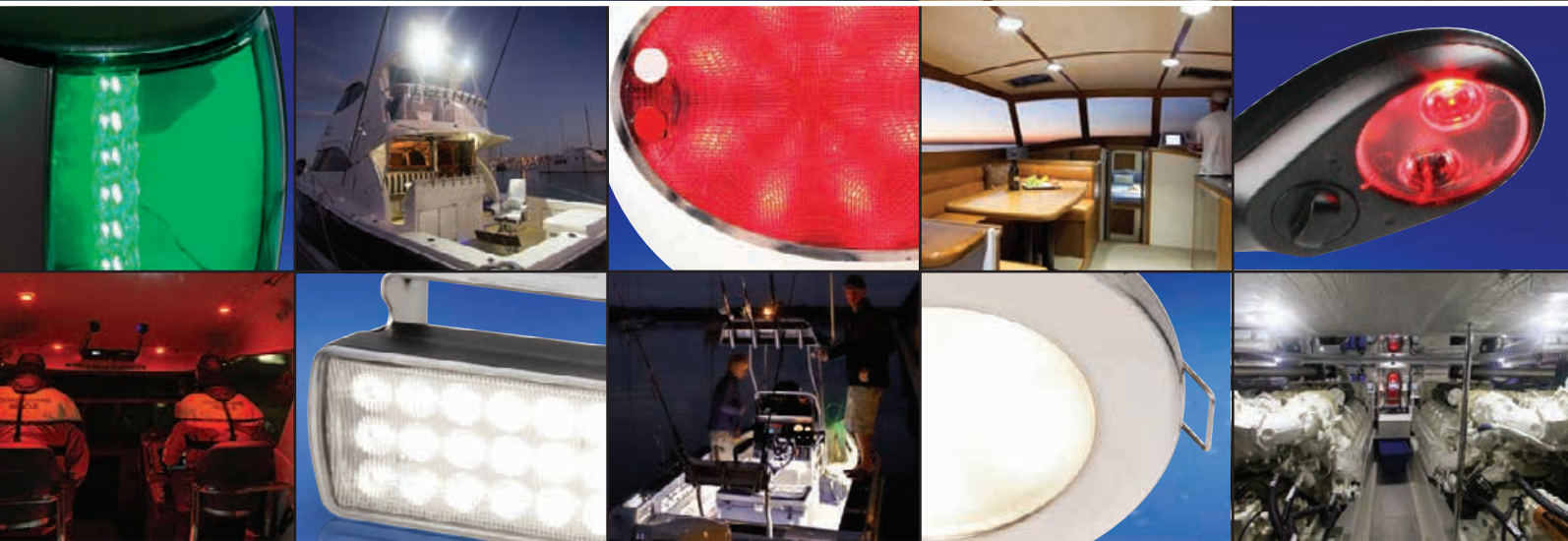


**Hella** *marine* 

*Vision and Innovation*

New Zealand Product Catalogue



World leading LED technology. Power saving and ultra durable.

[www.hellamarine.com](http://www.hellamarine.com)

# Vision and Innovation



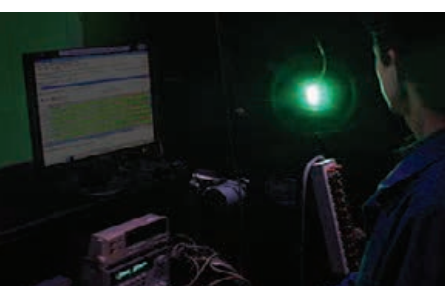
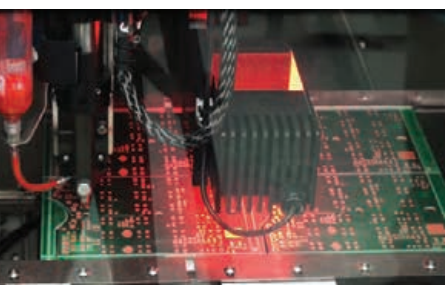
Hella marine, Auckland, New Zealand.



A marine lighting specialist first created in Germany in 1925, Hella marine has been headquartered since 2004 in Auckland, New Zealand - a country with a rich maritime history of boat building and yacht racing success.

