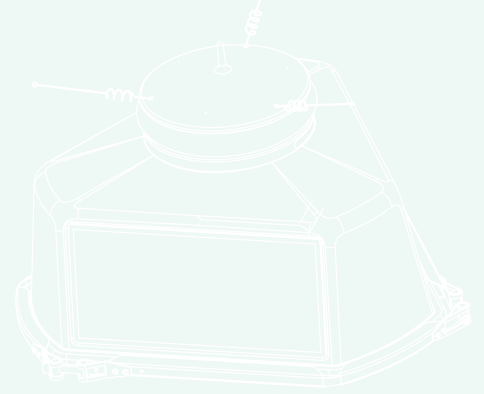




Vega *guides the way*



VLB-36 LED MARINE BEACON

SELF CONTAINED BEACON



ENERGY EFFICIENCY AS HIGH AS:
90 candela per watt at 5NM
4.0NM to 7.0NM at 0.74T
Options of 7° or 10° Vertical
Divergence



ISO 9001

BUREAU VERITAS
Certification



VLB-36 LED MARINE BEACON

The VLB-36 Self Contained Beacon forms part of the Vega LED marine beacon family. It is available with two vertical divergence options: 7° and 10°. The unique optical system utilises an acrylic lens to maximise the light capture from the LEDs. The LEDs are precisely graded and placed to produce a light beam with minimum variation in intensity.

The beacon is available in 5 colours, red, green, white, yellow and blue (on request). All colours meet the IALA chromaticity recommendation.

The VLB-36 optics have been maximised for buoy applications by shaping the optical performance for higher output across the vertical divergence of the beacon.

The use of high efficient optics and electronics has resulted in energy efficiency as high as 90 Candela per Watt at 5NM. The low energy need reduce the solar panel and battery requirements in the overall design.

All VLB-36 beacons are tested in the Vega zero range light tunnel prior to shipment to ensure the light output meets the required specification.

The Solar Charger with its 3 side pyramid shapes has 3 solar panels. Three different sizes of solar boxes are available to accommodate various range, latitude, and duty cycle requirements.

	SOLAR	BATTERY
Small	7.8W	12Ah
Medium	15W	12/18/35Ah
XLarge	30W	12/18/35Ah

BATTERY IS NOT INCLUDED (must be ordered separately). The battery sizes that can fit in each size unit are indicated.

The Solar Charger contains a microprocessor based charge controller to manage the charge rate to the battery depending on the ambient temperature and battery voltage.

The base of the solar pack contains threaded inserts to take 3 M12 bolts. These are located on a 200mm PCD. An adapter plate is available where 4-hole mounting is required.

The selection of the correct Solar Charger unit depends on

- The available solar energy at the location
- The energy needed for the flash character
- The range of the light

A selection tool is available on the "Calculators" section of the website www.vega.co.nz

EASY PROGRAMMING

Programming of the VLB-36 could not be easier. There are up to 15 programmable effective intensity settings. Once set the VLB-36 provides automatic Schmitt Clausen correction to increase intensity for the flash character and maintain the effective range of the light. The output intensity cannot exceed the maximum candela output of the beacon.

Programming is done using the Vega TVIR programmer.

Additional options include:

- Charging plug and sync wire
- Internal GPS sync to allow the VLB-36 to synchronise with other marine lanterns.
- VegaWeb web or SMS based

monitoring system interface.

- 3+4 way 200 PCD through hole mounting adapter.
- Battery if required to be supplied by Vega.

