



LED 160

Full range lantern for fixed and floating installations

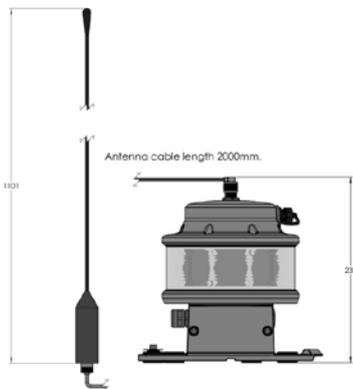
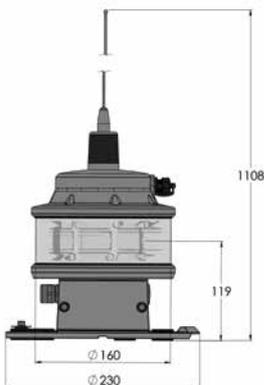
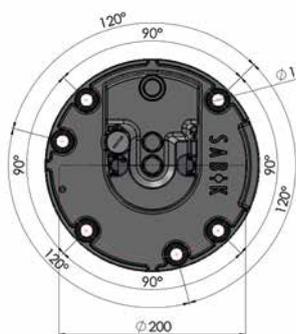
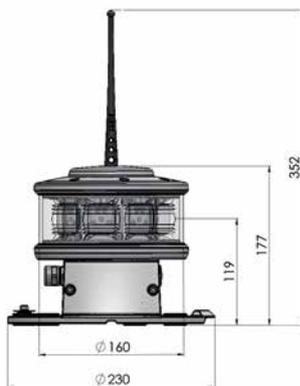
This all-round LED 160 lantern has world-class optical performance with options for buoys and fixed installations. Three different lens options available covering a range from 3 NM up to 12NM (Tc = 0,74)

- Standard IALA colours
red, green, white, yellow and blue
- Best in class optical performance
- New designed rugged injection moulded aluminium housing
- Easy field installation thanks to the integrated junction box with 3 cable entries
- Extremely low power consumption, suitable for solar and battery operation
- Integrated 16A solar panel charger
- Adjustable intensity and range
- The lantern is available in three different versions. LED 160 with Narrow 5° and with Wide 10° vertical divergence, and the LED 160H with a 2,5° vertical divergence
- Programmable with Sabik IR programmer or with Bluetooth® control from up to 50m distance
- Optionally integrated GPS synchronization
- Optionally integrated GSM/GPS remote monitoring
- Available with integrated AIS



Integrated AIS

- Available in two models: Type 1 (FATDMA) and Type 3 (RATDMA)
- AIS transponder integrated in the top part of the lantern
- Integrated GPS antenna and external VHF antenna included in the delivery
- Extremely low power consumption when used as Type 1 <45mW with 1 message/ 3 minutes (about 0,09 Ah/day)
- Support messages: 6 and 21
- Supports up to 10 virtual Aton:s



Product code example: LED-160-NG-9L

- **LED-160-NG** is Sabik code for LED 160 with narrow lens in green
- **9L** is a selection of option 9 integrated GSM/GPS monitoring

Optical performance

Maximum fixed intensity LED 160H

Max power 36 W	4300 cd
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Maximum fixed intensity LED 160N

	1150 cd	1200 cd	1000 cd	1850 cd
Power consumption	13 W	16 W	16 W	16 W

Maximum fixed intensity LED 160W

	550 cd	850 cd	550 cd	1100 cd
Power consumption	12 W	16 W	16 W	16 W

Main Technical Specification

Lens visual/Mechanical diameter	160 mm
Lens material	UV stabilized Acrylic
Light source	High Power Light Emitting Diodes
Vertical divergence	2,5°@50% of peak intensity (FWHM) 5°@50% of peak intensity (FWHM) 10°@50% of peak intensity (FWHM)
Weight	3,3 kg
Temperature range	-40° – +60°C
Supply Voltage	10 – 32 VDC
Solar Panel Charger	16 ampere PWM charger
Power consumption	13W – 16W
Power consumption LED 160H	36 W
Degree of protection	IP 67
Cable length	2 m / 6 m

Order Overview LED 160

Product codes

LED 160H High intensity lantern	LED 160N Lantern with narrow lens designed for fixed structures	LED 160W Lantern with wide lens designed for buoys	Colour
LED-160-HW	LED-160-NW	LED-160-WW	white
	LED-160-NR	LED-160-WR	red
	LED-160-NG	LED-160-WG	green
	LED-160-NY	LED-160-WY	yellow
	LED-160-NB	LED-160-WB	blue

Option matrix

GPS sync	Integrated GPS sync including GPS antenna
OPT 4L	
LightGuard GSM + GPS	Integrated GSM/GPS based monitoring including GSM/GPS antennas
OPT 9L	
Battery control card	Control card for secondary (emergency) battery
OPT 11L	
Automatic Identification System	OPT AIS 1: Lantern with integrated AIS type 1 OPT AIS 3: Lantern with integrated AIS type 3
OPT AIS	



VLB-44X

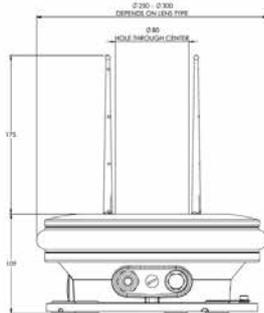
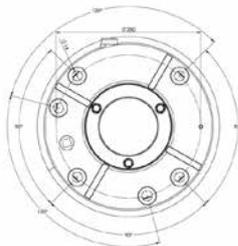
Long range lantern 6-14 NM (1-3 tiers)

The VLB-44X lantern forms part of the LED marine lantern family. The use of highly efficient optics and electronics has resulted in state-of-the-art energy efficiency.

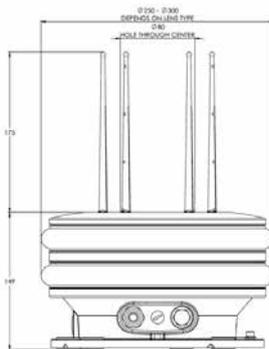
This level of efficiency significantly reduces the solar panel and battery requirements in standalone applications.

- Comes in 3 different vertical divergences to cover both fixed and floating applications: 10° (ideal for buoys), 5° (for land/pole use), 2.5° (for lighthouses)
- With 1 to 3 tiers, can be sized to match the range requirement of a particular application. Multiple units can be used to extend the range to 16 NM
- Available colours are red, green, white and yellow
- The unique optical system utilises an acrylic lens to maximise the light captured from the LED's
- The LED's are precisely graded and placed to produce a light beam with minimum variation in intensity
- A switch mode regulator maintains the light output of the LEDs independent of input of voltage and temperature

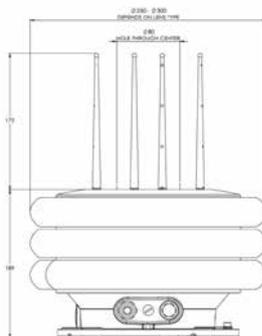




SIDE VIEW
Weight 4.5 kg



SIDE VIEW
Weight 7.2 kg



SIDE VIEW
Weight 9.9 kg

Optical Performance

Maximum intensity (Single tier)

10°	920 cd	1300 cd	1050 cd	1650 cd
5°	1400 cd	1800 cd	1500 cd	2610 cd
2.5°	2060 cd	2610 cd	2190 cd	3730 cd

Maximum intensity (Two tier)

10°	1840 cd	2600 cd	2100 cd	3300 cd
5°	2800 cd	3600 cd	4260 cd	5220 cd
2.5°	4120 cd	5220 cd	4380 cd	7460 cd

Maximum intensity (Three tier)

10°	2760 cd	3900 cd	3150 cd	4950 cd
5°	4200 cd	5400 cd	4500 cd	7830 cd
2.5°	6180 cd	7830 cd	6570 cd	11190 cd

Main Technical Specification

Light source	High-Intensity LEDs
Colours available	Red, Green, White, Yellow
Vertical divergence	2.5°@50% of peak 5°@50% of peak 10°@50% of peak
Weight	4.5 kg + 2.7 kg each additional tier
Temperature	-30° – +50°C
Voltage	12 VDC (10-18 VDC)
Intrusion protection	MIL-STD-202G Method 104A, Cond A P68, 1.5m for 60 minutes
Lens	Machined cast acrylic; UV-protected
Base	Marine grade aluminium
Degree of protection	IP 67
Cable length	2 m / 6 m

Order Overview VLB-44X

Product code

Code	Note
VLB44X-xT-cddd(-GS)	
c	Colour (R, G, Y, W)
ddd	Vertical divergence (2D5, 05D, 10D)
x	Tiers (1 to 3)

Option matrix

GS	GPS synchronization
VLB-44XE	Extended I/O



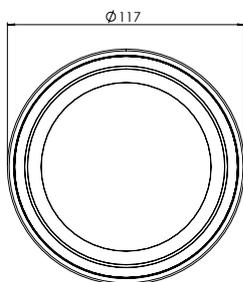
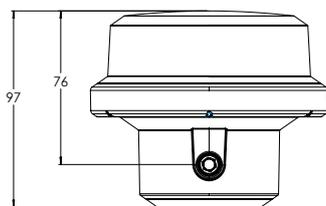
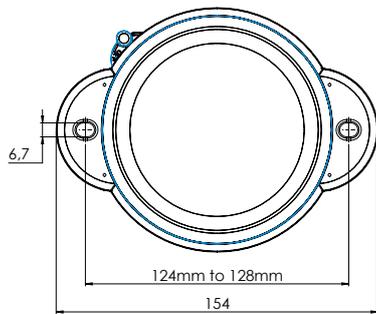
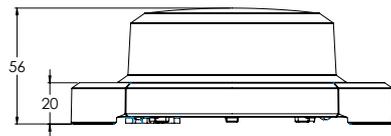
M550

Self-contained LED lantern, 1 to 2 NM range

This miniature solar LED marine lantern offers leveraging custom optics, high-efficiency solar panels and premium materials. Now with replaceable, recyclable batteries this lantern provides excellent value and reliable operation over the long term. Battery life expectancy is five years with product life up to 10 years and a three-year warranty. Ideal for marine aids-to-navigation, marina lighting, dock lighting, and port lighting. To view performance in your installation location, visit www.sabik-marine.com ->Marine Selector Tool

- 40 user-adjustable flash patterns and programmable intensities
- Replaceable, recyclable, high-temperature-rated NiMH AA batteries
- Automatic Light Control (ALC) 2.0; achieve optimal intensities throughout the year
- Premium grade, UV resistant polycarbonate body and lens material
- IP 68 rated
- Ventilated battery compartment





Optical performance

Maximum fixed intensity

18 cd	23 cd	29 cd	25 cd	8 cd
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Main Technical Specification

Construction	Premium grade, UV resistant polycarbonate lens/head and polycarbonate/polysiloxane co-polymer base.
Lens visual/Mechanical diameter	102 mm
Lens material	UV stabilized polycarbonate
Light source	High Flux Surface Mount LED
Solar module	High efficiency cells ; 0,6 W
Battery	3 NiMH AA cells; 3.6 V / 1.1 Ah capacity
Degree of ingress protection	IP 68
Weight	Flange Mount: 0.37 kg (0.8 lbs) Pole Mount: 0.40 kg (0.9 lbs)
Overall height	56 mm (flange mount), 97 mm (pole mount)
Overall width	155 mm dia.
Installation	2 x M6 on 128 mm dia.

Order Overview M550

Product codes

Colour	M550 Flange	M550 Flange switched	M550 Pole
red	M550RF	M550RF-S	M550RP
green	M550GF	M550GF-S	M550GP
white	M550WF	M550WF-S	M550WP
yellow	M550YF	M550YF-S	M550YP
blue	M550BF	M550BF-S	M550BP

Option matrix

M550 Flange Mount - Switched	2-bolt mount with ON/OFF switch
M550 Flange Mount	2-bolt mount
M550 Pole Mount	Pole mount

Accessories

59935	Pole Mount Replacement/Conversion Kit
70943	Flange Mount Replacement/Conversion Kit
70937	Switched Kit (compatible with Flange Mount only)
70955	Replacement NiMH batteries
59934	Bird Deterrent (single)



M650H

Self-contained LED lantern for buoys and minor beacons, 2 to 4 NM Range

The M650H is a cost-effective, self-contained, high-performance, low-maintenance and easy-to-install solar LED marine lantern. The M650H features a replaceable battery pack that extends the service life beyond five years, reducing the total cost of ownership. Applications include: marine aids-to-navigation marking, marina lighting, dock lighting, and port lighting. To view performance in your installation location, visit www.sabik-marine.com ->Marine Selector Tool

- **Standard IALA colours**
red, green, white, yellow, blue
- **High-efficiency solar cells with bypass and blocking diode function. Maximum power point tracking (MPPT) for optimal energy collection**
- **Premium grade UV resistant, polycarbonate/ polysiloxane co-polymer body and lens material**
- **Colour-specific temperature corrected LED drivers provide consistent intensity under all operating conditions**
- **IP 68 rated. Double O-ring sealing with waterproof vent**
- **SLA battery**
- **Ventilated battery compartment**
- **Adjustable intensity and range**
- **Vertical divergence > 8° (FWHM)**
- **Programmable with On-Board User Interface, USB port, or optional wireless IR-Programmer**
- **Integrated event-log**
- **Optional ON/OFF switch**
- **Optional external charger**
- **Optional integrated GPS synchronization**



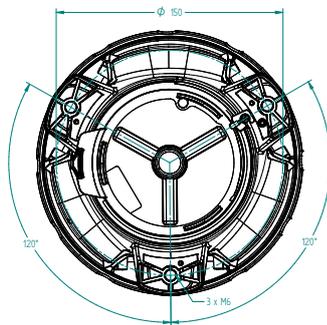
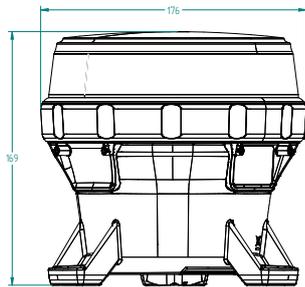
Optical performance

Maximum fixed intensity

31 cd	45 cd	60 cd	52 cd	15 cd
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Main Technical Specification

Lens visual/Mechanical diameter	165 mm
Lens material	UV stabilized Polycarbonate
Light source	High Power Light Emitting Diode (LED)
Vertical divergence	>8° (FWHM)
Solar module	High efficiency cells; bypass and blocking diodes; MPPT; 1.5 W
Battery	AGM sealed lead acid; 4.2 V / 5 Ah capacity
Degree of ingress protection	IP 68
Weight	1.58 kg
Overall height	169 mm
Overall width	176 mm dia.
Installation	3 x M6 on 150 mm dia.



