

## VLS-46U

21 - 25NM by night @ 0.74T

3.9 - 6.2NM by day @ 074T

The VLS-46 Ultra is ideal for harbours with narrow or difficult approaches. The modular design allows up to seven projectors to be placed side by side. This can be used to create unique sector angles, flash patterns and intensities.

The VLS-46 Ultra has been designed to take advantage of the latest LED technology. The key features include:

- **Peak intensity from 167,000cd**
- **1 minute of arc boundary precision when viewed from 5,000 metres**
- **Large vertical divergence for visibility by all types of vessels**
- **Only one tower is required, compared with range lights. This reduces the installation and maintenance cost by half**
- **Sectors are adjustable. Each projector can be individually adjusted to the width required for the application, within the limits defined in this brochure and product manual**
- **Energy-efficient LED technology is ideal for solar-powered sites**
- **Maintenance-free design (no moving parts) will save money and time**
- **Lightweight marine-grade aluminium construction makes the unit light and easy to handle. For example, three 5° projectors including mounting plate weigh approximately 21.8kg**



### Monitoring

#### Dataport included:

- **Cloud based monitoring option**
- **Hard-wire input/output connection**
- **AIS-type 1 or 3**
- **GPS synchronisation**

## Functionality and Features VLS-46U

### About the VLS-46U

The VLS-46U sector light brings a new solution to an old problem.

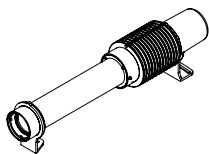
In the past, safe passage was achieved by having two leading lights lined up on top of each other to inform the mariner they were in a safe passage. If the lights were directly aligned above each other, the mariner knew they were on the centre line of their approach. However, adverse marine conditions often pushed the mariner off the centre line to an unknown and hazardous location.

With the VLS-46, the mariner will have precise red, white, green or yellow-coloured sectors (or a combination of two coloured flashes) to guide them through the channel safely.

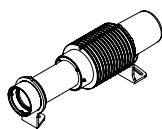
### Variants

There are two variants of projector (5° and 10°), which shine a horizontal beam that can be adjusted in width (horizontal divergence). Each projector is available in red, white or green

- 5° is the narrow-angle projector and can be adjusted between 0.5° and 5°
- 10° is the wide-angle projector and can be adjusted between 1° and 10°.



ULTRA 5 DEGREE  
246-002



ULTRA 10 DEGREE  
246-003

### How it works

Each sector light can be made up of one to seven projectors. The projectors are set up with their own beam widths, intensity and flash characters.

Alignment Options:

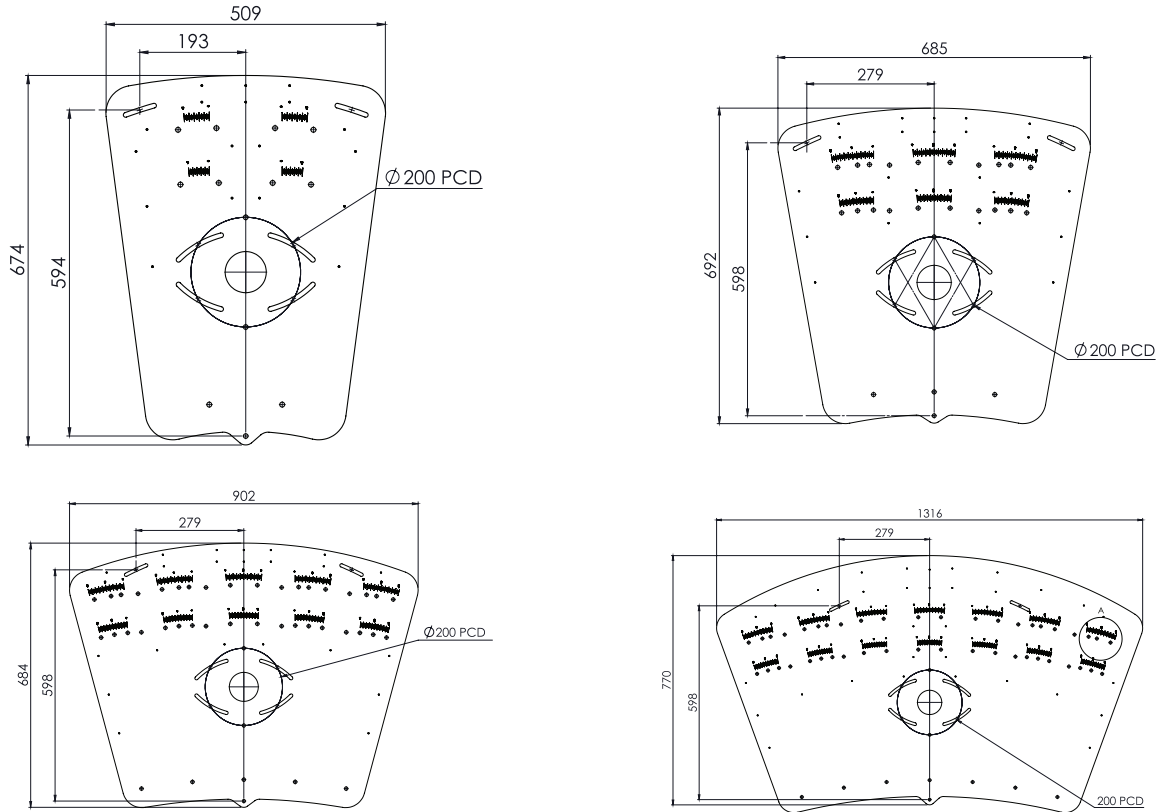
- 1 Edge to edge for traditional sector light applications.
- 2 Projectors set to the same angle to increase the range of the sector.
- 3 Overlapping and alternating beams to simulate oscillating boundaries.
- 4 Parallel beams to mark a channel that has a constant width.

### Common application

Parallel channel marking can be achieved with 4 projects installed in two separate locations. This is ideal for channels that do not decrease in widths as the vessel approached the sector light.



## Technical Specification VLS-46U



Item	Weight
5° Projector	4.5kg
10° Projector	4.4kg
2 Projector mount plate	5.9kg
3 Projector mount plate	8.3kg
5 Projector mount plate	13.2kg

### Optical Performance

#### Maximum intensity

5° Projector	40000cd	140777cd	167000cd
10° Projector	10780cd	40000cd	45500cd

#### Vertical divergence

5° Projector: 3.6° @ 50 %  
10° Projector: 7.2° @ 50 %

#### Accuracy

5° Projector: 0.017°  
10° Projector: 0.034° to 0.058°

#### Horizontal adjustment

5° Projector: 0.5° to 5°  
10° Projector: 1° to 10°

#### Schmitt-Clausen Correction

Selectable effective intensity or peak intensity

#### Day/Night control

Automatic, via day/night sensor

#### Flash character

Fully programmable (incl. presets)

## Material

<b>Housing</b>	Anodised marine-grade aluminium
<b>Lens</b>	Acrylic and glass

## Environmental

<b>Degree of Protection</b>	IP67
<b>Temperature</b>	-30°C to 50°C
<b>Salt</b>	Continuous exposure to salt water and spray
<b>Accerlation and Shock</b>	5G in all directions
<b>Wind</b>	100KT

## Electrical performance

<b>Power up to</b>	<b>61W</b>	<b>98W</b>	<b>79W</b>
Depend on external temperature, effective intensity correction and flash character			
<b>Reverse polarity protection</b>	Yes		
<b>Nominal voltage</b>	12/24VDC (30V maximum)		
<b>Input/Output</b>	Hard-wire sync, alarm, RS-232, hard-wire on/off control, day/night output		
<b>Cable length</b>	1.5m to 5.0m maximum		

## Order Overview VLS-46U

### Product code

Code	Note
VLS-46Z-D-Cc-G-BPY	
<b>Z</b>	Standard (no charcater) or U for Ultra
<b>D</b>	Divergence
<b>C</b>	Colour (R, W, G)
<b>c</b>	Quantity oif projectors in that colour (1-7)
<b>G</b>	No character or GS for GPS option
<b>BPY</b>	Base plate (BP2, 3, 5, 7)

### Product code example: VLS-46U-10-R2-W1-G1-BP5

Ultra sector light, 10°, 2 red projector, 1 white and 1 green, on a 5 projector base plate