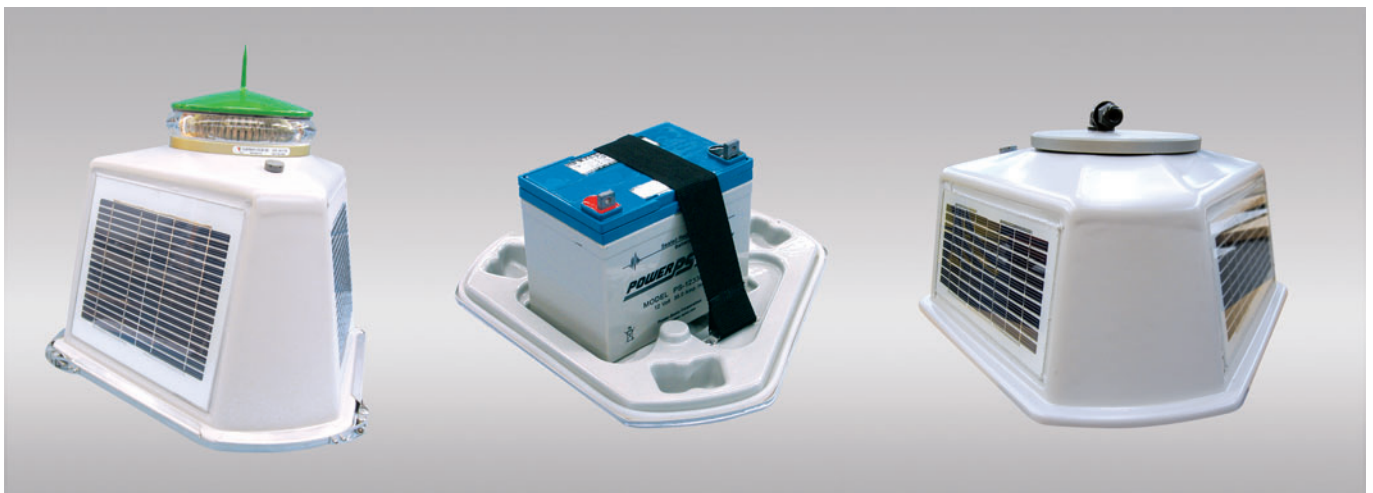
SPECIFICATIONS

Optical Performance

VD	Candela	Red	Green	White	Yellow	Blue
7°	Peak	570	320	520	330	100
	Effective	290	240	290	290	66
10°	Peak	470	220	300	190	40
	Effective	240	150	161	150	29

Functionality

- Up to fifteen effective intensity settings matching common range requirements.
- Automatic Schmitt Clausen intensity correction up to the maximum intensity available.
- Colours meet IALA chromaticity requirement.
- Candela output reduces at higher temperatures.
- Vertical divergence 7° or 10° measured at 50% of peak intensity.
- 246 standard flash characters and one programmable custom character.
- 20 factory set custom characters.
- Calibrated lux measurement with nine levels to determine day/night transition. IALA recommendation included.
- Hard wire sync option with beacon master or slave plus sync delay of up to 9.9 seconds
- ON/OFF control using sync wire
- Has the ability with the factory fitted GPS option to synchronize flash character with other lights plus sync delay of up to 9.9 seconds.
- Programmable low voltage cutoff threshold.



- Programmable sleep and test mode.
- Programmable transport mode. Beacon hibernates after programming until deployed
- Calendar operations with 5 date pairs to turn the beacon off and on
- Optional security code for programming.

Electrical

Battery Voltage	12VDC
Operating Voltage	9 to 18 VDC
Battery Type	Powersonic AGM or Haze Solar GEL
Battery charger	Charge current stops at -20° C
Expected battery life	6 years
Solar Panels	Mono-crystalline
Solar panel orientation	80° to horizontal, 120° in azimuth

Typical Current for fixed character at 7°:

Candela	Red (mA)	Green (mA)	White (mA)	Yellow (mA)	Blue (mA)
77 CD (5NM)	95	100	70	100	230 (@4.5NM)
Peak CD	765	910	740	820	540

Night off current	4mA
Day current	0.5mA
Calendar accuracy	Better than 6 hours per year over full operating temperature range.

BATTERIES

	Powersonic	Haze
12Ah	PS-12120	HZY-SL-12-12
18Ah	PS-12180	HZY-SL-12-18
35Ah	PS-12350	HZY-SL-12-33

Mechanical & Environment

Temperature	-30° to +50° Celsius
Intrusion rating	IP 68, 2 hours immersion in 1 metre of water
Cooling	Convection only
Pressure	Membrane in solar body
Salt	Continuous exposure saltwater and spray
Wind	Withstand winds to 140kt
Ice loading	22Kg/square metre
Shock/Vibration	Shock 75G horizontal and 35G vertical 5G vibration
EMI Interference	Withstands 200V/m 1 to 12 GHz, 10V/m 0.1 to 1 GHz (without GPS) withstands 25kV static discharge

Material for Beacon

Lens	Acrylic
Housing	Anodised marine grade aluminium base, ABS plastic top
Sealing	Sikaflex on lens
Bird Spikes	Plastic spike, stainless steel optional