Order Overview M650H

Product codes

Colour	M650H	M650H switched	M650H GPS	M650H switched GPS
red	M650HR	M650HR-S	M650HR-GPS	M650HR-SGPS
green	M650HG	M650HG-S	M650HG-GPS	M650HG-SGPS
white	M650HW	M650HW-S	M650HW-GPS	M650HW-SGPS
yellow	M650HY	M650HY-S	M650HY-GPS	M650HY-SGPS
blue	M650HB	M650HB-S	M650HB-GPS	M650HB-SGPS

Option matrix

M650H	
M650H Switched	ON/OFF switch
M650H Switched GPS	Includes GPS synchronization & ON/OFF switch
M650H GPS	Includes GPS synchronization

Accessories

57003	650 Bird Deterrent – Additional (1 ships with each lantern)
57392	650 Bottom Cover Replacement Pack Switched
57393	650 Bottom Cover Replacement Pack
59198	650 Bottom Cover Tool
72835	650 Battery Replacement Pack
59188	650 International Wall Charger Assembly
57394	650 USB Cable
69899	IR (Infrared) Programmer

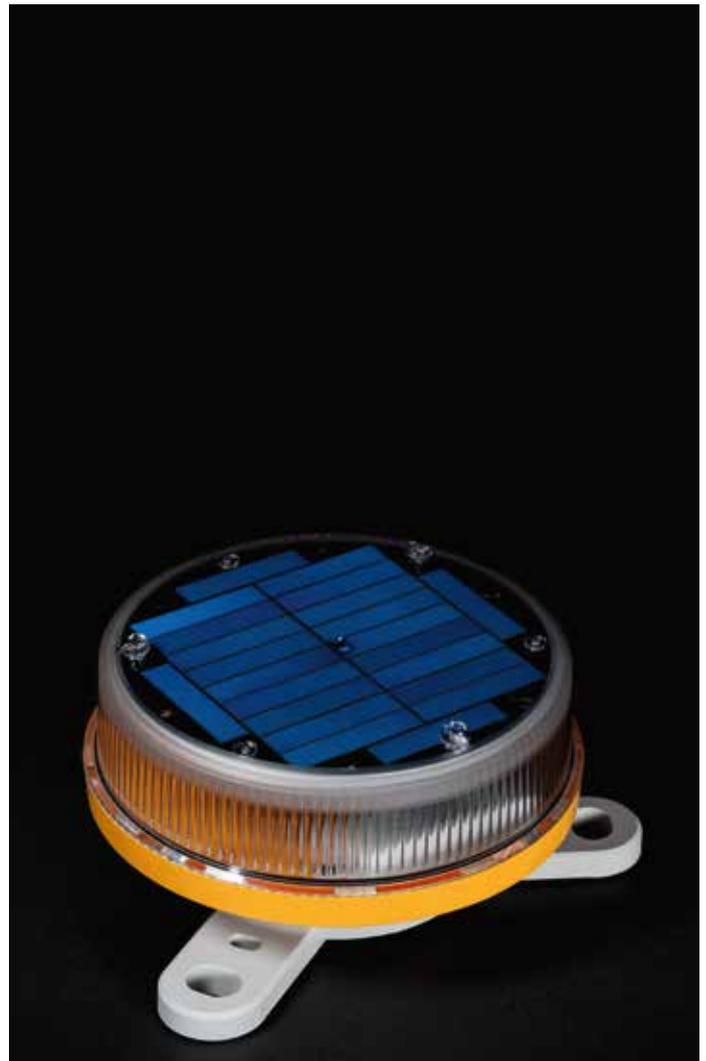


M660

Self-contained LED lantern for buoys and minor beacons, up to 4 NM Range

The M660 is a high-performance, longlife, easy-to-use and cost-effective self-contained solar LED marine lantern. The M660 features a Li-ion battery pack that extends the service life of the lantern up to eight years. M660 has four different mounting options and can be controlled with Bluetooth® Control. To view performance in your installation location, visit Marine Selector Tool in www.sabik-marine.com ->Marine Selector Tool

- **Standard IALA colours**
red, green, white, yellow, blue
- **Ventilated battery compartment**
- **Adjustable intensity and range**
- **Vertical divergence > 8° (FWHM)**
- **High-efficiency solar cells. Maximum Power Point Tracking (MPPT) for optimal energy collection**
- **Premium grade UV resistant, polycarbonate/poly siloxane co-polymer body and lens material**
- **IP 68 rated. O-ring sealing with waterproof vent**
- **Li-ion battery, optional dual pack**
- **Programmable with Bluetooth® Control and IR-Programmer**
- **Optional ON/OFF switch, external charger and charging port**
- **Built-in calendar function for automatic deactivation during off-season months**



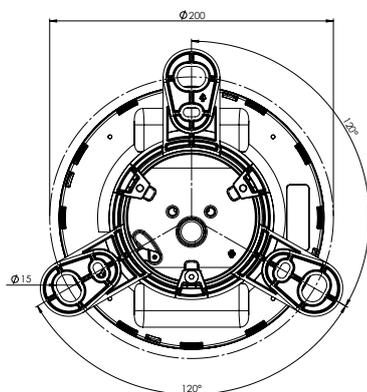
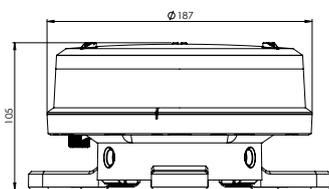
Optical performance

Maximum fixed intensity

40 cd	42 cd	71 cd	52 cd	18 cd
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Main Technical Specification

Lens visual/Mechanical diameter	177 mm
Lens material	UV stabilized Polycarbonate
Light source	High Power Light Emitting Diode (LED)
Vertical divergence	>8° (FWHM)
Solar module	High efficiency cells; MPPT; 2.5 W
Battery	Li-ion; 3.6 W / 6 Ah capacity; can be ordered with 1 or 2 battery packs
Degree of ingress protection	IP 68
Weight	0.8 kg
Overall height (excl. bird deterrents)	105 mm
Installation (adapter)	3 x M6 on 150mm and 3 x M12 on 200mm
Installation (pole mount)	70 or 72 diameter



Order Overview M660

Product codes

Colour	M660	M660 switched	M660 dual battery	M660 charge port
red	M660R	M660R-S	M660R-2B	M660R-C
green	M660G	M660G-S	M660G-2B	M660G-C
white	M660W	M660W-S	M660W-2B	M660W-C
yellow	M660Y	M660Y-S	M660Y-2B	M660Y-C
blue	M660B	M660B-S	M660B-2B	M660B-C

Option matrix

M660	
M660 Switched	ON/OFF switch
M660 Dual Battery	Dual Battery Pack
M660 Charge Port	With Charge Port

Accessories

69934	660 Bird Deterrent – Single
79848	Spare adapter (incl. screws)
79273	Optional switch
69885	660 International Wall Charger Assembly
69899	IR (Infrared) Programmer
38334	660 Standard Bolt Kit

Product code example: M660RSC2B

- **M660R** is Sabik/Carmanah code for M660 in red
- with a selection of switched with charge port and dual battery



M850

**Self-contained LED lantern,
3 to 6+ NM Range**

The M850 combines a compact, high-efficiency solar engine with premium components and a rugged design for best-in-class performance at an optimal price. This lantern is suitable for use in most solar locations. To view performance in your installation location, visit www.sabik-marine.com ->Marine Selector Tool

- Option for standard or wide divergences (for fixed or floating applications)
- Multiple cost-effective battery pack options suitable for a wide variety of installation locations
- Built-in calendar function for automatic deactivation during off-season months
- Top-mounted 4-character LED display with simple »tap to activate« functionality
- Premium grade, UV resistant polycarbonate lens material
- Environmentally friendly, super durable powder-coated aluminium chassis
- Adjustable intensity and range
- IP 68 rated
- GPS synchronized flash option
- Remote monitoring options available



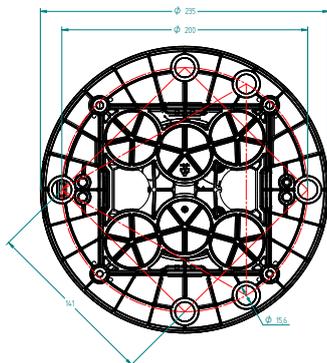
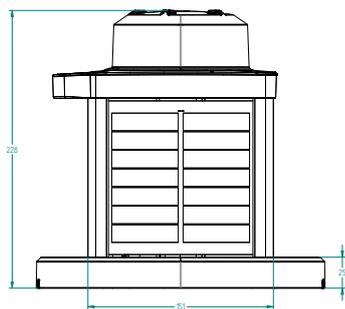
Optical performance

Maximum fixed intensity

M850	239 cd	290 cd	445 cd	320 cd
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Main Technical Specification

Lens visual/Mechanical diameter	111 mm
Construction	Premium grade, UV resistant polycarbonate lens/head and polycarbonate/polysiloxane co-polymer base
Light source	High Flux Surface Mount LEDs with colour-specific temperature-corrected LED driver
Vertical Divergence (FWHM)	8° (standard) or 10° (wide)
Solar modules	High-efficiency cells; MPPT; 4 x 1,7 W
Battery	Two replaceable, recyclable battery options, AMG sealed lead acid; 60 Wh / 6.3 V / 10 Ah capacity and 96 Wh / 6.3 V / 16 Ah capacity
Degree of ingress protection	IP 68 immersion
Weight	4.5 kg M850 60X 5.3 kg M850 96E
Overall height	226 mm
Overall width	235 mm dia.
Installation	3, 4 or 5 x M12 on 200 mm dia.
Charge port	Factory option
GPS sync	Factory option
Remote monitoring	Optional satellite monitoring



Order Overview M850

Product codes

Colour	M850 60X (GPS) (Sat. monitoring)	M850 96E (GPS) (Sat. monitoring)
red	M850R-60X (-GPS)(-MON)	M850R-96E (-GPS)(-MON)
green	M850G-60X (-GPS)(-MON)	M850G-96E (-GPS)(-MON)
white	M850W-60X (-GPS)(-MON)	M850W-96E (-GPS)(-MON)
yellow	M850Y-60X (-GPS)(-MON)	M850Y-96E (-GPS)(-MON)



M860

**Self-contained LED lantern,
4 to 7+ NM Range**

With a durable, large-format solar engine, the M860 is engineered for consistent, reliable performance at remote installations and in challenging insolation locations. This is a premium and full-featured lantern that is suitable for achieving longer ranges in challenging insolation locations. To view performance in your installation location, visit

www.sabik-marine.com ->Marine Selector Tool

- Option for standard or wide divergences (for fixed or floating applications)
- Multiple cost-effective battery pack options suitable for a wide variety of installation locations
- Built-in calendar function for automatic de-activation during off-season months
- Top-mounted 4-character LED display with simple »tap to activate« functionality
- Premium grade, UV resistant polycarbonate lens material
- Environmentally friendly, super durable powder-coated aluminium chassis
- Adjustable intensity and range
- IP 68 rated
- GPS synchronized flash option
- Remote monitoring options available



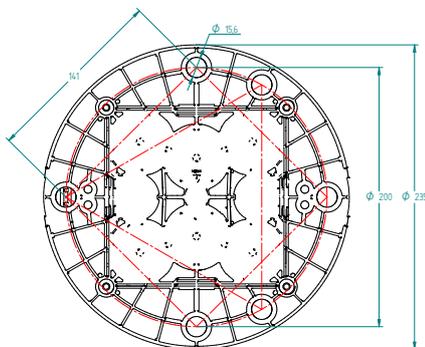
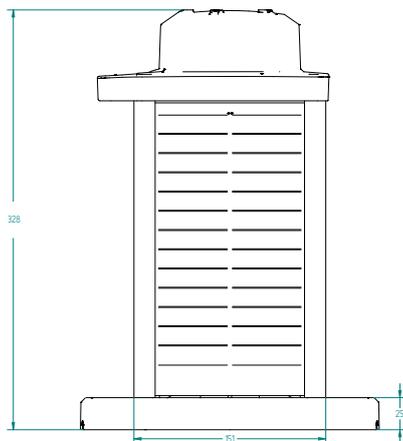
Optical performance

Maximum fixed intensity

M860	239 cd	290 cd	445 cd	320 cd
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Main Technical Specification

Lens visual/Mechanical diameter	111 mm
Construction	Premium grade, UV resistant polycarbonate lens/head and polycarbonate/polysiloxane co-polymer base
Light source	High Flux Surface Mount LEDs with colour-specific temperature-corrected LED driver
Vertical divergence (FWHM)	8° (standard) or 10° (wide)
Solar modules	High-efficiency cells; MPPT ; 4 x 3,8 W
Battery	Two replaceable, recyclable battery options, AGM sealed lead acid; 96 Wh / 6.3 V / 16 Ah capacity and 200 Wh / 8.4 V / 25 Ah capacity
Degree of ingress protection	IP 68 immersion
Weight	6.4 kg M860 96E 10.2 kg M860 200BC
Overall height	328 mm
Overall width	235 mm dia.
Installation	3, 4 or 5 x M12 on 200 mm dia.
Charge port	Factory option
GPS sync	Factory option
Remote monitoring	Optional satellite monitoring



Order Overview M860

Product codes

Colour	M860 96E (GPS) (Sat. monitoring) (with 96Wh battery)	M860 200BC (GPS) (Sat. monitoring) (with 200Wh battery)
red	M860R-96E (-GPS)(-MON)	M860R-200BC (-GPS)(-MON)
green	M860G-96E (-GPS)(-MON)	M860G-200BC (-GPS)(-MON)
white	M860W-96E (-GPS)(-MON)	M860W-200BC (-GPS)(-MON)
yellow	M860Y-96E (-GPS)(-MON)	M860Y-200BC (-GPS)(-MON)



VLB-5X-SS

Self-contained LED lantern for buoys and beacons up to 5,5 NM range

The VLB-5X-SS 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)
- Available with GPS synchronization



Optical Performance

Maximum peak intensity

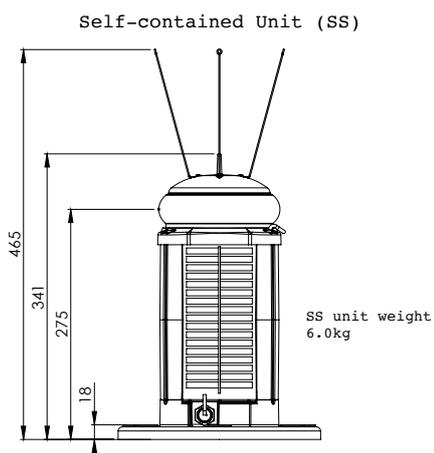
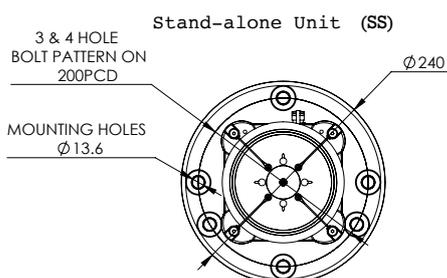
7°	177cd	177cd	177cd	157cd
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Optical specification

Light source	High Power Light Emitting Diode (LED)
Vertical divergence	7° @ 50% peak
Temperature control	LEDs monitored for constant intensity control and over temperature protection

Main Technical Specification

Nominal Range	Up to 5.5 NM
Lens	Moulded acrylic (PMMA)
Base	Injection Moulded UV Stabilized Nylon 6/6 with 30% glass fill
Body	Injection Moulded UV Stabilized Nylon 6/6 with 30% glass fill
Designed service life	10 years (excluding battery)
Weight	6 kg
Flash character	256 standard characters plus custom character
Temperature range	-40° – +50°C
Battery capacity	12 Ah
Voltage	12 VDC (9-18 VDC)
Degree of protection	IP 68



Order Overview VLB-5X-SS

Option matrix

DP-AL-SW	Dataport, alarm/monitor & wire synch factory option
GS	Internal GPS sync module as factory option



SC 160 I

Self-contained LED lantern for buoys and beacons

SC 160 I is a self-contained medium range LED lantern with best-in-class optical performance for fixed and floating structures. The lantern includes solar panels, battery and charge controller. This lantern is designed for harsh marine environments and for long uninterrupted operation.

