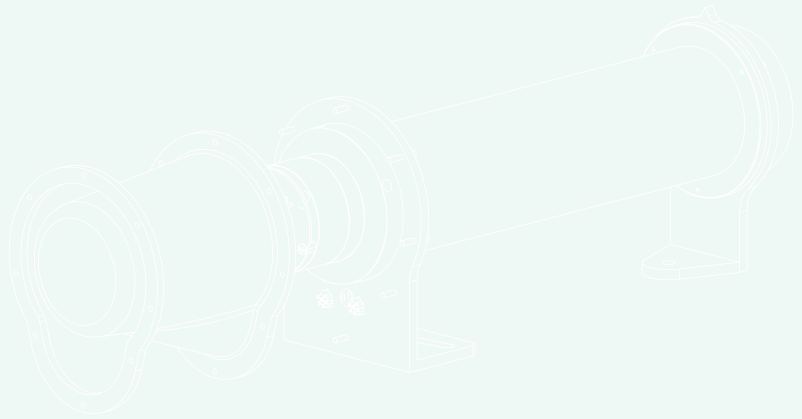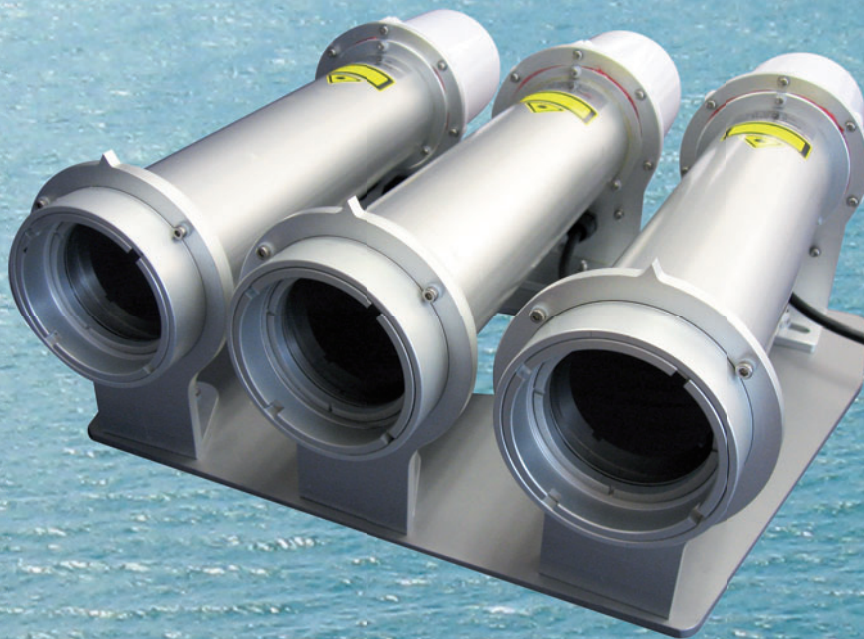*Vega* *guides the way*

VLS-46
LED SECTOR PROJECTOR

Options of 5° or 10° horizontal angle

Up to 0.8NM by day and 12NM by night at 0.74T

IALA AISM

ISO 9001
BUREAU VERITAS
Certification

VLS-46 LED SECTOR PROJECTOR

The VLS-46 forms part of the Vega sector light family. It utilises a high-powered LED light source for energy efficiency and is available in red, green, yellow and white. Two horizontal subtense models are available, 5 degree and 10 degree. The sector angle is adjustable to suit specific requirements down to 10% of the available subtense.

The VLS-46 was originally designed to be used as a set of three lanterns, red-white-green, to mark entry through a channel or into a port. However any multiple of VLS-46 projectors can be mounted together to handle a variety of navigation tasks including.

- Single sector applications to mark danger areas or vessel turning points.
- Lane separation for 2-way traffic.
- Parallel channel marking.
- A 2-station range system.
- Marking a marine reserve or boundary.

With the 5-degree horizontal subtense the VLS-46 is capable of providing a day range of up to 0.8NM and a night range of up to 11.6NM. For ranges above these refer to Vega PEL3 or PEL6 sector lights.

Additional options include:

- Factory fitted internal GPS sync to allow the VLS-46 system to synchronise with other marine lanterns. The GPS module is only fitted to one of a set at lanterns. The others sync through hard wire connection to the unit having the GPS unit fitted.
- VegaWeb web based monitoring system.
- Mounting plates for the number of VLS-46 projectors required.
- External GPS sync using VSU-29 GPS sync pulse unit.

Vega has gone to great lengths to make the VLS-46 a flexible navigation tool. Not only is the individual subtense adjustable,

the projectors can be adjusted on the base plate to align the sector and the boundaries between individual units. The mounting utilises a beam crossover concept in order to produce a more compact arrangement. Pre-alignment for the application is done at the factory from information supplied by the customer.