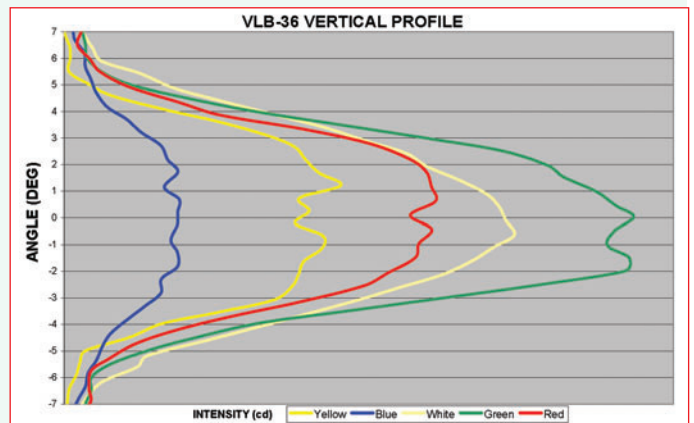
Material for Solar Power Pack

Body	Vacuum formed UV stabilised ASA plastic, 316 stainless steel base plate within base, 316 stainless connection clamps
Sealing	Sikaflex in base and O-rings elsewhere
Weight	Without battery: small 4.5kg, Medium 5.4kg, (V)Large 7.3kg
Dimensions	See drawings

Mounting	3-hole on 200mm PCD using M12 bolts, 4-hole adapter plate optional
Focal Plane	Above base: Small 235mm, Medium 314mm, (V)Large 473mm
Service Life	12 years
Warranty	1 year. Refer Vega warranty conditions.