- Range up to 8 NM (Tc=0,74) 11 NM (Tc=0,85) depending on geographical location
- Standard IALA colours red, green, white, yellow
- Lantern made of rugged injection moulded aluminium housing and UV resistant polyethylene body
- Integrated flasher with day-light switch and solar charger
- Standard VRLA battery and ventilated battery compartment , Li-ion battery optional
- Solar modules covered with tempered glass
- Adjustable intensity and range
- Available with narrow (5°) or wide (10°) vertical divergence
- Programmable with Bluetooth® Control mobile app up to 50 m radius
- Other wireless programming options available such as Sabik Easy Programmer or PC/USB interface
- Integrated event log for 365 days
- Optional integrated GPS synchronization and GSM Remote monitoring
- Available with AIS
- External charge port or external solar module



Integrated AIS

- Available in two models: Type 1 (FATDMA) and Type 3 (RATDMA)
- AIS transponder integrated in the top part of the lantern
- Integrated GPS antenna and external VHF antenna included in the delivery
- Extremely low power consumption when used as Type 1 <45mW with 1 message/3 minutes (about 0,09 Ah/day)
- Support messages: 6 and 21
- Supports up to 10 virtual Aton:s

Optical Performance

Maximum fixed intensity SC 160 IN (5° @ 50% peak intensity FWHM)

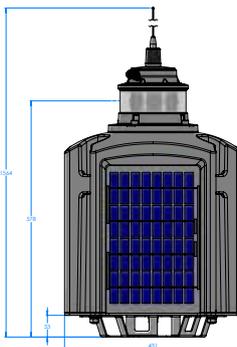
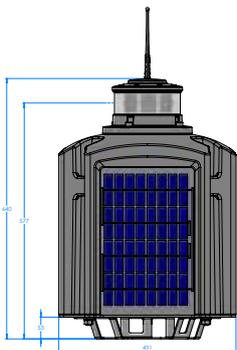
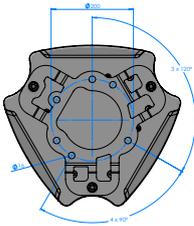
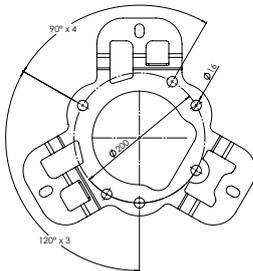
	1150 cd	1200 cd	1000 cd	1850 cd
Power consumption	13 W	16 W	16 W	16 W

Maximum fixed intensity SC 160 IW (10° @ 50% peak intensity FWHM)

	620 cd	720 cd	620 cd	1100 cd
Power consumption	13 W	16 W	16 W	16 W

Main Technical Specification

Lens visual/Mechanical diameter	160 mm
Lens material	UV stabilized acrylic
Light source	High Power Light Emitting Diodes (LEDs)
Vertical divergence options	5°@50% of peak intensity (FWHM) 10°@50% of peak intensity (FWHM)
Solar modules	3 x 10 W
Battery	VRLA GEL-Type, 32Ah/12V; Li-ion 35Ah/12V
Weight	27 Kg
Overall height	583 mm
Overall width	431 mm dia.
Power consumption	13W - 16W
Installation	3 x M12 on 330 mm dia.



Order Overview SC 160 I

SC160 I with VRLA Battery

N = Narrow (5° @ 50 % peak intensity) W = Wide (10° @ 50 % peak intensity)

Red	SC-160-1-NVR	Red	SC-160-1-WVR
Yellow	SC-160-1-NVY	Yellow	SC-160-1-WVY
Green	SC-160-1-NVG	Green	SC-160-1-WVG
White	SC-160-1-NVW	White	SC-160-1-WVW

Example: SC160-1-WVW-4L

- **SC-160-1-WVW** is the code for SC160 I with VRLA battery and wide lens in white
- **4L** is a selection for option 4L Integrated GPS sync including GPS antenna

Option matrix

GPS sync	Integrated GPS sync including GPS antenna
OPT 4L	
LightGuard GSM + GPS	Integrated GSM/GPS based monitoring including GSM/GPS antennas
OPT 9L	
OPT 11L	Control card for secondary (emergency) battery
Automatic Identification System	OPT AIS 1: Lantern with integrated AIS type 1 OPT AIS 3: Lantern with integrated AIS type 3
OPT AIS	



SC 160 II

Self-contained LED lantern for buoys and beacons

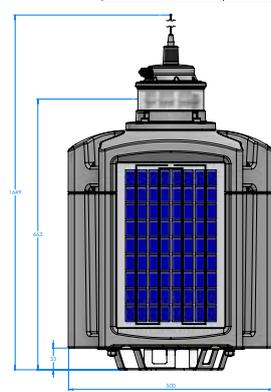
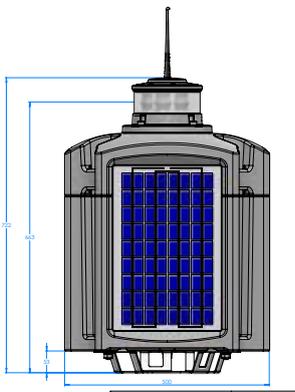
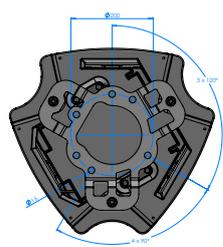
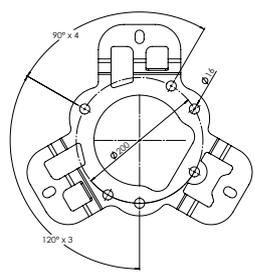
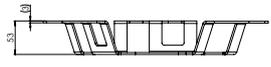
SC 160 II is a self-contained LED lantern with best in class optical performance for fixed and floating structures with longer range. The lantern includes solar panels, battery and charge controller. This lantern is designed for harsh marine environments and for long uninterrupted operation.

- Range up to 10 NM (Tc=0,74) 14 NM (Tc=0,85) depending on geographical location
- Standard IALA colours red, green, white, yellow
- Lantern made of rugged injection moulded aluminium housing and body of UV resistant polyethylene
- Integrated flasher with day-light switch and solar charger
- Standard VRLA battery and ventilated battery compartment
- Adjustable intensity and range
- Available with narrow (5°) or wide (10°) vertical divergence
- Programmable with Bluetooth Control mobile app up to 50 m radius
- Other wireless programming options available such as Sabik Easy Programmer or PC/USB interface
- Integrated event log for 365 days
- Optionally integrated GPS synchronization and GSM Remote monitoring
- External charge port or external solar module
- Available with AIS option



Integrated AIS

- Available in two models: Type 1 (FATDMA) and Type 3 (RATDMA)
- AIS transponder integrated in the top part of the lantern
- Integrated GPS antenna and external VHF antenna included in the delivery
- Extremely low power consumption when used as Type 1 <45mW with 1 message/3 minutes (about 0,09 Ah/day)
- Support messages: 6 and 21
- Supports up to 10 virtual Aton:s



Optical Performance

Maximum fixed intensity SC 160 IIN (5° @ 50% peak intensity)

	1150 cd	1200 cd	1000 cd	1850 cd
Maximum power consumption	13 W	16 W	16 W	16 W

Maximum fixed intensity SC 160 IIW (10° @ 50% peak intensity)

	620 cd	720 cd	620 cd	1100 cd
Maximum power consumption	13 W	16 W	16 W	16 W

Main Technical Specification

Lens visual/Mechanical diameter	160 mm
Lens material	UV stabilized acrylic
Light source	High Power Light Emitting Diodes (LEDs)
Vertical divergence options	5°@50% of peak intensity (FWHM) 10°@50% of peak intensity (FWHM)
Solar modules	3 x 11 W
Battery	VRLA GEL-Type, 60Ah/12V
Weight	35 Kg
Overall height	669 mm
Overall width	500 mm dia.
Power consumption	13W - 16W
Installation	3 x M12 on 330 mm dia.

Order Overview SC 160 II

SC160 II with VRLA Battery

N = Narrow (5° @ 50 % peak intensity)		W = Wide (10° @ 50 % peak intensity)	
Red	SC-160-2-NVR	Red	SC-160-2-WVR
Yellow	SC-160-2-NVY	Yellow	SC-160-2-WVY
Green	SC-160-2-NVG	Green	SC-160-2-WVG
White	SC-160-2-NVW	White	SC-160-2-WVW

Example: SC-160-2-WVR-4

- SC-160-2-WVR is the code for SC160 II with VRLA battery and wide lens in red
- 4 is a selection of option 4L GPS sync including GPS antenna

Option matrix

GPS sync	Integrated GPS sync including GPS antenna
OPT 4L	
LightGuard GSM + GPS	Integrated GSM/GPS based monitoring including GSM/GPS antennas
OPT 9L	
Automatic Identification System	OPT AIS 1: Lantern with integrated AIS type 1 OPT AIS 3: Lantern with integrated AIS type 3 Refer page 140



SCLO 200M

Self-contained range light with
14 NM Range

- Range up to 14 NM (Tc=0,74)
22 NM (Tc=0,85)
- Standard IALA colours
red, green, white and yellow
- Light module of rugged aluminium
housing and body of UV resistant polyethylene
- Light horizontally and vertically
adjustable in the field
- Integrated flasher with day-light
switch and solar charger
- Ventilated battery compartment
- Durable solar panels with tempered glass
- Adjustable intensity and range
- Programmable with Sabik standard IR
programming devices
- Light can be programmed and controlled up to 50
meter distance with a smart phone using Sabik
Bluetooth Control
- Optional integrated GPS synchronization
- Optional integrated GSM/GPS remote monitoring



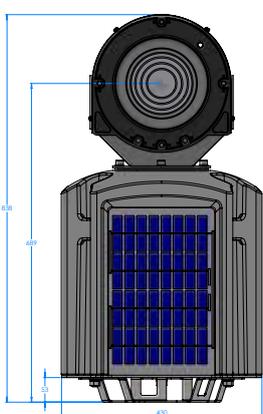
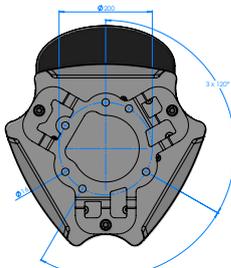
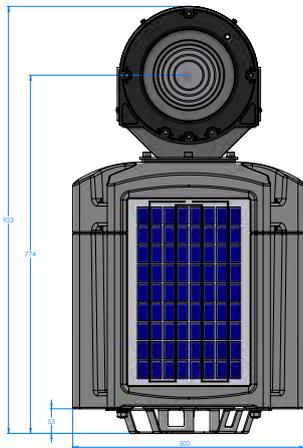
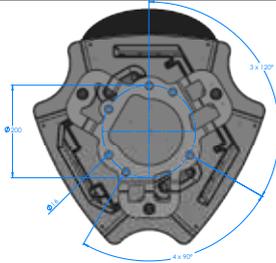
Optical performance

Maximum fixed intensity

At full power	7000 cd	7000 cd	7000 cd	13000 cd
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Main Technical Specification

	up to 3 Nautical miles	up to 4 Nautical miles
Lens visual/Mechanical diameter	203 mm	
Lens material	UV stabilized Polycarbonate	
Light source	Light Emitting Diodes (LEDs)	
Horizontal divergence	8° @ 50% (±1°) of peak intensity	
Unit lifetime	Up to 10 years	
Weight	39 kg	
Overall height	870 mm	
Overall width	500 mm dia	
Power consumption	max 4 W	
Light unit degree of protection	IP 66	
Solar Modules	3 x 11W	
Battery	VRLA GEL-Type, 60Ah/12V	
Installation	3 x M10 on 330 mm dia	



Order Overview SCLO 200M

Product codes

Product	Colour
SCLO-200-MW	white
SCLO-200-MR	red
SCLO-200-MG	green
SCLO-200-MY	yellow

Product code example: SCLO-200-MR-7-9

- **SCLO-200-MR** is Sabik code for SCLO 200M in red
- **7-9** is a selection of option 7 with external GPS antenna and option 9 with GSM/GPS monitoring

Option matrix

OPT 4: GPS sync	GPS sync including external GPS antenna
OPT 9: LightGuard GSM + GPS	Integrated GSM based monitoring including GSM/GPS antennas
OPT 10: LightGuard GSM	Integrated GSM based monitoring including GSM antenna
OPT 12: Aux card with I/O	Aux card including I/O ports
OPT 13: Aux card with RS485 and I/O	Aux card including RS 485 and I/O port
Shock & Tilt Sensor	Integrated 3-axis G sensor for tilt and shock sensing



LO 200M

Medium Intensity LED Range Light

The LO 200M signal is designed for applications requiring medium and long range directional light, such as range lights and port entry signals.

- Equipped with a high intensity power LED and especially designed optics
- Robust aluminium IP 66 housing
- Visual range up to 14NM (Tc = 0,74)
- Standard IALA colours red, green, white and yellow
- Extremely low power consumption, suitable for solar and battery operation
- Vertical divergence 8° @ 50% of peak intensity
- Integrated flasher with 16 A solar panel charger
- Adjustable intensity and range
- Programmable with Sabik standard IR programming devices
- Optional integrated GPS synchronization
- Optional integrated GSM remote monitoring
- Equipped with Bluetooth programming



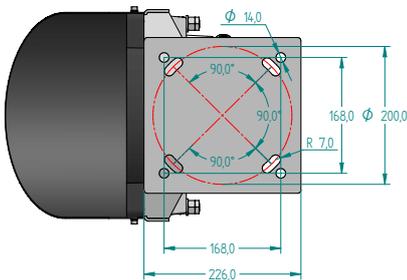
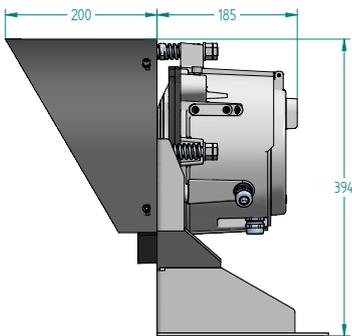
Optical performance

Maximum fixed intensity

At full power	7000 cd	7000cd	7000cd	13000cd
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Main Technical Specification

Lens visual/Mechanical diameter	203 mm (8")
Lens material	UV stabilized polycarbonate
Light source	Light Emitting Diode (LED)
Lens horizontal divergence	6° @ 50 % (± 1°) of peak intensity
Unit lifetime	Up to 10 years
Weight	11,7 kg
Temperature range	-40°...+60°C
Supply Voltage	9 – 32 VDC
Power consumption	4W at full intensity
Degree of protection	IP 67
Cable length	2 m / 6 m



Order Overview LO 200M

Product codes

Product	Colour
LO-200-MW	white
LO-200-MR	red
LO-200-MG	green
LO-200-MY	yellow

Product code example: LO-200-MR-4

- **LO-200-MR** is Sabik code for LO 200M in red
- **4** is a selection of option 4

Option matrix

OPT 4: GPS sync	Integrated GPS sync including GPS antenna
OPT 9: LightGuard GSM + GPS	Integrated GSM based monitoring including GSM/ GPS antennas
OPT 10: LightGuard GSM	Integrated GSM based monitoring including GSM antenna
OPT 11: Control card	Control card for secondary battery
OPT 12: Aux card with I/O	Aux card including I/O ports
OPT 13: Aux card with RS485 and I/O	Aux card including RS 485 and I/O port



VLL-43

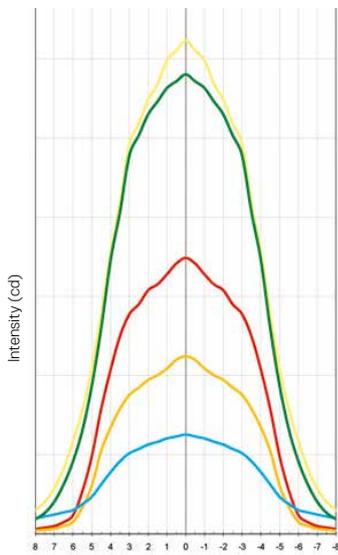
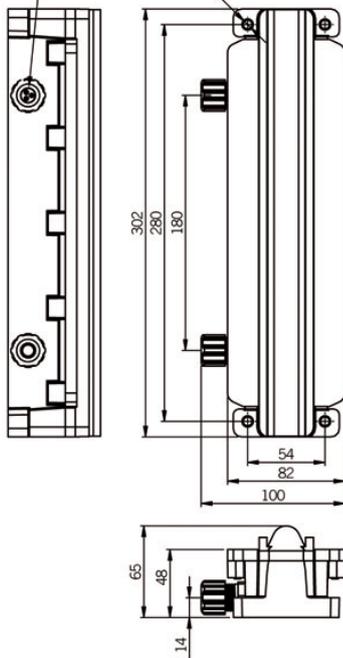
13NM to 22 NM @ 0.74T

The VLL-43 Linear Lead Light is powerful unidirectional light ideal for marking short ranges and obstacles. The optical system utilises an acrylic lens to capture and project the light from the high-powered LEDs. The LEDs are precisely graded and placed to produce a light beam with minimum variation in intensity. Any number of these lights can be used to achieve the desired range. Each unit has its own control board and can be operated individually.

