



# ADJUSTABLE LED SECTOR LIGHT

## VLS-46 Ultra Projectors

21 - 25 NM by night and 3.9 - 6.2 NM by day\*

\* Depending on projector configuration, 0.74T

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 167,000 cd\*\*
- 1 minute of arc boundary precision when viewed from 5,000 metres\*\*
- Large vertical divergence for visibility by all types of vessels.



The VLS-46 Ultra is a great all-round solution. Talk to us today about your requirements.

\*\* White, 5°



# OUTSTANDING FUNCTIONALITY AND FEATURES

## ABOUT THE VLS-46 ULTRA

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

## BENEFITS OF THE VLS-46 ULTRA

1. Only one tower is required, compared with range lights. This reduces the installation and maintenance cost by half.
2. 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.
3. Energy-efficient LED technology is ideal for solar-powered sites.
4. Maintenance-free design (no moving parts) will save money and time.
5. 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.

## 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.

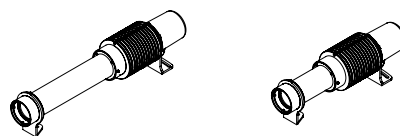
Alignment Options:

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. See example below.

## VARIANTS

There are two variants of projector (5° and 10°), which shine a horizontal beam that can be adjusted in width (horizontal divergence).

- 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

ULTRA 10 DEGREE

Each projector is available in red, white or green.

## COMMON APPLICATIONS



Parallel channel marking can be achieved with four projectors installed in two separate locations. This is ideal for channels that do not decrease in width as the vessel approaches the sector light.

# SPECIFICATIONS

## OPTICAL SPECIFICATION PER PROJECTOR

<b>Maximum Intensity</b>	5° Projector	10° Projector
- White	167,000cd	45,500cd
- Green	169,000cd	47,000cd
- Red	40,000cd	10,780cd
<b>Vertical Divergence</b>	3.6° at 50% for 5° Projector 7.2° at 50% for 10° Projector	
<b>Accuracy</b>	0.017° for 5° Projector 0.034° to 0.058° for 10° Projector	
<b>Horizontal Adjustment</b>	0.5 to 5° for 5° Projector 1 to 10° for 10° Projector	
<b>Schmitt-Clausen Correction</b>	Selectable effective intensity or peak intensity	
<b>Day/Night Control</b>	Automatic, via day/night sensor	
<b>Flash Character</b>	Fully programmable to any flash character	

## MONITORING

- Dataport included
- VegaWeb cloud based monitoring system
- Hard-wire input/output connection
- AIS-type 1 or 3
- GPS synchronisation

## ENVIRONMENTAL

<b>Intrusion Protection</b>	IP67
<b>Temperature</b>	-30°C to 50°C
<b>Salt</b>	Continuous exposure to saltwater and spray
<b>Wind</b>	100+ knots
<b>Acceleration and Shock</b>	5G in all directions

## MATERIALS

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

## WEIGHT

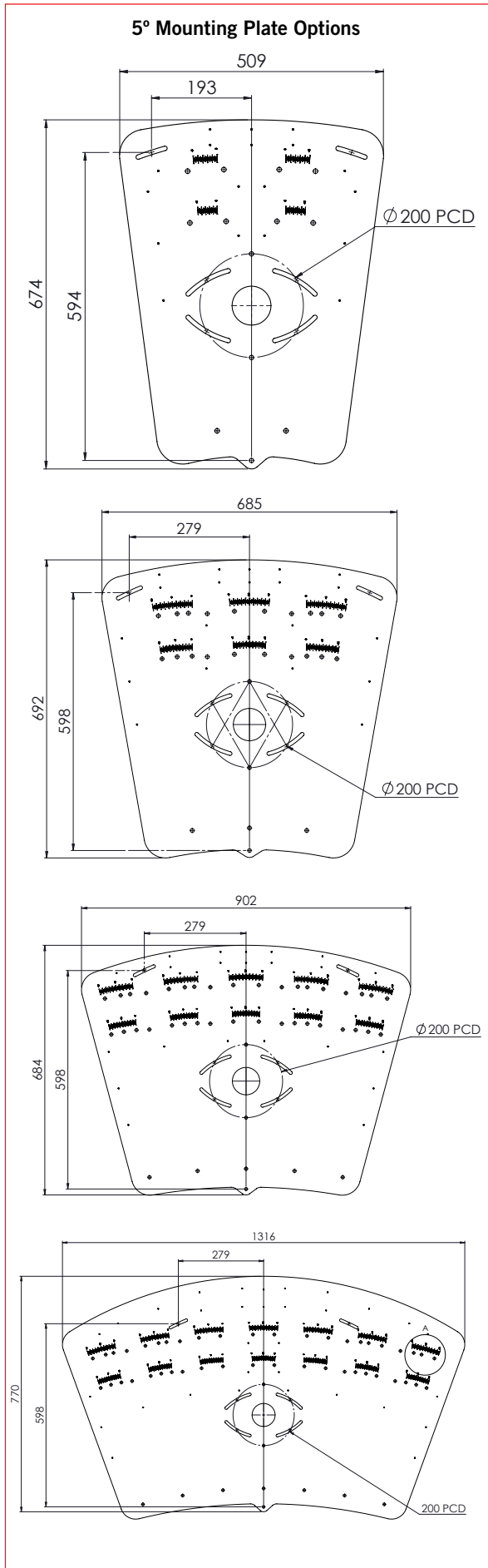
Item	Weight
5° Projector	4.5kg
10° Projector	4.4kg
2 Projector Mount Plate	5.9kg
3 Projector Mount Plate	8.3kg
5 Projector Mount Plate	13.2kg

## ELECTRICAL PERFORMANCE

<b>Nominal Voltage</b>	12/24 VDC (30V maximum)
<b>Power* Per Projector</b>	Up to 79W (white) Up to 98W (green) Up to 61W (red)
<b>Reverse Polarity Protection</b>	Yes
<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

\* Depending on external temperature, effective intensity correction and flash character.

# DIMENSIONS & WEIGHTS



# ORDER INFORMATION

**Product Name :** VLS-46 LED Sector Light

**Order Code :** VLS-46Z-D-Cc-G-BPY

Z = Standard (no character) or U for Ultra product version

D = Divergence 5° or 10°

C = Colour (R, W, G)

c = Quantity of projectors in that colour (1-7)

G = GPS no character or GS to indicate GPS option

BPY = Baseplate, size according to the number of projectors to be fitted (BP2, 3, 5 or 7)

For example: VLS-46U-10-R2-W1-G1-GS-BP5

Ultra sector light, 10°, 2 red projectors, 1 white and 1 green, with GPS fitted, on a 5 projector base plate.

**The following information is needed when enquiring about this product:**

1. Do you require the Standard or Ultra model?
2. What horizontal divergence is required 5° or 10°?
3. What number of projectors is required?
4. What colours are required?
5. Is GPS required?



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