Founded in 1973, today Hella New Zealand Ltd is a respected opto-electronic designer and manufacturer. The company's core competence is the development, production and distribution of advanced transport lighting products utilizing the latest LED (Light Emitting Diode) technology.

This LED competence is channelled to provide world leading marine lighting products that set benchmarks for reliability, safety and energy efficiency and to exceed customer expectations for outstanding service and support.



N° 201297

**Hella marine is certified to the international quality standard ISO 9001:2008 for:**

'The Design and Manufacture of Marine Navigation Lighting, General Lighting, LED Based Lighting and Associated Electronic Control Units.

The Design and Manufacture of Automotive Lighting and Signalling Equipment, General Lighting, Optical Products and Plastic Components.'

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# The Hella marine Advantage

At sea, power is often a scarce resource. Highly efficient and durable LED lighting has a substantial role to play in conserving energy and enhancing a vessel without sacrificing functionality or compromising safety.

Our vision is to provide world leading products that set benchmarks for quality, reliability, safety and energy efficiency while satisfying customer expectations for outstanding service and support. Hella marine 'Fit and Forget' LED lighting is firmly established as the solution of choice that meets long term reliability and economic considerations for astute owners and operators.

**LED**

## ***Class Leading Efficiency***

Combining efficient LED sources with advanced optic technology, Hella marine LED products deliver more light output per watt than incandescent based lamps with significant energy savings.

Ultra low heat signatures reduce heat onboard and prevent damage to surrounding materials.

**IP 67**  
COMPLETELY  
SEALED

## ***IP 67 - Completely Sealed***

Preventing moisture from corroding internal LED electronics is vital for long term durability in the harsh marine environment.

Hella marine products are completely sealed and purpose designed for interior or exterior use, wet or dry.

**HD**  
GRILAMID®  
LENS

## ***Heavy Duty Grilamid® Lens***

Many Hella marine LED products utilise Grilamid®, a high performance polyamide manufactured in Switzerland, as a heavy duty lens material. Grilamid® is a revolutionary transparent plastic with exceptionally high impact strength and resistance to UV and chemical damage.

**CE**

## ***Electromagnetic Compatibility (EMC)***

All Hella marine products are designed to suppress electromagnetic interference, complying with the emission and immunity limits prescribed in international standards.

This protects the radio, communication, navigation and other electrical equipment onboard from possible interference with our products.

**C**

Where applicable, Hella marine products carry CE marking for European Union legislation, and the C-Tick mark for Australian & New Zealand requirements.

**UV  
RESISTANT**

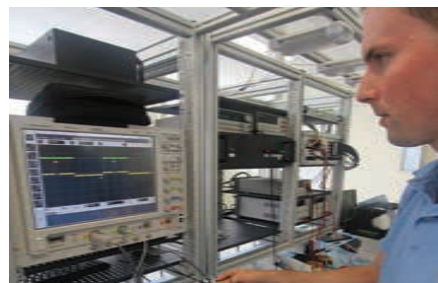
## ***Outstanding UV and Impact Resistance***

Hella marine lamps utilise advanced impact resistant polymers that will not yellow or deteriorate in the harsh marine environment.

**5 YR  
WARRANTY**

## ***5 Year Warranty***

All Hella marine LED based lighting products carry a Five Year Warranty providing peace of mind that the product will stand the test of time. For more information visit: <http://www.hellamarine.com/en/about/warranty/>





Extreme fisherman Matt Watson relies on Hella marine onboard his Stabicraft. [www.stabcraft.com](http://www.stabcraft.com)



### **Warranty - Standing behind the product**

**All LED based lighting products supplied by Hella marine carry a Five-Year Warranty from end user purchase covering faults in materials, components or workmanship, with the exceptions as stated below:**

*Hella marine NaviLED® TRIO Tri Colour LED navigation lamps carry a Seven-Year Warranty*

*Hella marine HID (Xenon) and Halogen based Deck Floodlights carry a One-Year Warranty.*

*Hella marine bulb based interior and exterior lamps and products listed in the accessories section of this catalogue carry a One-Year Warranty.*

In the unlikely event that you should experience a confirmed warranty related problem with your purchase, Hella marine will, at its discretion, either repair, replace or refund the purchase price of the product.

Warranty services may be obtained by returning the product within the warranty period to the Hella dealer where the product was originally purchased.