- Separate intensity settings for day
- Nine night/day transition settings
- Up to 246 standard flash characters
- One programmable custom character
- Wired synchronisation with options of master/slave
- Synch delay from 0.1 to 9.9 seconds
- Battery low voltage cut off
- Optional PIN code for programming
- External GPS synchronisation using the VSU-29 unit
- Automatic Schmidt-Clausen correction for intensity



REPLACED WITH 3 PIN SOCKET FOR PLUG AS SOCKET OPTION.
2 CABLE GLANDS SUIT $\varnothing 6$ TO $\varnothing 10$ CABLE.
4 MOUNTING HOLES $\varnothing 6$



■ Yellow ■ Blue ■ White
■ Green ■ Red

Optical Performance

Maximum peak intensity

8.5°	1740cd	2900cd	1120cd	3120cd	630cd
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Optical specification

Light source	High Power Light Emitting Diode (LED)
Horizontal divergence	8.5° @ 50%
Vertical divergence	±20° at 50% peak intensity
	±15° at 50% peak intensity
	±20° at 50% peak intensity
	±7.5° at 50% peak intensity
Temperature control	LEDs monitored for constant intensity control and over temperature protection

Main Technical Specification

Nominal Range	Up to 16 NM
Lens	Machined cast acrylic
Base	Injection moulded UV stable plastic
Body	Marine grade aluminium anodises
Weight	1,4 kg
Flash character	246 standard characters
Temperature range	-30° to +60°C
Voltage	12 VDC (9-18 VDC)
Solar charger	N/A
Degree of protection	IP 68
Cable length	2 m / 6 m

Order Overview VLL-43

Product code

Code	Note
VLL43-c(-GS)	
c	Color (R, G, Y, W, B)

Option matrix

GS	External GPS synchronization using the VSU-29 unit
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VRL-91

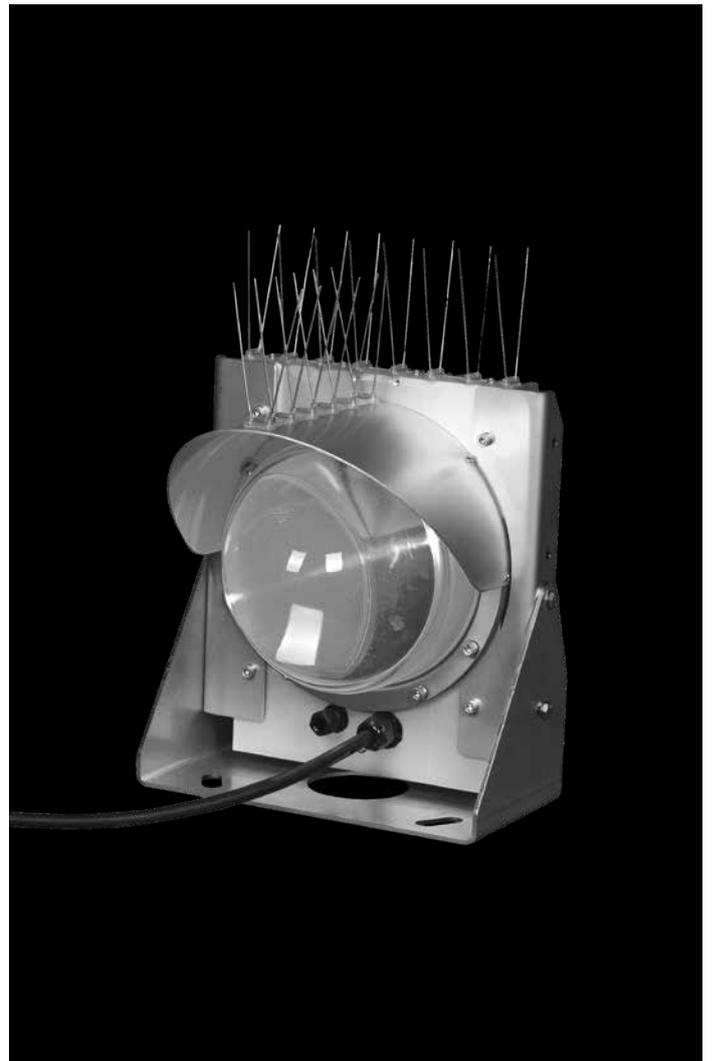
5.4NM by day
23NM by night

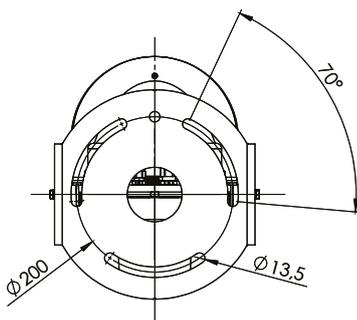
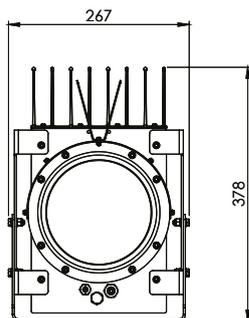
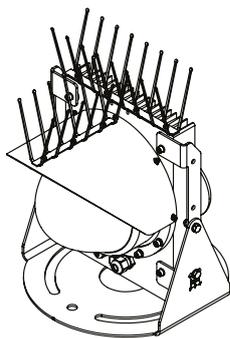
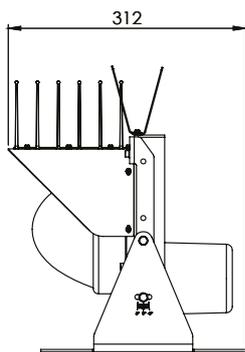
The VRL-91 high power LED range light forms part of the Vega LED marine beacon family and is intended for applications requiring very high intensity.

A single white VRL-91 lens using a single LED produces an intensity of up to 403000 candela, which provides a range of 23 NM at 0.74T with no background light.

Programming features (with IR remote programmer):

- **Automatic Schmidt-Clausen intensity correction for short flashes**
- **Multiple effective intensity settings for both day and night operation**
- **Day/night transition level settings**
- **Fully programmable flash characters**
- **One programmable custom character**
- **Synchronisation control including master/slave options and sync delay (optional)**
- **Supply voltage monitoring**
- **Programmable low voltage cut out**
- **RS-232 data port compatible (optional)**
- **Optional security code**





Optical Performance

Maximum peak intensity

±1.5°	136000cd	276000cd	500000cd
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Optical specification

Light source	High Power Light Emitting Diode (LED)
Horizontal divergence	±1.5°
Vertical divergence	±1.5°

Main Technical Specification

Nominal Range	Up to 23 NM
Lens	Machined cast acrylic
Body	Anodised marine grade aluminium
Weight	7.5 kg
Flash character	246 standard characters plus 1 custom character
Temperature range	-30° to +50°C
Voltage	12/24 VDC (10-30 VDC)
Degree of protection	IP 67
Cable length	2 m / 6 m

Order Overview VRL-91

Product code

Code	Note
VRL-91-c(-GS)	
c	Color (R, G, W)

Option matrix

GS	Internal GPS as factory option
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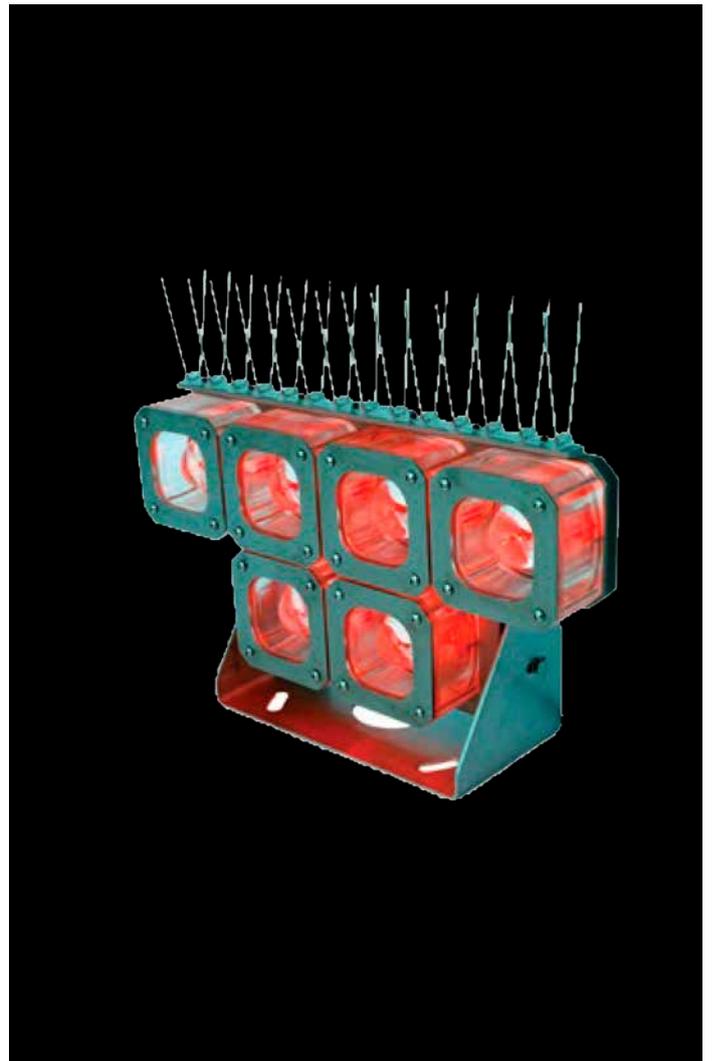
VRL-74

13NM - 22 NM@ 0.74T

The VRL-74 is a LED range light operating through an optical grade acrylic lens. The horizontal and vertical profiles can be widened with the use of spreader lenses.

The standard offering for the VRL-74 comes in 1-6 different lenses and any of 5 colours depending on your requirements.

- Multiple effective intensity settings for both day and night operation
- Day/night transition level settings
- Programmable flash characters
- Synchronisation control, master/slave options
- Low voltage cut out
- Optional security code
- Automatic Schmidt-Clausen intensity correction for short flashes





ODSL 200

Omnidirectional LED sector light

ODSL 200 omnidirectional sector light is an innovative, compact sector light with accurate sector borders. This light is equipped with a replaceable LED optical unit. The range of the light, depending on colour and flash character, is between 6 and 10 NM ($T_c = 0,74$).

- Sectors are verified at Sabik's photometric range prior to delivery
- Field installation is easy thanks to the adjustable base
- Precision alignment, at site, can be done with a gun sight (has to be ordered separately)
- After installation sector alignments remain unchanged even if the LED optical unit is replaced
- Light can be delivered with an external weather cover
- The standard sector light is available as a 3, 6 or 12 layer model
- Small area of uncertainty between the sectors, typically less than $0,5^\circ$
- Integrated flasher with daylight switch and a 16 A solar panel charger
- Programmable with Sabik IR programming devices or Bluetooth Control
- This light can be equipped with remote monitoring and synchronization
- Patented omnidirectional LED sector light technology



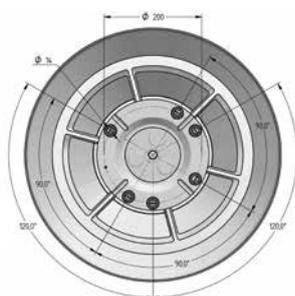
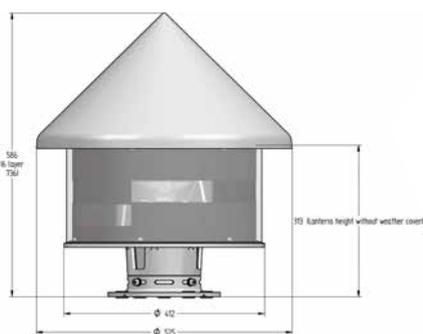
Optical performance

Maximum fixed intensity per tier and colour

Max power 3,5 W	250 cd	250 cd	600 cd
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Main Technical Specification

Lens visual/Mechanical diameter	200 mm
Lens material	UV stabilized acrylic
Light source	High Power Light Emitting Diodes
Vertical divergence	2°@50% of peak intensity (FWHM)
Unit lifetime	Up to 10 years
Weight lantern	3-tier 10,5 kg, 6-tier 13,4 kg, 12-tier 22,4 kg
Weight including weather cover	3-tier 14 kg, 6-tier 17,4 kg, 12-tier 26,4 kg
Height	3-tier 577 mm, 6-tier 727 mm, 12-tier 1027 mm
Temperature range	-40° – +60°C
Supply Voltage	10 – 32 VDC
Solar panel charger	16 A PWM charger
Power consumption	3,5 watts/tier
Degree of protection	IP 67
Cable length	2 m / 6 m



Order Overview ODSL 200

Product codes

ODSL 200

ODSL-200-3, 3 layer lantern

ODSL-200-6, 6 layer lantern

ODSL-200-12, 12 layer lantern

ODSL 200 WEATHER COVER

ODSL-200-3WC, 3 layer weather cover

ODSL-200-6WC, 6 layer weather cover

ODSL-200-12WC, 12 layer weather cover

Gun sight for exact alignment

821035

Option matrix

OPT 4: GPS sync	Integrated GPS sync with external GPS antenna
OPT 9: LightGuard GSM + GPS	Integrated GSM based monitoring with external antennas
OPT 10: LightGuard GSM	Integrated GSM based monitoring with external GSM antenna



VLS-46

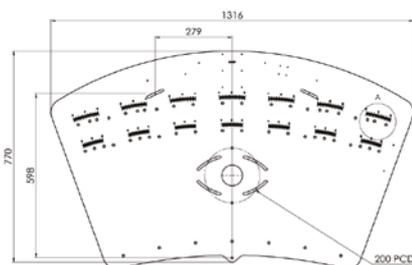
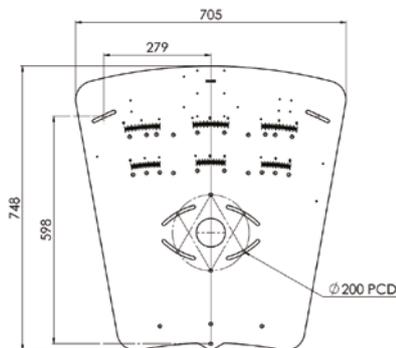
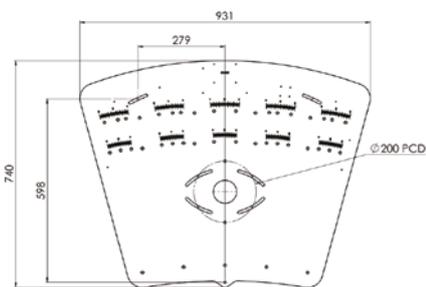
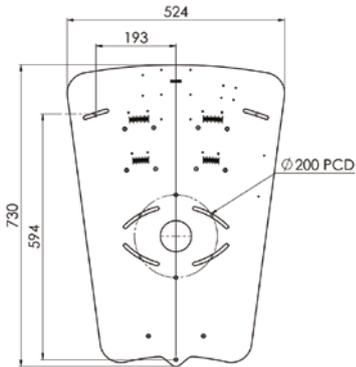
Adjustable LED sector light
15 -19 NM by night
1.6 - 3.0 NM by day

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

- **Peak intensity up to 14,800cd**
- **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**
- **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**





Optical Performance

Maximum peak intensity				
5°	9000cd	8300cd	14800cd	12300cd
10°	2300cd	2140cd	3480cd	3030cd

Optical specification

Light source	High Power Light Emitting Diode (LED)
Horizontal divergence	5°, adjustable from 0.5 – 5° (linear adjustment) 10°, adjustable from 1.0° (linear adjustment)
Vertical divergence	±1.8° @ 50% intensity & ±1.9° @ 10% intensity ±3.6° @ 50% intensity & ±3.7° @ 10% intensity
Temperature control	LEDs monitored for constant intensity control and over temp protection

