

## VLB-5X

Short-range lantern  
5.5NM @ 0.74T

The VLB-5X short range beacon is available in both standalone and self-contained models, to suit a wide range of locations and environments. The VLB-5X includes the latest LED technology, new battery technology, and an advanced charging algorithm, which supports the battery to perform well in extreme weather conditions.

Benefits include:

- **Optical range – 5.5 NM**
- **Battery technology and advanced charging algorithm**
- **Excellent battery life in hot climates**
- **Excellent battery capacity in cold climates**
- **The 5X battery will continue to charge between -40°C and 65°C**
- **Five colours meeting IALA chromaticity requirements**
- **Light intensity automatically adjusts with flash character setting (Schmidt-Clausen)**
- **12 options for day to night transition light levels**
- **More than 256 flash characters**
- **Calendar control of beacon operation**
- **Alarm output (system notification)**



## Functionality and Features VLB-5X

### About the VLB-5X

The VLB-5X has a long-life battery that is expected to keep the beacon flashing for more than eight years in hot and cold climates. In-house testing shows 45% greater autonomy in cold temperatures of -25°C and 25% greater autonomy in temperatures over 20°C, compared to other batteries. Besides being ideal for extreme conditions, the battery is also robust. The battery can be discharged to low levels without damage or affecting its long-term capacity to be recharged to 100%. The infrared remote on the VLB-5X makes programming straightforward. It allows for a hands-free configuration in all conditions, day or night.

### Variants

The VLB-5X is designed for installation on buoys, fixed poles and land locations. It is available in four models:

- (SA) stand-alone beacon for use with external 12VDC power sources
- (SS) standard self-contained solar beacon

### EXAMPLE CALCULATION FOR ANCHORAGE, ALASKA U.S

<b>Latitude</b>	61° North
<b>Flash</b>	FL 10s 1.0
<b>Colour</b>	White
<b>Distance</b>	4.5NM
<b>Divergence</b>	7°
<b>Effective Intensity</b>	54 cd
<b>Autonomy</b>	VSOL + 40Ah - 140 days

### Standards

#### Marine Navigation Lights:

USCG Approval CFR 33 Part 66  
Part 67 for artificial island and structures

#### Electromagnetic Compatibility (EMC) /

#### Electromagnetic Interference (EMI):

EN55015:2006 +A1:2007, +A2:2009 radiated and conduct emission

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

FCC 47 CFR Section 15 Class A

**Optical Test:** IALA Recommendation E-122 (2001) and E-200-3 Part 3 (2008) IALA Recommendation E-200-1 Part 1

**Daylight:** IALA Recommendation 1038

**Power Supply:** IEC60945 Section 7 normal and peak voltage, and reverse polarity protection IP68 to EN60529 MIL-STD-202G method 213B Cond H

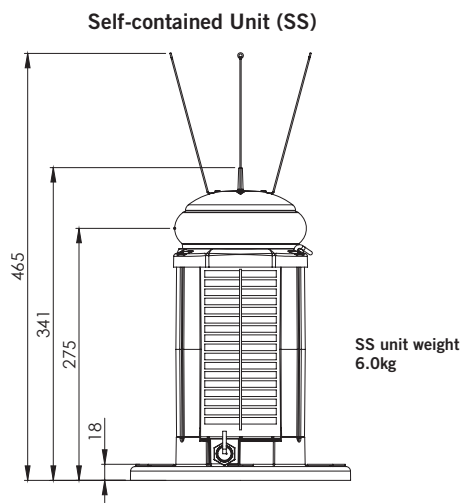
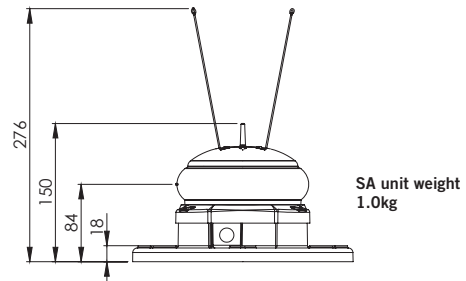
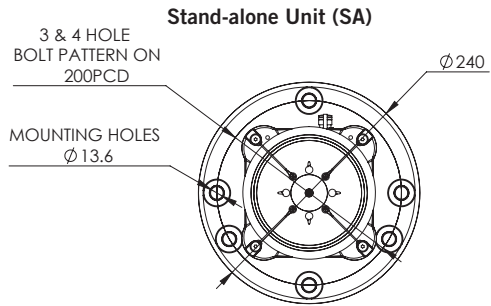
**Vibration:** MIL-STD-202G method 204D Cond B, 5G in all directions

**Immersion:** MIL-STD-202G method 104A Cond B withstands immersion to 1m depth

### EXAMPLE CALCULATION FOR ABERDEEN, SCOTLAND

<b>Latitude</b>	57.1°
<b>Flash</b>	FL 5s 0.3
<b>Colour</b>	Red
<b>Distance</b>	4.0NM
<b>Divergence</b>	7°
<b>Effective Intensity</b>	37 cd
<b>Autonomy</b>	Standard (SS) – 76 days VSOL + 40Ah – 180 days

## Technical Specification VLB-5X



### Optical Performance

Maximum intensity	177cd	177cd	157cd	177cd	50cd
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Vertical divergence	7° @ 50 % peak intensity
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Schmitt-Clausen correction	Selectable effective intensity or peak intensity
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Chromaticity	IALA chromaticity requirements
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Vertical divergence	Effective intensity (cd)
4NM	37
5NM	77
5.5NM	106

## Material

<b>Body</b>	UV stabilised nylon
<b>Lens</b>	Moulded acrylic (PMMA)
<b>Bird spike</b>	Plastic and stainless steel
<b>Base</b>	Nylon 6/6 with 30% glass fill
<b>Solar panels</b>	Mono Crystalline silicon
<b>Top cap</b>	UV stabilised ASA
<b>Mounting</b>	3 & 4-hole on 200mm PCD available on same base

## Environmental

<b>Degree of Protection</b>	IP68
<b>Temperature</b>	-40°C to 50°C
<b>Salt</b>	Continuous exposure to salt water and spray
<b>Wind</b>	140kt
<b>Ice loading</b>	22kg/m <sup>2</sup>
<b>Shock/Vibration</b>	75g shock - 5g vibration in all direction

## Electrical performance

<b>Solar power (SS)</b>	Solar: 8W Battery: 12Ah 12V
<b>Reverse polarity protection</b>	Yes
<b>Battery</b>	Lead Crystal® battery 12Ah 12V or 24Ah 12V (2x 12Ah)
<b>Solar panel</b>	4 x 2W Mono Crystalline panels (SS)

# Order Overview VLB-5X

## Option matrix

<b>CB/SW</b>	External charging plug and sync wire
<b>EBAT-VGA-SL12-12U</b>	Battery
<b>GS</b>	GPS sync
<b>DP/AL/SW</b>	Data port, alarm/monitor, sync wire opt
<b>VLB-5X LCB Battery Kit</b>	Battery, O-rings, seal adaptor, plug adaptor cable and battery retainers – one required for each upgrade
<b>VLB-67/5 LCB Software Upgrade Kit</b>	USB, cable - only one required for multiple upgrades.

## Product code

Code	Note
VLB-5X-W-1.6-24-Y	
<b>C</b>	Colour (G, R, W, Y, B)
<b>YY</b>	Version (SA - Standalone, SS-12 Self-Contained Standard)