The electronic controller allows each projector to operate independently or to work in unison with a master projector. For example each projector can have a different flash character, intensity, or synch delay. One lantern can act as master and provides the synch pulse signal. The controller provides:

- Nine on/off daylight settings.
- Up to 246 standard flash characters, plus one additional programmable custom character.
- Up to 20 factory set custom characters.

The VLS-46 projector and base plate are made from marine grade aluminium and have an anodised finish.

The electronics are located at the end of the projector in an impact resistant modified xylex housing.

The VLS-46 is fully sealed to IP67.

- Separate day and night intensity settings.
- Up to fifteen intensity level settings for both day and night.
- Sync delay of up to 9.9 seconds.

Programming is done using the Vega IR programmer.

SPECIFICATIONS

OPTICAL PERFORMANCE

Up to 0.8NM by day, 12NM at night.

Max candela

VD	Red	Green	White
5°	4520	4750	5350
10°	760	680	970

- High intensity LED light source.
- Colours meet IALA chromaticity requirement.
- Vertical divergence ±1.5° at 100% and ±2.0° at 80% of peak intensity for 5 degree projector.

  Vertical divergence ±3.0° at 100% and ±4.0° at 80% of peak intensity for 10° projectors.
- Up to fifteen effective intensity settings matching common range requirements.
- Separate day and night intensity settings.
- 246 standard flash characters and one programmable custom character.
- Has the ability with GPS option fitted to synchronize flash character with other lights plus synch delay of up to 9.9 seconds.

- 20 factory set custom flash characters.
- Automatic Schmitt Clausen correction for flash characters to increase the light intensity and maintain the effective range. The maximum intensity of the projector cannot be exceeded.
- Flash synch delay of up to 9.9 seconds.
- Nine Lux level settings to determine day/night. transitions. IALA recommendation included.
- With sync wires connected all projectors will switch the day/night transition within 15-20 seconds of each other.
- Features programmable using IR programmer.
- Yellow colour available on request.
- Programmable low voltage cutout.
- Programmable storage mode
- Optical security mode for programming.

Electrical

Design Voltage	12VDC
Input Voltage	10-18VDC
Protection for	Reverse polarity

Current at Max Candela:

VD	Red	Green	White
5°	370mA	420mA	420mA
10°	350mA	500mA	460mA

Active off current	4mA
Standby Current	0.5mA (in day mode)
Synch input /output	Ground pulse, 10ms wide at start of character

- For current at lower intensity settings refer to Appendix A of Product Manual.
- The optional GPS module fits into one lantern which becomes the master lantern. The GPS module needs 10mA when acquiring satellite information. Acquisition normally takes 2 minutes. Factory setting for acquisition is 3 times per hour.
- Current requirement for the Vegaweb monitoring unit depends on the frequency monitoring occurs. Refer to VegaWeb technical information.

Mechanical and Environment

Temperature	-30° to +60° Celsius
Intrusion rating	IP 67
Cooling	Convection only
Salt	Continuous exposure salt water and spray
Wind	withstand winds to 100kt

Material

| Lenses	Acrylic and glass
Housing	Anodised marine grade aluminium with impact resistant acrylic back cover
Dimensions	See drawings
Focal Plane	90mm above base
Service Life	10 years
Warranty	1 year. Refer Vega warranty conditions.
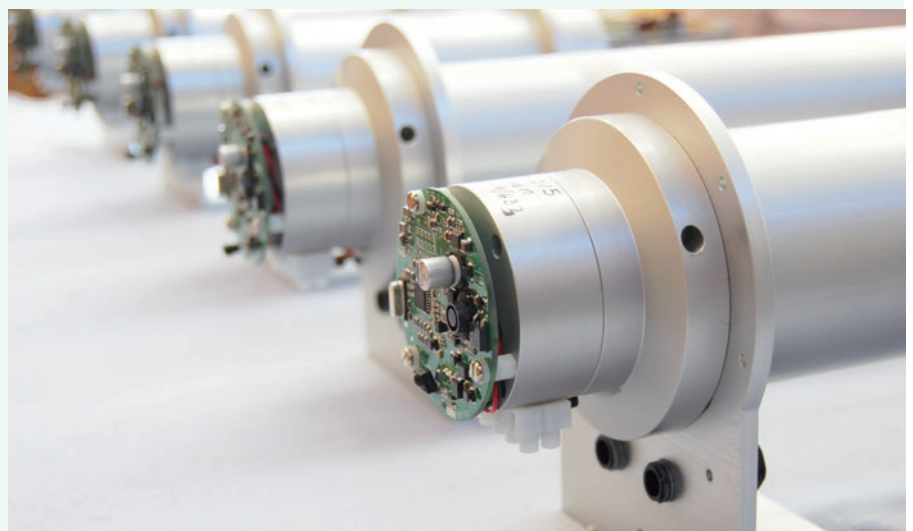
DIMENSIONS