Main Technical Specification

Nominal Range	5 degrees, up to 15 NM 10 degrees, up to 12 NM
Lens	Acrylic and glass
Base	Marine grade aluminium
Body	Marine grade aluminium and injection moulded UV stable plastic
Designed service life	10 years
Weight	2.4 - 19.1 kg
Temperature range	-30° – +50°C
Voltage	10-30 VDC
Solar charger	N/A
Degree of protection	IP 67
Cable length	2 m / 6 m

Order Overview VLS-46

Product code

Code	Note
VLS-46-D-Cc(-Cc)(-Cc)(-Cc)(-GS)-BPY	
D	Divergence
C	Color (R, G, W, Y)
c	Quantity of projectors in that colour (1-7)
BP	Base plate ((BP2, BP3, BP5, BP7)

Option matrix

GS	Internal GPS sync module as factory option
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VLS-46 Ultra

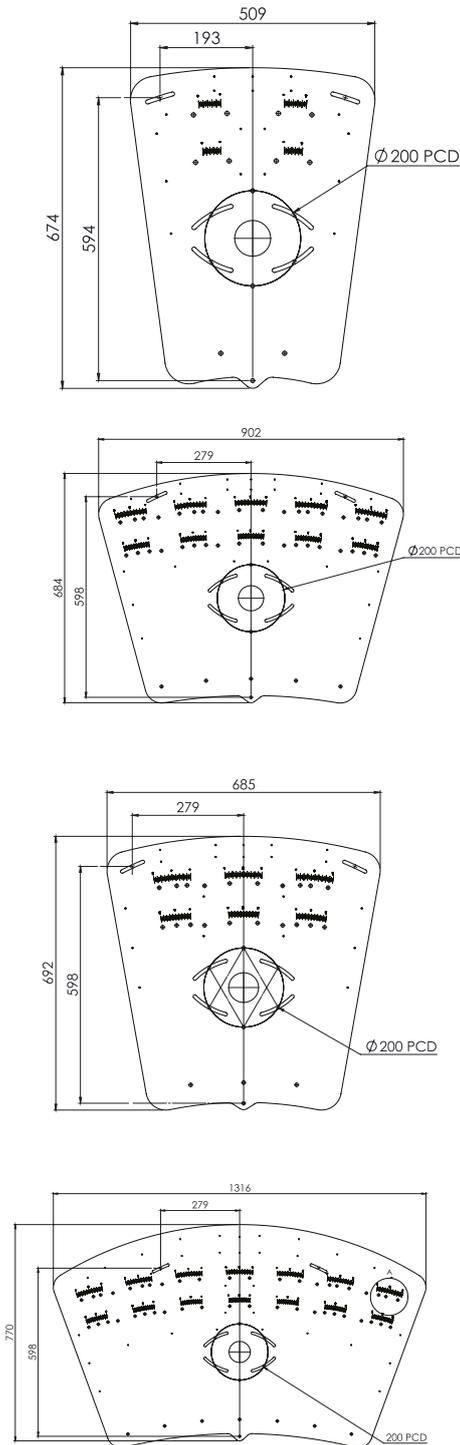
21 - 25NM by night @ 0.74T
3.9 - 6.2NM by day @ 0.74T

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 up to 169000cd
- 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





Optical Performance

Maximum peak intensity			
5°	40000cd	169000cd	167000cd
10°	10780cd	47000cd	45500cd

Optical specification

Light source	High Power Light Emitting Diode (LED)
Horizontal divergence	5°, adjustable from 0.5° – 5° (linear adjustment) 1°, adjustable from 1.0° (linear adjustment)
Vertical divergence	±1.8° @ 50% intensity ±1.9° @ 10% intensity ±3.6° @ 50% intensity ±3.7° @ 10% intensity
Temperature control	LEDs monitored for constant intensity control and over temperature protection

Main Technical Specification

Nominal Range	5 degrees, up to 21.0 NM 10 degrees, up to 17.8 NM
Lens	Acrylic and glass
Base	Marine grade aluminium
Body	Marine grade aluminium and injection moulded UV stable plastic
Designed service life	10 years
Weight	2.4 - 19.1 kg
Temperature range	-30° – +50°C
Voltage	10-30 VDC
Solar charger	N/A
Degree of protection	IP 67
Cable length	2 m / 6 m

Order Overview VLS-46 Ultra

Product code

Code	Note
VLS-46U-D-Cc(-Cc)(-Cc)(-Cc)(-GS)-BPY	
D	Divergence
C	Color (R, G, W)
c	Quantity of projectors in that colour (1-7)
BPY	Base plate (BP2, BP3, BP5, BP7)

Option matrix

GS	Internal GPS sync module as factory option
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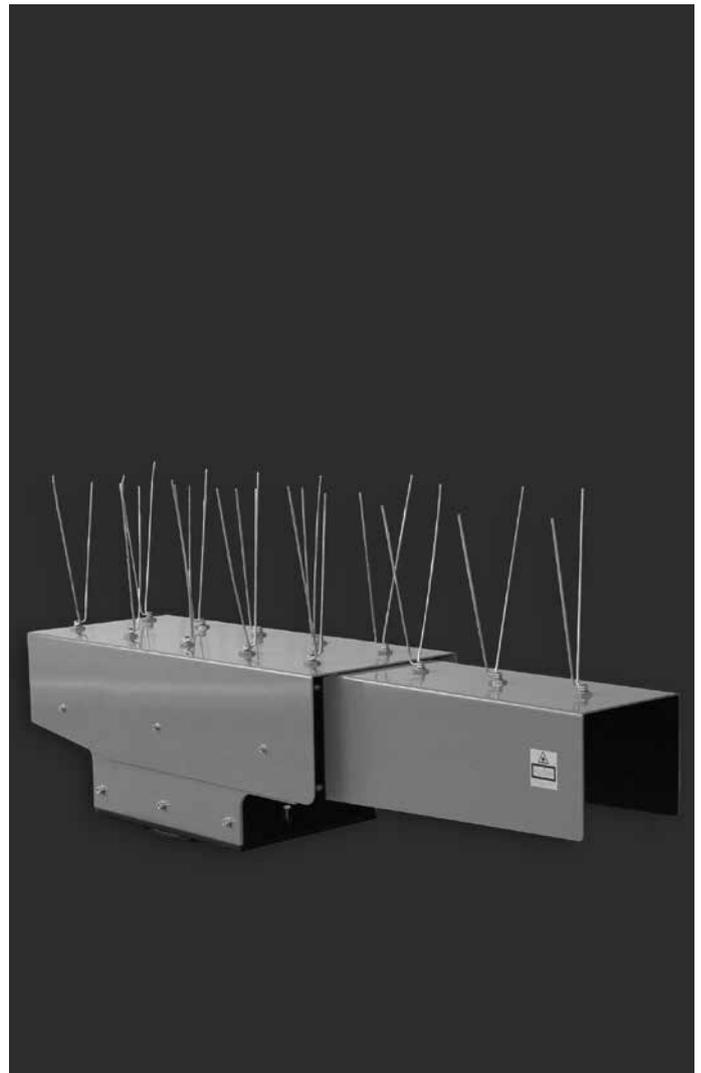


E8593

**LED Projector sector light,
up to 21 M / 4 M daytime range**

The E8593 is a high-performance, power efficient high intensity marine LED Projector sector light with beam configuration tailored to customer requirements at the factory. All E859X Lanterns feature factory configured Day and Night mode, luminous intensity, fast PWM control generating reduced intensities, as well as Fixed-and-Flashing (FFL) rhythmic characters or Slow Flash Front (SFF). The field proven E8593 supports Opposite-Isophase sector signal control reducing the latency of spatial awareness update for the mariners: the white sector signal is active during the eclipse of coloured sectors and vice versa, resulting in immediate awareness about leaving the white sector without the delay caused by the common eclipse.

- **Power efficient Day/Night light signalling system for port entry lights or leading line systems replacement**
- **Factory-customized sector configuration with precision of $\leq 0.05^\circ$ (3')**
- **Day and Night mode luminous intensities down to 10%**
- **Internal LED diagnostics with condition output**
- **Optional Opposite-Isophase sector signal control**
- **Available with triaxial acceleration sensor for Structural Health Monitoring of the AtoN mast**
- **Easy to install – requires only aiming the composite beam vertically**
- **No planned maintenance needed**

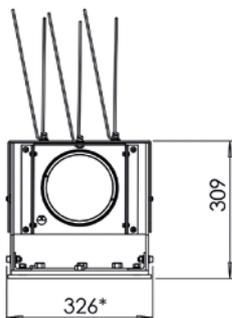
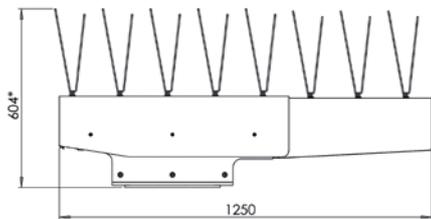


Optical performance

Number of sectors	3 (R, W, G)		
Typical luminous intensity of the light signal per colour	250,000 cd		
Nominal range, Night / Day (T=0.74)	up to 21 M / 4 M		
Subtense angle per sector (total approximately 7.5°)	≤ 1.2°	≤ 1.2°	≤ 2.5°
Vertical divergence angle	1.2°	2.5°	1.2°
Power consumption in flash	≤ 45 W	≤ 90 W	≤ 90 W
Achievable boundary resolution	~ 0.1° (6'... 9')		
Beam direction adjustment in field conditions, Hor/Vert	± 180° / ± 2°		

Main technical specification

Light source	High Power Light Emitting Diode (LED) clusters
Vertical divergence	1.2° or 2.5° (FWHM)
Lens material	optical glass
Enclosure material	polycarbonate optical unit potted in resin on aluminium bottom plate, marine grade aluminium sides and protective cover, painted steel mounting plate
Weight	< 50 kg
Operating environment	-40 °C to +55 °C
Power supply voltage	12 VDC (10–24 VDC)
Power consumption in flash	up to 90 W depending on configuration
Degree of ingress protection	IP 67
Overall height (excl. bird deterrents)	309 mm, width 326 mm, depth 1250 mm
Focal plane height	205 mm
Installation	3 x 14mm on 200 mm circle
Cable length	2 m / 6 m



Order Overview E8593

Product codes

Since this product is usually ordered in AtoN site specific configuration, simple ordering codes covering all possible alternatives are not available.

Product code example: E8593.GWR.F2.G1

- Projector sector light for IALA Region B with integrated Flasher E8672 and GPS capability

Option matrix

Sector lights for IALA Region A	E8593.RWG
Sector lights for IALA Region B	E8593.GWR

Accessories

Bird deterrent rod set (incl. screws)	8264.050
Cable Connector, 90deg, female 6 + PE-position	C016 30F006 100 10
Programmable Flasher, integrated	E8672
Programmable Flasher with GPS, integrated	E8672.G
TelFiCon™-Flasher for complete AtoN telematics, integrated	E9272



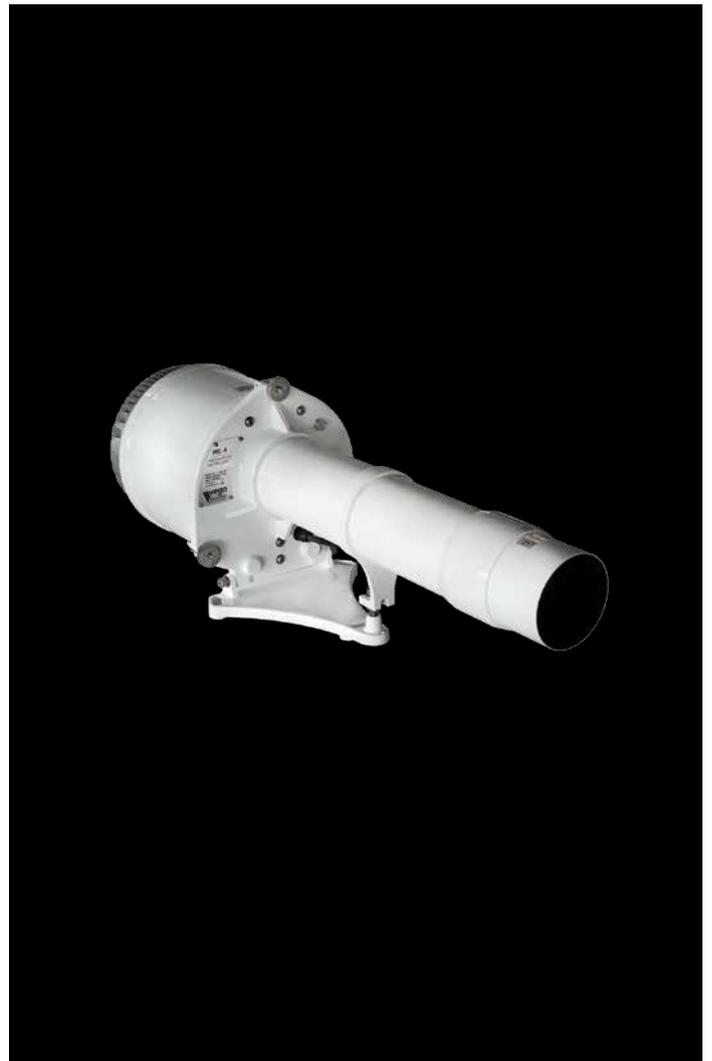
PEL-4

3.5°, 5° and 10° horizontal divergences

The PEL-4 is a precise aid to navigation. When sailing through hazardous waters, the PEL-4 will provide sharp visual feedback whether you are inside or outside a sector. If combined with oscillating boundary, the exact position within the sector will also be known.

The PEL-4 is equipped with LED technology and is bright enough to be used day and night. It is energy efficient and maintenance free as well. This makes it solar-power friendly and removes costly re-lamping visits.