This warranty is in addition to and does not preclude any other rights or remedies available to the consumer under any local legislation related to the provision of goods or services.

**This warranty does not cover:**

1. Claim/s as a result of normal wear and tear or of any modifications and / or alterations to the product in any shape or form.
2. Claim/s as a result of non-compliance of the assembly, service and operating instructions and/or any unfit or improper use.
3. Any expenses incurred in the process of making the claim.



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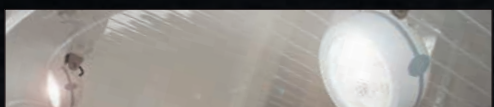
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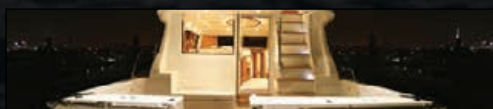
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### IP Degrees of Protection Definition

IP stands for International Protection, the IP degrees of protection are determined by DIN 40050 part 9.  
 This standard exists to specify the exact protection of electrical equipment against penetration by solid foreign matter, including dust and water. The exact degree of protection is achieved by various tests.

E.g.;        The IP rating of the 8517 series deck floodlight is listed as IP 6K 9K.  
                  This means dust tight and protected from high pressure cleaning.

#### IP 6K 9K

- First numeral
  - Protection against the ingress of solid foreign objects (table 1)
- Second numeral
  - Protection against the ingress of water (table 2)

**Table 1:**  
**Protection against the ingress of solid foreign objects (including dust)**

X .....	not tested
0 .....	not protected
1 .....	solid foreign objects $\varnothing \geq 50$ mm
2 .....	solid foreign objects $\varnothing \geq 12.5$ mm
3 .....	solid foreign objects $\varnothing \geq 2.5$ mm
4 .....	solid foreign objects $\varnothing \geq 1.0$ mm
5 and 5K .....	dust protected
6 and 6K .....	dust tight

**Table 2:**  
**Protection against the ingress of water**

X .....	not tested
0 .....	not protected
1 .....	vertical dripping
2 .....	dripping (inclined 15°)
3 .....	spraying
4 .....	splashing
4K .....	same with increased pressure
5 .....	jetting
6 .....	powerful jetting
6K .....	same at increased pressure
7 .....	temporary immersion
8 .....	continuous immersion
9K .....	high pressure/steam jet cleaning





*Navigation Lamp Requirements and Technology*

**Hella marine**   
*Vision and Innovation*

## International Standards

Hella marine navigation lamps comply with the International Regulations for Prevention of Collisions at Sea (IMO COLREG 72).

This IMO compliance, together with supplementary national requirements, is listed with each navigation lamp series throughout the catalogue.

### Main approval types:



Complies with IMO (International Maritime Organization) requirements under the International Regulations for the Prevention of Collisions at Sea. (IMO COLREG 72) IMO COLREG 72 forms the international basis for legal navigation lighting on vessels.



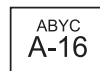
Approved by the German BSH (Bundesamt für Seeschifffahrt und Hydrographie) and carry BSH type approval numbers.  
BSH was formerly called DHI (Deutsches Hydrographisches Institut).



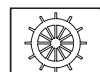
Approved by the Italian RINA (Registro Italiano Navale) authority.



Complies with USCG (United States Coast Guard) requirements.  
Lamps carry a marking for minimum visible distance in nautical miles, e.g. USCG 2 NM.



Complies with ABYC (American Boat and Yacht Council) Navigation Lamp Standard A-16.



Approved under the Marine Equipment Directive (MED) 96/98/EC last modified by directive 2008/67/EC for use throughout Europe in all EC member states for both pleasure and commercial vessels.

### Lamps requirements by vessel length

For vessels less than 50 meters in length overall, IMO COLREG 72 describes the following minimum visible distances for navigation lamps. Supplementary national approvals may also apply.