Single Projector 5 Degree

Length	433mm with front foot
Height	150mm
Width	113mm
Height of beam centre	90mm
Weight	1.6 kg

Single Projector 10 Degree

Length	298mm with front foot
Height	150mm
Width	113mm
Height of beam centre	90mm
Weight	1.3 kg
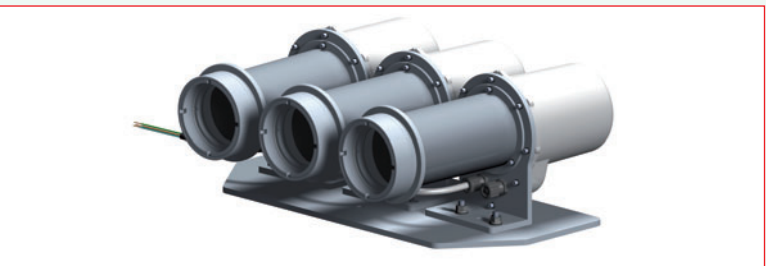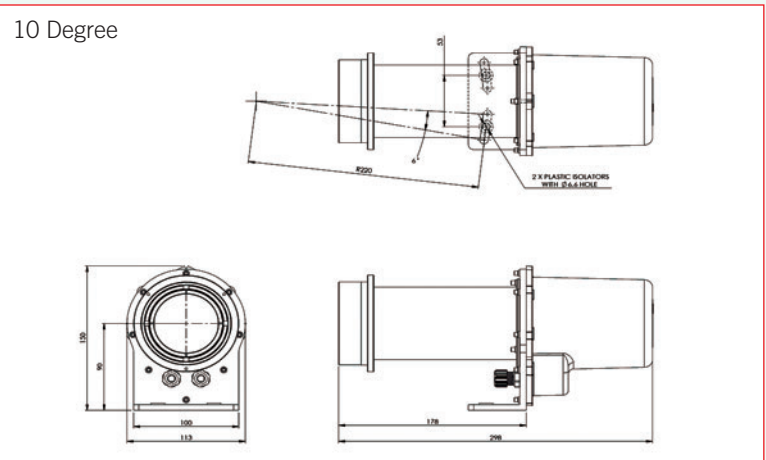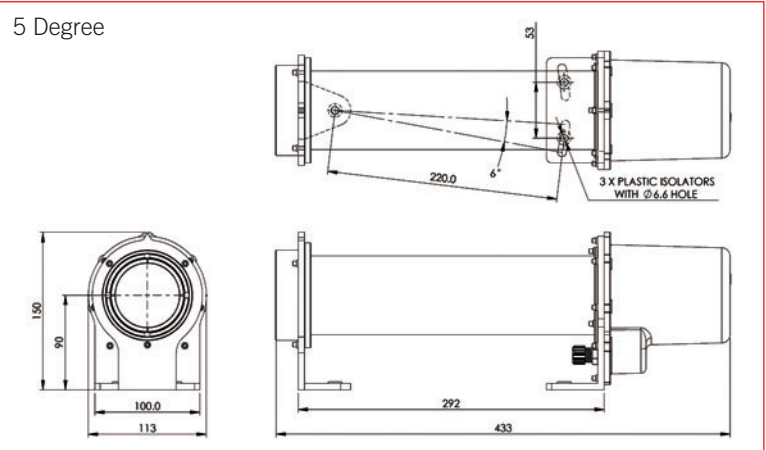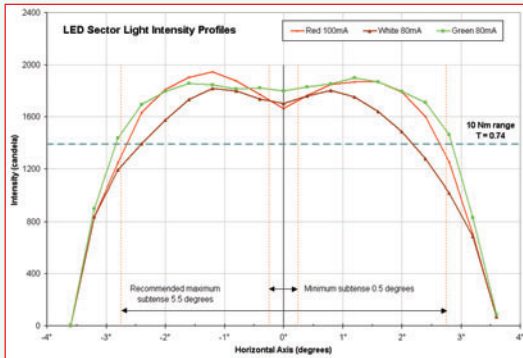
5 Degree

10 Degree

PARTS FOR ORDERING

DESCRIPTION	CODE	
VLS-46 5 degree LED projector	VLS-46-CCC-5	
VLS-46 10 degree LED projector	VLS-46-CCC-10	

Note: CCC is colour (RED, GRN, WHT)

	5 Degree	10 Degree
Base for 2 projectors	146-082	146-086
Base for 3 projectors	146-083	146-087
Base for 4 projectors	146-084	

DISTRIBUTOR