- Horizontal divergence available from 3.5° to 10°
- Weatherproof enclosure suitable for external mounting
- Maintenance-free LED (easy to replace if needed)
- Constant-current LED drivers
- Fully programmable IALA flash characters
- Adjustable day and night intensity from 0.3% to 100%
- Automatic day/night detection and change-over
- Optional security code
- Programmable low-voltage cut-out
- Selectable master/back-up operation mode
- Digital input/output
- Optional oscillating boundary



Optical Performance

Maximum peak intensity

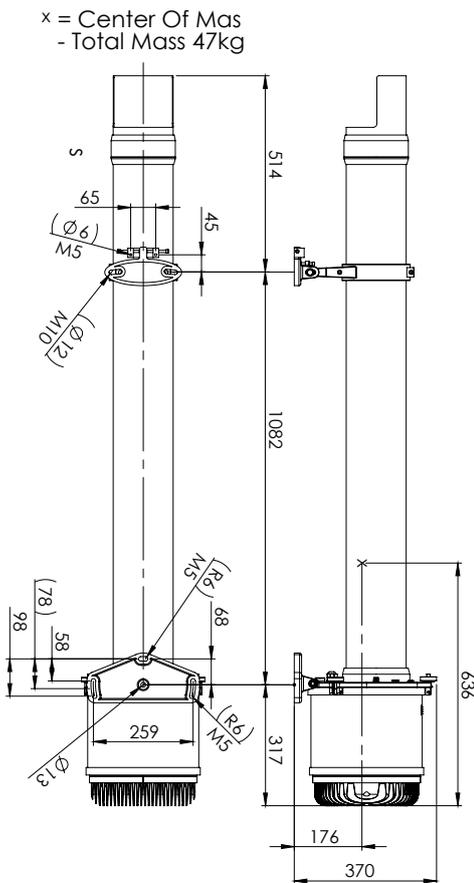
3.5D	77500cd	77500cd	350000cd
5D	50000cd	50000cd	225000cd
10D	20200cd	20200cd	91000cd

Optical specification

Light source	High Power Light Emitting Diode (LED)
Horizontal divergence	3.5D: 3.5°
	5D: 5°
	10D: 10°
Vertical divergence	3.5D: 2°
	5D: 3°
	10D: 5.3°

Main Technical Specification

Lens	Acrylic and glass
Base	Bronze
Body	Bronze, stainless steel, marine-grade aluminum
Weight	47 kg
Flash character	256 flash characters
Temperature range	-35° to +85°C
Voltage	12/24 VDC (10 to 30 VDC)
Degree of protection	IP 67
Cable length	2 m / 6 m



Order Overview PEL-4

Product code

Code	Note
PEL-4-D-S	
D	Horizontal subtense (3.5°, 5°, 10°)
S	Sector OB = Oscillating boundary FX = Fixed boundary

Option matrix

GS	Only available with VSU-29
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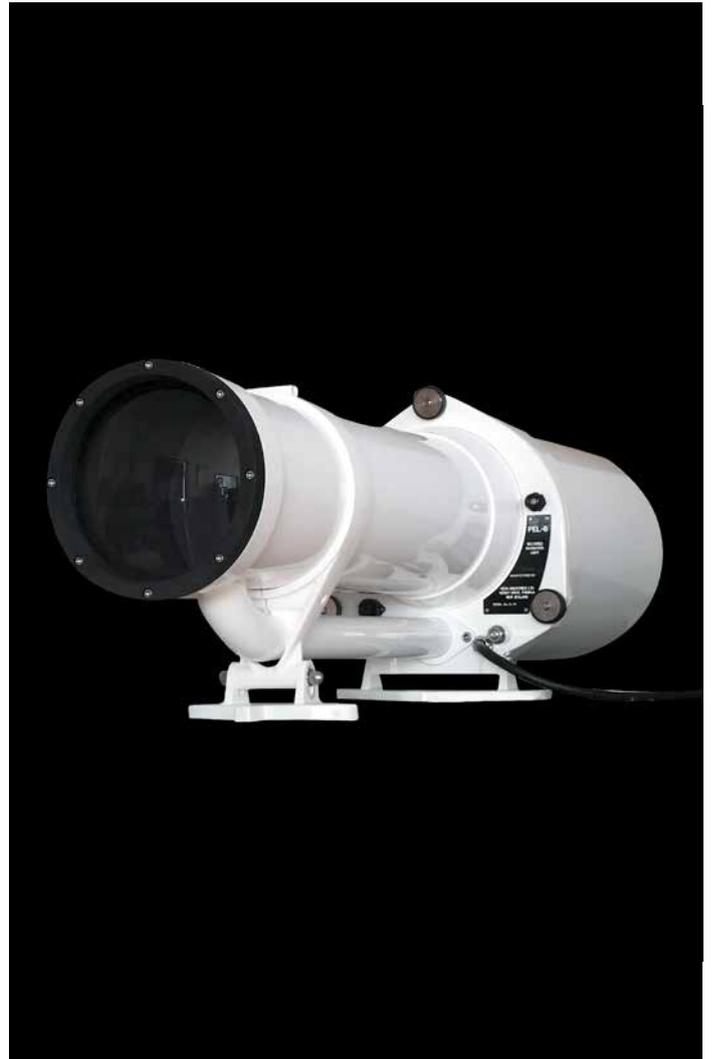


PEL-6

6 NM by day @ 0.74T
25 NM by night @ 0.74T

The PEL-6 is a part of Sabik Marine flagship precision sector light offering. It combines modern optical design techniques with decades of experience to provide very sharp sector boundaries and impressive range day or night.

- **Market leading boundary definition and sector accuracy**
- **Up to 6 NM range in daylight**
- **Over 21 NM night range in coloured sectors and 25 NM in white**
- **Automatic intensity reduction for night use**
- **Oscillating boundary option provides up to four extra sectors**
- **Rugged construction and sealing – proven life exceeds 20 years in typical harsh marine environment**

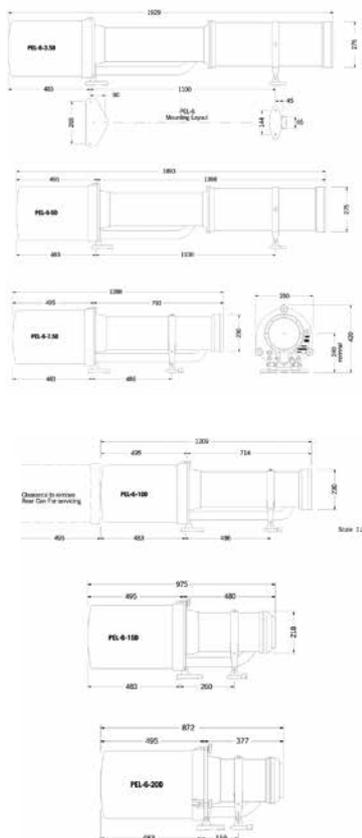


Optical Performance

Maximum peak intensity			
3.5°	196164cd	174368cd	726532cd
5°	96151cd	85468cd	356116cd
7°	37985cd	37985cd	158273cd
10°	24084cd	21408cd	89199cd

Optical specification

Light source	250W TH Lamp
Horizontal divergence	Available: 3.5, 5, 7, 10°
Vertical divergence	3.5°: 2.1°
	5°: 3°
	7°: 3.9°
	10°: 4.3°



Main Technical Specification

Nominal Range	Up to 24.8 NM
Lens	Precision ground glass
Base	Bronze
Body	Gunmetal, stainless steel, copper tube
Designed service life	20 years
Temperature range	-40° – +50°C
Voltage	24 VDC to 28 VDC
Degree of protection	IP 66
Cable length	2 m / 6 m

Order Overview PEL-6

Product code

Code	Note
PEL-6-D-S	
D	Horizontal subtense (3.5°, 5°, 7°, 10°)
S	Sector OB = Oscillating boundary FX = Fixed boundary

Option matrix

GS	Only available with VSU-29
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SLU-24 / SLU-36

LED light source to replace traditional lamp inside historical lighthouses

Sabik Lighthouse Unit (SLU-24 / SLU-36) is a reliable and efficient solid-state light source to replace traditional lamps in rotating or fixed classical lighthouse optics. It extends the service life of traditional lighthouses without expensive and complicated re-work or decommissioning activities. The product also offers many other additional benefits, such as the option for remote monitoring, lower maintenance costs and the possibility to utilize solar or other renewable power sources. All of this, while maintaining the traditional look, existing optics, rotating beam, flash characteristics, and heritage value of traditional lighthouses.

- **Rugged copper/aluminium body with special emphasis on heat management to ensure LED longevity**
- **Range up to 24 NM at Tc = 0,74**
- **Colors cool white and warm white**
- **Extremely low power consumption, suitable for solar and battery operation**
- **Integrated 16A solar panel charger using pulse width modulation**
- **Integrated flasher with automatic day-night switch**
- **Adjustable intensity and range**
- **Programmable with Sabik standard IR programming devices**
- **Integrated event log for 365 days**
- **Optional integrated GSM Remote monitoring**



Electrical Specification SLU-24 / SLU-36

Nominal voltage	24 VDC
Input voltage range	20 to 30 VDC
Reverse polarity protection	Yes
Current consumption at peak intensity	max 4.6 A (SLU-24) / 6.9 A (SLU-36)
Current by day	< 5 mA
LED over current protection	Yes
Battery cut off voltage	Programmable

Output characteristics

Color	Cool white (5000K - 6000K)	Warm white (2700K - 3000K)
Power consumption at peak intensity (W)	110W (SLU-24) / 165W (SLU-36)	110W (SLU-24) / 165W (SLU-36)
Power consumption at max avg. intensity (W)	65W (SLU-24) / 100W (SLU-36)	65W (SLU-24) / 100W (SLU-36)
Flash characteristic control	246 standard characters plus custom character	

Mechanical withstand and protection

Ingress protection	Equivalent to IP 10
Ambient temperature range	-30°C to +50°C

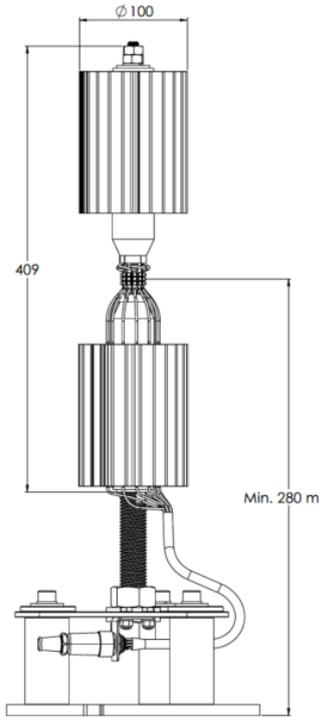
Other

Designed service life	>10 years
Maintenance	Only periodic cleaning of external surfaces required
Day / night transition	Programmable, default turn on at 15 lux / turn off at 60 lux

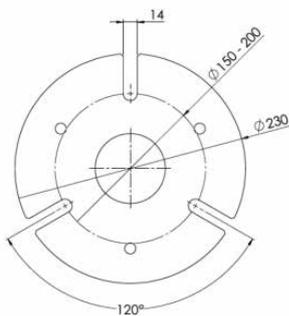
Standards

EMI/EMC	EN 55015:2006 +A1:2007, +A2:2009 radiated and conducted emissions
	EN 61000-4-2:2008, Electrostatic Discharge Immunity
	EN 61000-4-3:2006/AMD2:2010, Electromagnetic Compatibility
	EN 61000-4-5:2005 Class 3 Surge Immunity
	FCC 47 CFR Section 15 Class A
Colour	EN 61000-4-5:1995 Class 3 Surge Immunity
	IALA Recommendation E-200-1 "Marine Signal Lights - Colours" Edition 3 (December 2018)
Quality assurance	ISO 9001, ISO 14001, FAT upon request

- Will be customized to meet project specific needs
- Sabik team will support you from project definition to commissioning and operation as needed



SIDE VIEW
Weight approx 7 kg





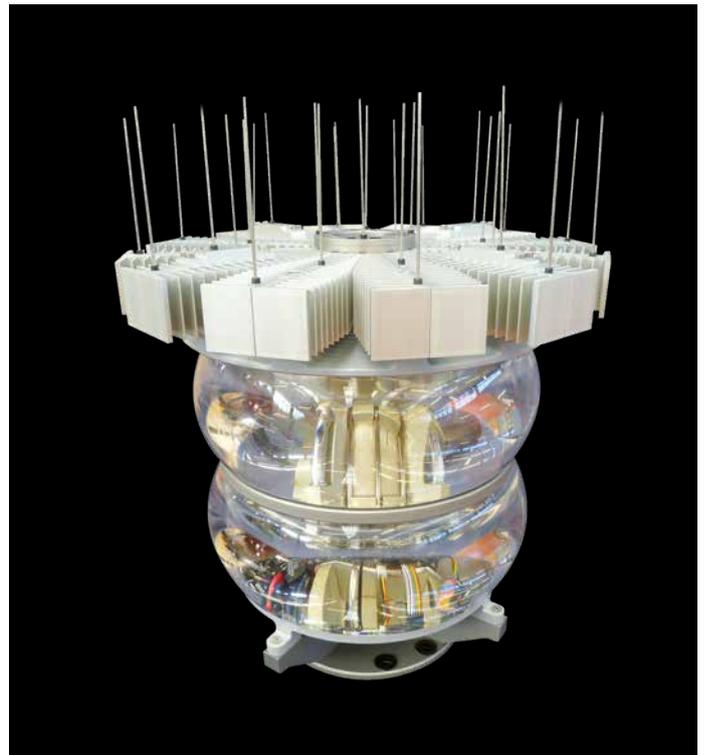
VLB-92

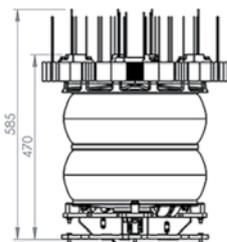
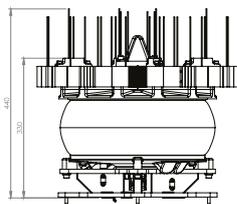
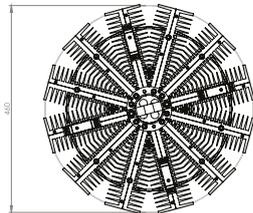
13NM - 22NM @ 0.74T

The VLB-92 is state-of-the-art long range LED beacon. It is intended for applications requiring very high intensity.

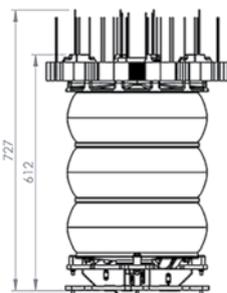
Depending on the configuration, the beacon is able to produce a range from 13-22NM at a transmissivity of 0.74T.

- **Effective intensity settings (5,800-240,000cd)**
- **Day/night transition level settings (40-250 lux range)**
- **Programmable flash characters, including IALA recommended characters**
- **Programmable custom character**
- **Synchronisation control including master/slave options and sync delay**
- **Synchronising delay can be set from 0 to 9.9 seconds**
- **Low voltage cut-out setting**
- **Optional security code**

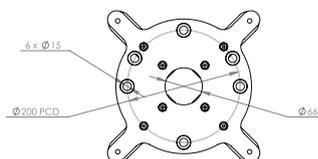




2 TIER
NET MASS: APPROX 38 KG



3 TIER
NET MASS: APPROX 47 KG



Optical Performance

Maximum intensity / layer	80000cd
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Optical specification

Light source	High Power Light Emitting Diode (LED)
Vertical divergence	±1.6° @ 50% peak ±0.8° @ 10% peak
Temperature control	LEDs monitored for constant intensity control and over temperature protection

Main Technical Specification

Nominal Range	Up to 22 NM
Lens	Machined cast acrylic
Base	2 part painted cast marine grade aluminium
Body	Anodised marine grade aluminium
Designed service life	10 years
Weight	1-tier 31,8kg 2-tier 38kg 3-tier 47kg
Flash character	246 standard characters plus 1 custom character; 20 factory set custom characters
Temperature range	-30° – +50°C
Voltage	24 VDC (20-36 VDC)
Solar charger	N/A
Degree of protection	IP 67
Cable length	2 m / 6 m

Order Overview VLB-92

Product code

Code	Note
VLB-92-W-1.6-24-Y	
Y	Tiers (1 T, 2 T, 3 T)

Option matrix

VSU-29	Optional integrated GPS synchronization using the VSU-29 GPS Sync Unit. VSU-29 requires 12 V operating voltage.
REMOTE-02	Infrared remote



VRB-25 LED

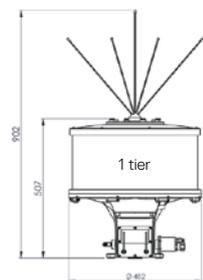
25NM @ 0.74T

The VRB-25 LED is a high intensity rotating beacon suitable for ranges up to 25 nautical miles. Being an LED beacon, it is extremely energy efficient and can be monitored digitally.

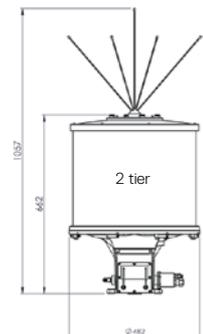
It is an ideal replacement for beacons with Fresnel lenses in historic lighthouses, or locations requiring intensities greater than what can be achieved with typical stationary beacons.