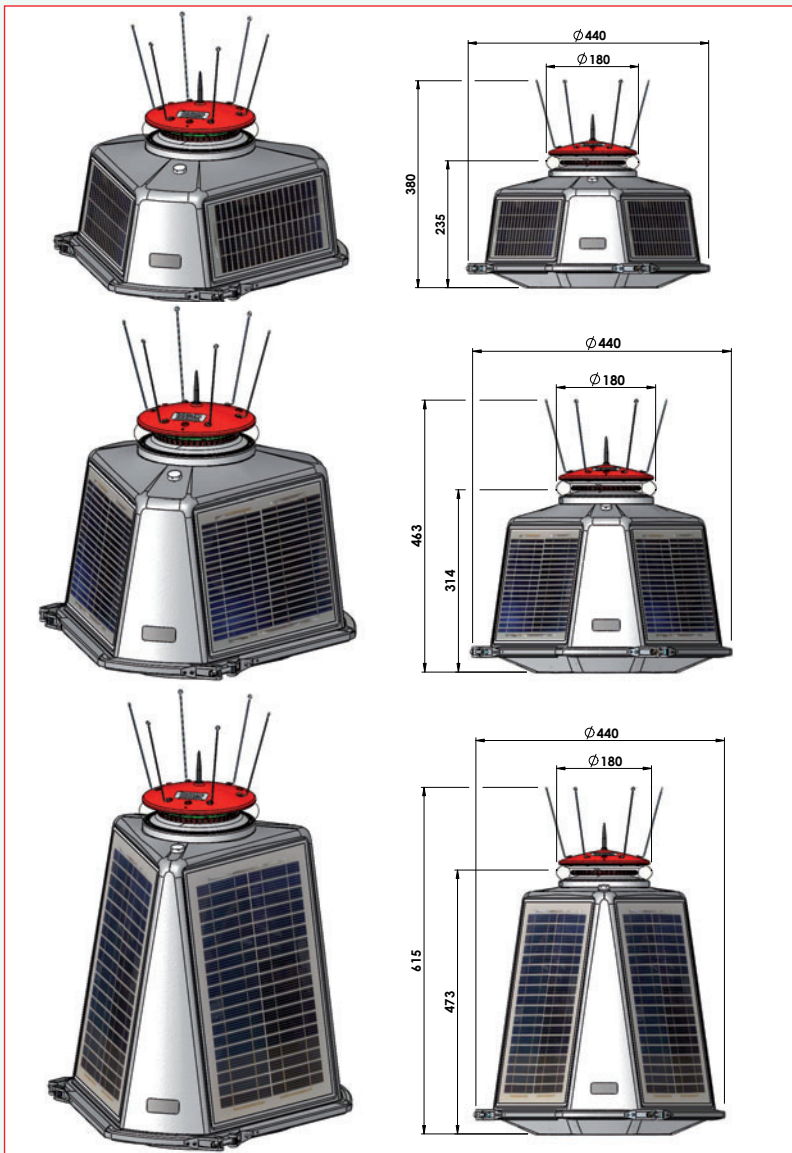
Standards

EMI/EMC	EN55015 radiated and conducted emissions, EN61000-4-2:1995 Electrostatic Discharge Immunity, EN61000-4-3 Radiation Immunity, EN61000-4-5:1995 Class 3 Surge Immunity
Optical	IALA recommendation E-122(2001)
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
Humidity	MIL-STD-202F Method 103B CondB
Shock	MIL-STD-202F Method 213B CondH
Vibration	MIL-STD-202 Method 204 CondB
Salt air/sea water	IEC60945 section 8.12
Immersion	MIL-STD-202F Method 104B CondB, 1m depth
Hail and Ice	IEC61215



Approved for use as Class A, B, and C lights for artificial island and structures in USCG 8th District under CFR 33 Part 67.

DIMENSIONS



BASE

Base diameter fits inside 440 mm dia circle

SMALL SIZE

Overall height 380 mm
 Focal plane height 235 mm
 Total weight 8.4 kg
 Battery weight 3.9 kg (12Ah)
 Battery dimensions 151 x 98 x 100 mm high
 Battery capacity 12 Amp-hrs @12Vdc
 Connection type F2 Faston 0.25 inch
 Solar panel size 240 mm wide x 110 mm high
 Solar panel output 2.6 Watts each panel
 Total solar 7.8 Watts

MEDIUM SIZE

Overall height 463 mm
 Focal plane height 314 mm
 Total weight 11.1 kg
 Battery weight 5.7 kg (18Ah)
 Battery dimensions 181 x 76 x 167 mm high
 Battery capacity 18 Amp-hrs @12Vdc
 Connection type F2 Faston 0.25 inch
 Solar panel size 240 mm wide x 195 mm high
 Solar panel output 5 Watts each panel
 Total solar 15 watts

X-LARGE SIZES

Overall height 615 mm
 Focal plane height 473 mm
 Total weight 19.3 kg
 Battery weight 12.0 kg (35Ah)
 Battery dimensions 198 x 132 x 180 mm high
 Battery capacity 35 Amp-hrs @12Vdc
 Connection type nut and bolt
 Solar panel size 240 mm wide x 365 mm high
 Solar panel output X-large 10 Watts each panel
 Total solar 30 Watts

PARTS FOR ORDERING

DESCRIPTION

VLB-36 (small powerpack 7.8W)
 VLB-36 (medium powerpack 15W)
 VLB-36 (extra-large powerpack 30W)

Options

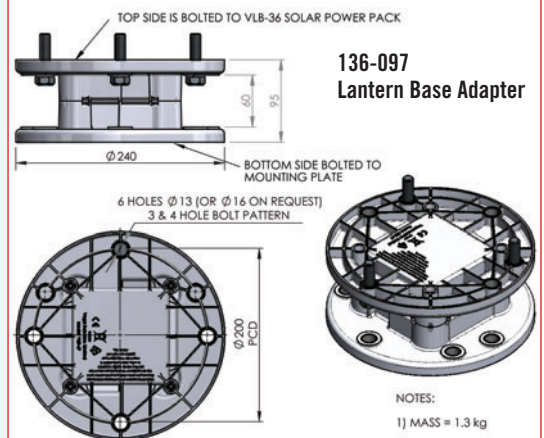
VLB-36 Lantern Base Adapter with 3/4 hole mounting (adds 95mm height)
 Internal GPS Sync
 TVIR Programmer
 Sync Signal Inverter Module
 Sync Wire and Alarm Wire
 Extra Strong Bird Spike

Note: C is colour (G, R, W, Y, B), DD is vertical divergence (07 or 10)

CODE

VLB-36-CDD-Sm-By
 VLB-36-CDD-Md-By
 VLB-36-CDD-Xl-By

136-097
 Add "-GS"
 Remote-02
 136-600
 Add "-SW/AL"
 136-039



DISTRIBUTOR

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