- **Weatherproof enclosure suitable for external mounting**
- **Maintenance-free LED**
- **Constant-current LED drivers**
- **Direct-drive brushless motor**
- **0.6 to 15.9RPM rotation speed with 240 increments**
- **Day and night intensity is adjustable from 0 to 100%**
- **Automatic day/night detection**
- **Optional security code**
- **Programmable low-voltage cut-out**
- **Selectable master/back-up operation mode**
- **Digital inputs/output**
- **RS232 port**

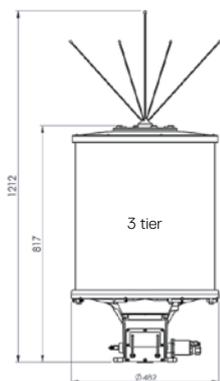




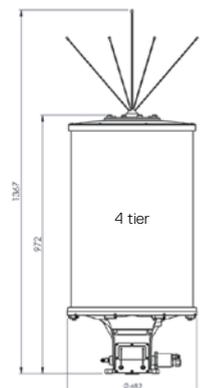
EST Weight: 43KG
Focal Height: 390mm



EST Weight 58KG
Focal Height: 467mm



EST Weight: 73KG
Focal Height: 545mm



EST Weight 87KG
Focal Height: 622mm

Optical Performance

Maximum peak intensity

1.5°	520000cd	520000cd	520000cd	520000cd
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Optical specification

Light source	High Power Light Emitting Diode (LED)
Horizontal divergence	1.5° @ 5% of specified intensity
Vertical divergence	1.5° @ 5% of specified intensity
Temperature control	LEDs monitored for constant intensity control and over temperature protection

Main Technical Specification

Nominal Range	Up to 25 NM
Lens	Machined cast acrylic
Base	Cast marine grade aluminium, anodised and painted
Body	Anodised marine grade aluminium
Designed service life	10 years
Weight	1 tier: 43 kg 2 tier: 58 kg 3 tier: 73 kg 4 tier: 87 kg
Flash character	Dependent on configuration
Temperature range	-35° – +50°C
Voltage	12 VDC
Solar charger	N/A
Degree of protection	IP 65
RPM range	0.66-15.9
Cable length	2 m / 6 m

Order Overview VRB-25 LED

Product code

Code	Note
VRB25-xP-nT-LED	
x	Number of panels (6 or 8)
n	Number of tiers (1, 2, 3, 4)

Option matrix

LPD-02	Lightening protection device factory option
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VPL 110

Buoy lantern

VPL 110 is a robust lantern with an outer polycarbonate cover to be used integrated into buoy applications. This lantern has very low power consumption and is equipped with GPS synchronization. LightGuard remote monitoring can be added as an option and advanced Bluetooth® Control app is also available for android and iOS mobile phones.

- Adjustable intensity and range
- Integrated flasher with day and night switch
- Standard range: 4 NM at $T_c = 0,74$
(5 NM at $T_c = 0,85$)
- Available in standard IALA colours
- Vertical divergence $8^\circ @ 50\%$ ($\pm 1^\circ$) of peak intensity
- GPS synchronization as standard
- Remote monitoring with LightGuard Monitor
- Programmable with Sabik standard IR programming devices
- Advanced Bluetooth® Control up to 50m available for android and iOS smart phones



Optical Performance

Maximum fixed intensity

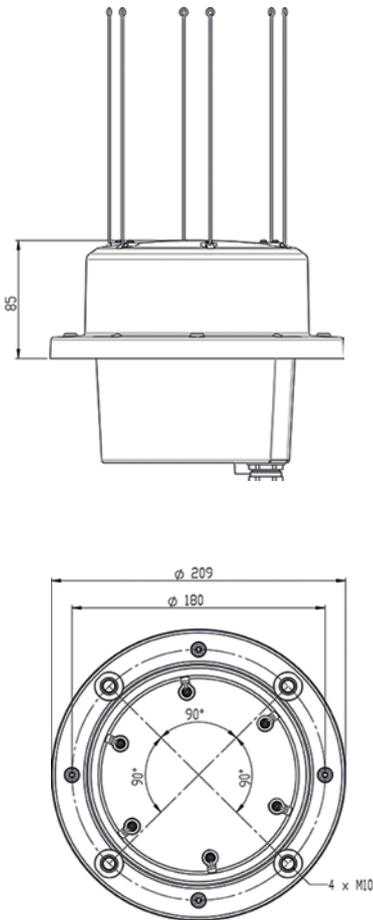
VPL 110	40cd	40cd	50cd	45cd
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Optical specification

Light source	High Power Light Emitting Diode (LED)
Vertical divergence	8° @ 50% (±1°) of peak intensity

Main Technical Specification

Nominal Range	up to 4 NM
Lens	Uv stabilized polycarbonate
Designed service life	Up to 10 years
Weight	2,8 kg
Temperature range	-40° to +60°
Solar charger	1,5 W
Degree of protection	IP 67
Cable length	2 m / 6 m



Order Overview VPL 110

VPL 110 (GPS sync as standard)	Colour
VPL-110-W4	white
VPL-110-R4	red
VPL-110-G4	green
VPL-110-Y4	yellow

Product code for Programmer

980332	Sabik Easy Programmer
	Bluetooth mobile app for android and IOS available

Option matrix

LightGuard GSM + GPS OPT 9H	Integrated GSM based monitoring including GSM/GPS antennas
Optical Feedback System OPT 1H	Integrated LED performance measurement
Shock & Tilt Sensor	Integrated 3-axis G sensor for tilt and shock sensing

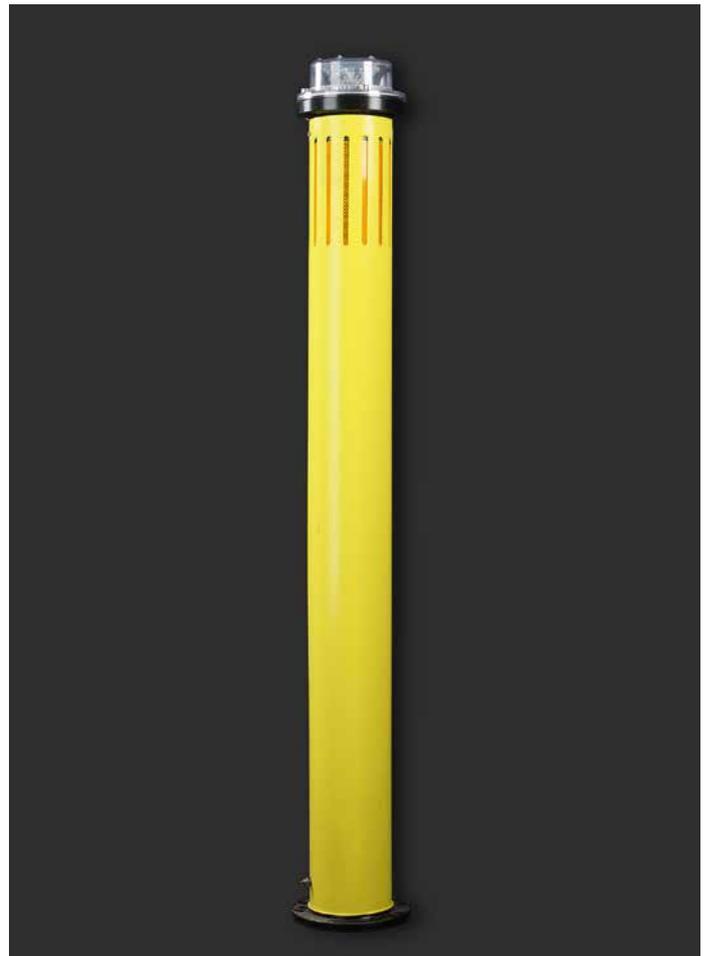


SBFL 160

Marker Light for Aquaculture Farms

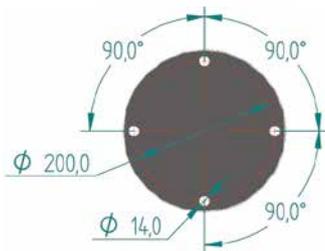
SBFL 160 is a marker light especially developed for aquaculture farms. The unit is designed to meet the requirements regarding night and day time visibility as well as radar visibility. It can also be installed directly on floats for aquaculture farms. The marker light consists of a yellow buoy tube with integrated alkaline battery, LED lantern, light reflectors along with internal radar reflector. The partly integrated, robust lantern has very low power consumption and is equipped with GPS synchronization.

- Adjustable intensity and range
- Standard range 3 NM at $T_c = 0.74$
(4,5 NM at $T_c = 0,85$)
- Default IALA yellow colour light
- Equipped with internal radar reflector
- Energy sources: Alkaline main battery
- Vertical divergence $8^\circ @ 50\% (\pm 1^\circ)$ of peak intensity
- GPS synchronization as standard
- Optional integrated GSM/GPS remote monitoring
- Remote monitoring with LightGuard Monitor can be added as an option
- Mounting mechanism can be customized for different floats
- Sabik Easy programmer can be used for programming the lantern and for reading the status of the lantern and battery
- Advanced Bluetooth® Control up to 50m available for android and iOS smart phones



Main Technical Specification

Lantern intensity setting	17 cd
Max lantern intensity	40 cd
Vertical divergence	8° @ 50% (±1°) of peak intensity
Buoy material	UV resistant Polyethylene
Lantern material	UV resistant Polycarbonate
Weight without adapter plate	33 kg
Degree of protection, lantern	IP 67
Lantern programming	Wireless with Sabik Easy programmer or with an advanced Bluetooth android mobile app
Primary battery 220 Ah	Changing interval > 1,5 years
Cable length	2 m / 6 m



Product codes

SBFL-160-1-7YBS	Marker light with 220Ah primary battery + sync
SBFL-160-1-7YTS	Marker light with 230/12V power supply and 12Ah back-up battery + sync

Product code for mechanical fixing

841011	Mechanics for buoy installation
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Product code for lanterns

VPL-110-Y4	Lantern for SBFL marker light with synchronization
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Product code for battery

950168	220 Ah primary battery
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Product code for Programmer

980332	Sabik Easy Programmer
	Bluetooth® app for android and IOS mobile phones available



VP LED

Buoy LED lantern

The VP LED is an LED lantern designed to be used in moderate ice conditions. It has a proven record of surviving the crushing pressure and dynamic forces of ice. VP LED is mainly used on plastic ice spars and buoys when a lightweight unit is important.

- Marine grade aluminium housing
- Designed to be fully waterproof, can sustain extensive submersion
- Integrates firmly onto buoy top and presents a very low profile to lateral forces from ice
- Lantern can be removed for battery replacement
- Range up to 6 NM ($T_c = 0,74$)
- Standard IALA colours
red, green, white and yellow
- Extremely low power consumption, ideal for primary battery operation
- Integrated flasher with day light switch
- Adjustable intensity and range
- Programmable with Sabik standard IR programming devices
- Integrated 365 day event log
- Optional integrated GPS synchronization
- Optional integrated GSM Remote monitoring
- Optional Bluetooth control



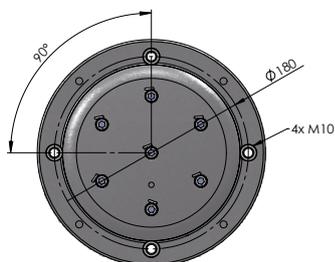
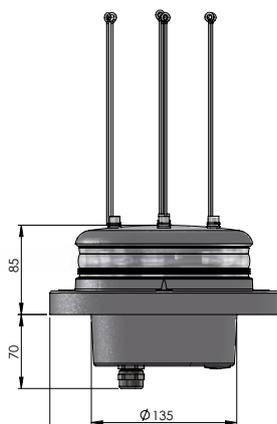
Optical performance

Maximum fixed intensity

At full power 6 W	120 cd	160 cd	240 cd	120 cd
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Main Technical Specification

Lens visual/Mechanical diameter	160 mm
Lens material	UV stabilized Polycarbonate
Light source	Light Emitting Diodes (LEDs)
Vertical divergence	10° @ 50 % (±1°) of peak intensity
Unit lifetime	Up to 10 years
Weight	3,2 kg
Temperature range	-40°...+60°C
Supply Voltage	10 – 32 VDC
Solar Panel Charger	16 ampere PWM charger
Power consumption	Max 6 watts
Degree of protection	IP 68
Cable length	2 m / 6 m



Order Overview VP LED

W = Wide (10° @ 50 % of peak intensity)

Red	VP-LED-WR
Yellow	VP-LED-WY
Green	VP-LED-WG
White	VP-LED-WW

Product code example: VP-LED-NW-13

- VP-LED is Sabik code for a buoy lantern
- NW is the code for a Narrow lens in white
- 13 is a selection of option 13 Aux card with RS485 and I/O

Order Overview VP LED B/Y

Wreck marking buoy lantern blue/yellow

Product codes

VP LED BLUE/YELLOW WRECK MARK	VP-LED-2-WBY
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Option matrix

OPT 4: GPS sync	Integrated GPS sync including GPS antenna
OPT 9: LightGuard GSM + GPS	Integrated GSM based monitoring including GSM/ GPS antennas
OPT 10: LightGuard GSM	Integrated GSM based monitoring including GSM antenna
OPT 11: Control card	Control card for secondary battery
OPT 12: Aux card with I/O	Aux card including I/O ports
OPT 13: Aux card with RS485 and I/O	Aux card including RS 485 and I/O port
OPT BT	Bluetooth control



MPV LED

Heavy duty ice buoy LED lantern

The MPV LED is an LED lantern designed to be used in most severe ice conditions, and is capable of surviving the crushing pressure and dynamic forces of ice in winter conditions.

- Rugged bronze alloy housing for installation in harsh marine environments
- Designed to be fully waterproof – can withstand submersion down to 100 meters
- Integrates firmly onto buoy top – presents a very low profile to lateral forces from ice
- Enables battery replacement through lantern without removing the lantern from buoy
- Visual range up to 6 NM ($T_c = 0,74$)
- Standard IALA colours
Red, Green, White and Yellow
- Extremely low power consumption; ideal for primary battery operation
- Integrated flasher with day light switch
- Adjustable intensity and range
- Programmable with Sabik standard IR programming devices
- Integrated 365 day event log
- Optional integrated GPS synchronization
- Optional integrated GSM Remote monitoring



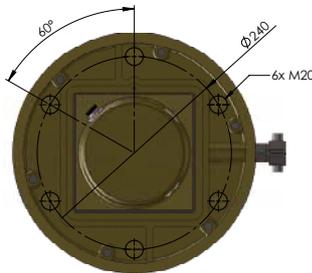
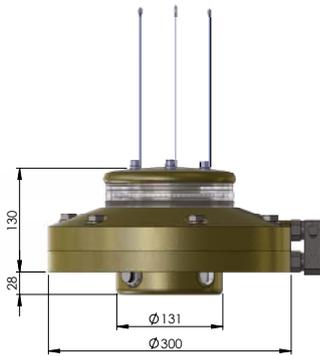
Optical performance

Maximum fixed intensity

At full power 6 W	120 cd	160 cd	240 cd	120 cd
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Main Technical Specification

Lens visual/Mechanical diameter	160 mm
Lens material	UV stabilized Polycarbonate
Light source	Light Emitting Diodes (LEDs)
Vertical divergence (wide lens)	10° @ 50% (±1°) of peak intensity
Unit lifetime	Up to 10 years
Weight	25 kg
Temperature range	-40°...+60°C
Supply Voltage	10 – 32 VDC
Power consumption	max 6 watts
Degree of protection	IP 68
Cable length	2 m / 6 m



Order Overview MPV LED

W = Wide (10° @ 50 % of peak intensity)

Red	MPV-LED-WR	H = with hinge
Yellow	MPV-LED-WY	J = without hinge
Green	MPV-LED-WG	
White	MPV-LED-WW	

Product code example: MPV-LED-WG-4

- **MPV-LED** is Sabik code for a MPV LED
- **WG** is the code for a wide lens in green
- **4** is a selection of option 4 GPS synchronization

Option matrix

OPT 4: GPS sync	Integrated GPS sync including GPS antenna
OPT 9: LightGuard GSM + GPS	Integrated GSM based monitoring including GSM/ GPS antennas
OPT 10: LightGuard GSM	Integrated GSM based monitoring including GSM antenna
OPT 11: Control card	Control card for secondary battery
OPT 12: Aux card with I/O	Aux card including I/O ports
OPT 13: Aux card with RS485 and I/O	Aux card including RS 485 and I/O port

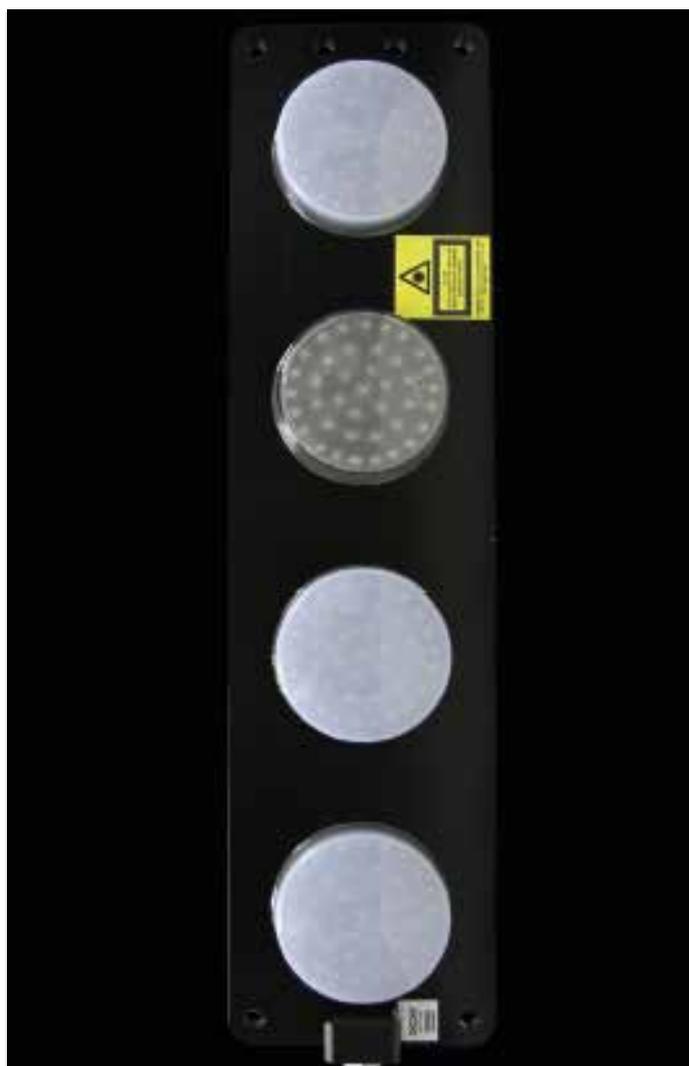


E58XX

LED Indicator Panel

E58XX is a robust LED indicator panel for demanding industrial applications ranging from access control to equipment status monitoring. The design and manufacturing of the E58XX benefit from our years of experience in delivering LED based marine signaling, aviation obstruction, as well as road and railway traffic signals. While widely popular as a crane light, the E58XX is a superior choice for any signaling application requiring high reliability, resiliency and high quality optoelectronics.

- **“Fit and forget” maintenance-free lifetime exceeding 10 years, guaranteeing excellent reliability and dependability**
- **Low power consumption: approximately 0.5 to 4W per LED signal module**
- **No “phantom colour” effect: sunlight reflections from the unpowered modules are colourless**
- **Superior shock and vibration tolerance, ensuring trouble free use on mobile platforms**
- **Superslim form factor: overall dimensions of a panel with 3 lights are 150x465x40 mm, male 5-pole M12 receptacle typical for power supply; optional visors are available (75 x 90 mm)**
- **Any combination of LED modules emitting red, green, yellow, blue and white can be ordered**



Optical Parameter (DC/AC)

Clear lens (Standard)

Viewing angle 2θ½	25°	30°	30°	15°	20°
Luminous intensity @ centre of light beam	50cd	50/40cd	50/45cd	100/90cd	40cd
Luminous intensity @ ±45°	1.9cd	1.6cd	2.4cd	0.9cd	0.3cd

Clear-erosion patterned

Viewing angle 2θ½	25°	35°	35°	20°	35°/ 30°
Luminous intensity @ centre of light beam	30cd	30/25cd	30cd	50/40cd	25cd
Luminous intensity @ ±45°	1.5cd	1.5cd	2.0cd	1.0cd	0.5cd

Semi-transparent

Viewing angle 2θ½	25°	30°	30°	15°	30°
Luminous intensity @ centre of light beam	25/20cd	25/10cd	25/20cd	40/30cd	15cd
Luminous intensity @ ±45°	1.5cd	2/1.5cd	2cd	1.5cd	1.0cd

Environmental

Intrusion protection	IP67 or IP68
Temperature	-40°C to 70°C
Salt	Allow application in salt mist condition
Lens protection	IK08 (EN 50102)
Mechanical vibration	10-500Hz acceleration up to 2.2g

Technical Specification

Power requirement	E581X (DC): 21-28V E582X (50/60Hz): 100 - 200V
Power consumption	DC light module: 0.5 - 1.0W AC light module: 2.3 - 6.5W
Weight (w/o hard-wired power cable)	0.8kg - 3.2kg
Cable length	2 m / 6 m

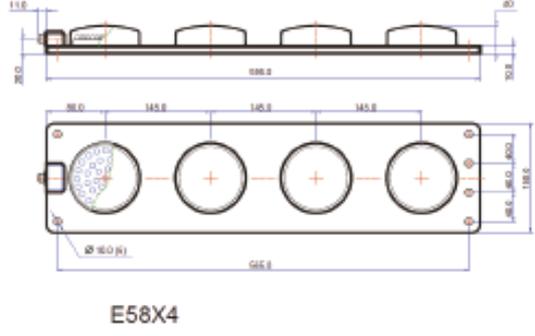
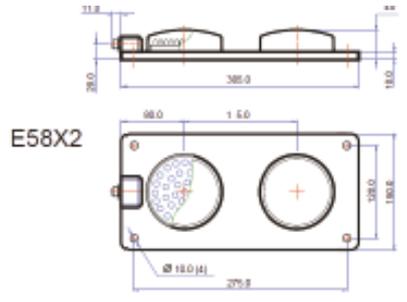
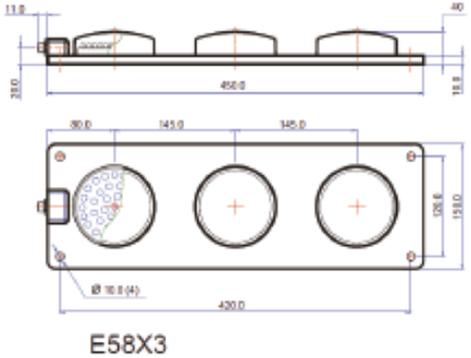
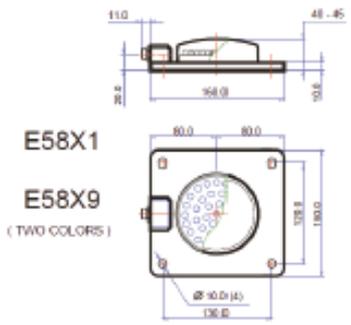
Order Overview E58XX

Product code

E58XN-CCCC-000	Note
X	Power supply (1 = 24VDC, 2 = AC, 3 = 12VDC)
N	Number of lights (1-4)
CCCC	Colour group (R, W, G, Y, B)
000	Option group (S, E, Cx, V) S = Semi-transparent E = Clear lens w/ erosion-patterned Cx = Hard-wired power supply cable; x = cable length V = VH (horizontally installed) or VV (vertically installed)

Product code example: E5814-RYGB-EC6

- E5814-RYGB-EC6 is a LED Indicator Panel for 24 V DC operation
- Red, yellow, green and blue LED modules
- Erosion-patterned lens and a 6 m hard-wired power supply cable.





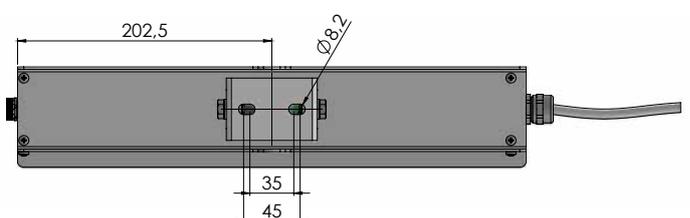
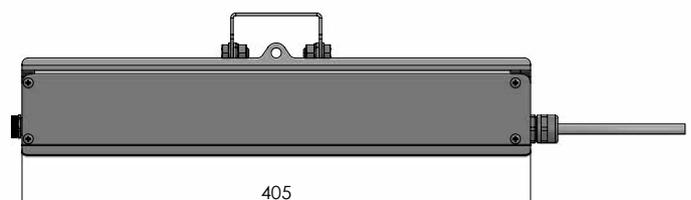
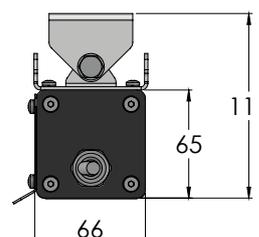
LTF 400

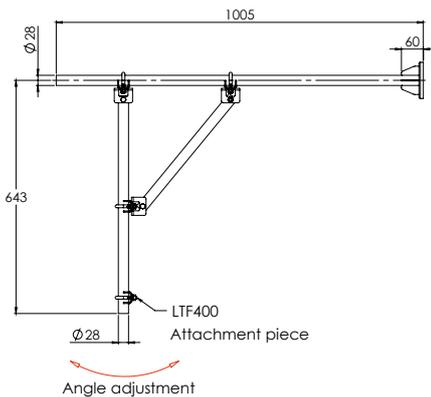
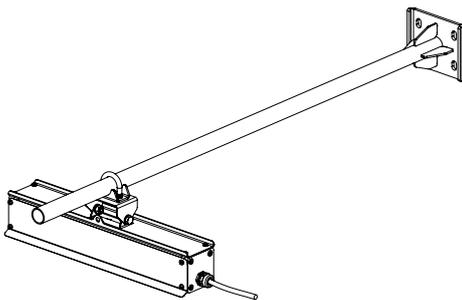
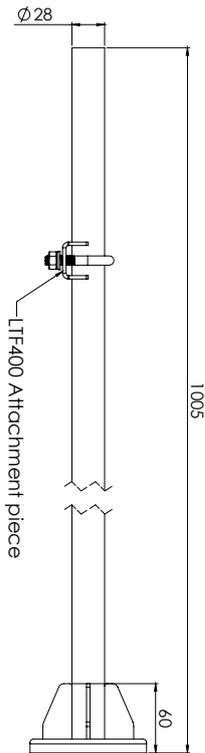
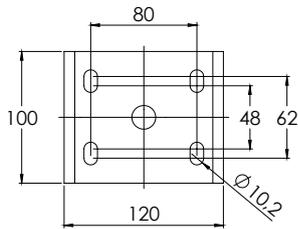
Floodlight

Sabik LTF 400 is a floodlight for illuminating fixed structures and auxiliary signs. Designed to excel in demanding marine environment, it is also a robust choice for inland installations.

LTF 400 comes in different opening angles and brightness options to match your illuminating and power consumption requirements. The integrated high efficiency controller and maintenance-free LED-based design make this product ideal for remote and solar-powered installation.

- Very low power consumption ideal for solar-powered sites
- Rugged, sealed, maintenance-free construction
- Automatic day/night switching
- Beam profile optimized for even distribution on luminated structures





Optical specification

Light source	High Power Light Emitting Diode (LED)
Divergence	8° / 50° / 120° FWHM (Narrow, Wide, Ultra Wide)

Main Technical Specification

Lens	UV stabilized acrylic
Housing	Aluminium, stainless steel A4, UV stabilized acrylic
Designed service life	More than 10 years
Weight	1.3 kg
Dimension (W x D x H)	440 x 72 x 79 mm
Flash character	Fully programmable (including presets)
Temperature range	-40° to +60°C
Voltage	12 VDC (10-30 VDC)
Solar charger	No
Degree of protection	IP 65
Reverse polarity protection	Yes
Daytime idle consumption	< 0.6 mA @ 12 VDC
Battery cut off voltage	10 VDC
Cable length	2 m / 6 m

Other

Twilight switch	Yes
Water tight equalizing valve	Yes
Mounting	2 pcs M8, Additional mounting arm option

Order Overview LTF 400

Product code

LTF 400 0.9 W	LTF 400 3 W	Beam opening
LTF400-N-W-1	LTF400-N-W-3	8°
LTF400-W-W-1	LTF400-W-W-3	50°
LTF400-UW-W-1	LTF400-UW-W-3	120°



LT 1000

LED Light Tube

LT 1000 LED Light tube is designed to replace traditional floodlights. The light is distributed directly towards the mariner instead of illuminating the structure. Only a fraction of energy is required compared to traditional floodlights.

- Maintenance-free LED light tubes for illuminating fixed aids to navigation
- Housing fully waterproof with PTFE vent for breathing
- Standard IALA surface colours Red, Green, White and Yellow in accordance with E-108 Recommendation
- Low power consumption, ideal for solar systems
- Can be used stand-alone or with control unit
- With the control unit the Intensity can be adjusted from 5% to 100% with control unit
- Control unit also includes integrated 16 A solar panel regulator and photocell
- Programmable with Sabik standard IR programming devices



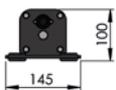
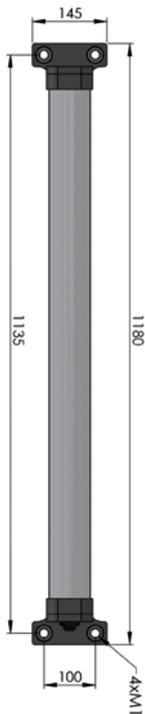
Optical performance

Maximum Illuminance

At full power 3 W 100 cd/m² 100 cd/m² 100 cd/m² 100 cd/m²

Main Technical Specification

Dimensions	1180 x 145mm
Lens tube material	UV stabilized Acrylic
End terminal material	Marine grade anodized aluminium
Light source	Light Emitting Diodes (LEDs)
Viewing angle	150°
Unit lifetime	Up to 10 years
Weight	2.5 kg
Temperature range	-40°...+60°C
Supply Voltage	10 – 32 VDC
Power consumption	High setting = max 3 watts Low setting = max 0,5 watt



Order Overview LT 1000

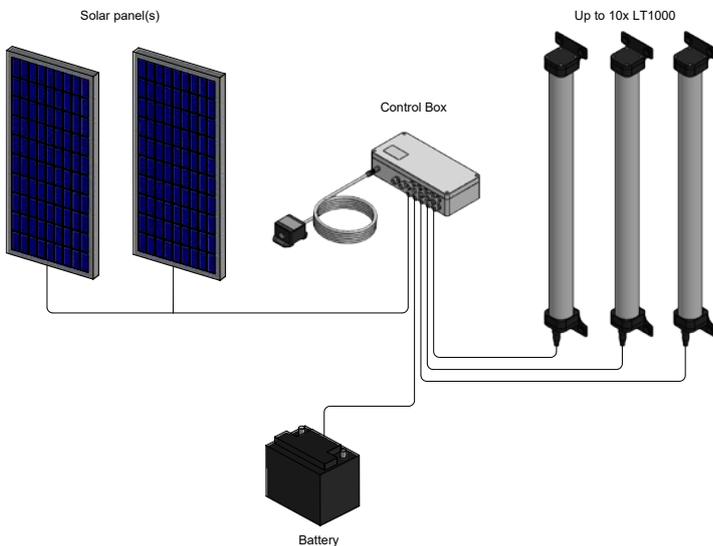
Product codes

LT 1000 0,5W	LT 1000 3W	Colour
Power 0,5W	Power 3 W	
LT-1000-1-W	LT-1000-3-W	white
LT-1000-1-R	LT-1000-3-R	red
LT-1000-1-G	LT-1000-3-G	green
LT-1000-1-Y	LT-1000-3-Y	yellow

Option matrix

Supply cables with connector	2 m
	6 m
	10 m

CONTROL BOX	980269
LT-1000 CABLE 2M	715620-2
LT-1000 CABLE 6M	715620-6
LT-1000 CABLE 10M	715620-10



Installation Example