#### Vessels 0-12 meters / 0-40 feet in length:

- White, Red, Green All Round lamps, 2 Nautical Mile
- Masthead lamp, 2 Nautical Mile
- Port and Starboard lamps, 1 Nautical Mile
- Stern lamp, 2 Nautical Mile
- Tri Colour lamp, 2 Nautical Mile. (Sailing vessels under sail only)

#### Vessels 12-20 meters / 40-65 feet in length:

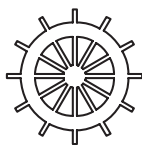
- White, Red, Green All Round lamps, 2 Nautical Mile
- Masthead lamp, 3 Nautical Mile
- Port and Starboard lamps, 2 Nautical Mile
- Stern lamp, 2 Nautical Mile
- Tri Colour lamp, 2 Nautical Mile. (Sailing vessels under sail only)

#### Vessels 20-50 meters / 65-150 feet in length:

- White, Red, Green All Round lamps, 2 Nautical Mile
- Masthead lamp, 5 Nautical Mile
- Port and Starboard lamps, 2 Nautical Mile
- Stern lamp, 2 Nautical Mile



## Wheelmark Approval



The Wheelmark for navigation lights symbolises conformity with the Marine Equipment Directive (MED) 96/98/EC, which calls upon IMO COLREG 1972 and the norms EN 14744 (European standard for navigation lights on inland and sea-going vessels) and EN 60945 (Maritime navigation and radiocommunication equipment and systems).

Wheelmark certified Hella marine LED navigation lamps are approved throughout Europe in all EC member states for both pleasure and commercial vessels.

Wheelmark approvals replace the previously required certificates of the national authorities with the aim of ensuring that the equipment meets a common standard of safety and performance valid in every member state of the EU.

A predominant safety requirement of EN 14744 for LED navigation lights is the monitoring and control of light output deviations caused by service life conditions. The Hella marine solution is a sophisticated self control and diagnostic electronics integrated into each single-function Wheelmark certified NaviLED®PRO LED navigation lamp.

The electronics check and measure each lamp ensuring light intensity, and consequently the lamp's visibility performance, permanently correspond to the visibility requirements of the norm for ongoing safety and reliability at sea.

The MED certification of each Hella marine NaviLED®PRO series lamp can be recognized by the symbol of a ship's wheel (Wheelmark) engraved onto the top section of the shroud, and also onto the top section of the lens.

The MED lists statutory equipment carried and used on ships which are registered under the flags of the European Union member states which have to meet the international conventions developed by the International Maritime Organisation (IMO).

## NaviLED®PRO Wheelmark Self Diagnostic Control

**Hella marine NaviLED®PRO Wheelmark LED navigation lamps are type approved and certified according to the European norm EN 14744 by the German Federal Maritime and Hydrographic Agency (BSH) for German inland waterways and the open sea.**

To ensure long term safety at sea, each single-function NaviLED®PRO BSH navigation lamp is equipped with a sophisticated self diagnostic control.

A photometrical self-test is carried out by the lamp in periodic intervals. If the light output, and consequently the visibility, reaches a pre-determined value, the lamp activates 'Service Mode'.

Service Mode is indicated by the lamp flashing at a rate of 60 flashes per minute for 15 seconds as soon as the lamp is switched on. This will occur for 15 seconds every time the lamp is switched on until the unit has operated for 2000 hours.

After 2000 hours the Service Mode flash rate doubles to 120 flashes per minute for 15 seconds as soon as the lamp is switched on.

To ensure the lamp meets the light output criteria of its certification, Hella marine recommends the light module be replaced as soon as it enters this 2000 hour Service Mode stage.

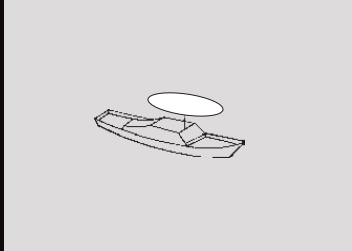
The 2000 Service Mode flash rate should not occur earlier than tens of thousands of hours. By regular recreational boating standards, even with regular night sailing, this stage will hardly ever be reached.

## IMO COLREG 72 Lights and Visibility - Powerboats

**IMO COLREG requirements for navigation lighting on powerboats less than 50m LOA (Length Overall).**

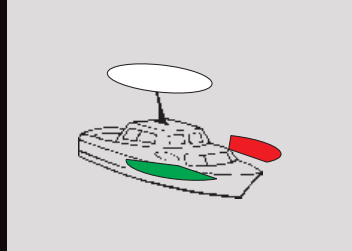
Note - Sailboats under motor adopt the rules for Powerboats.

**Powerboats up to 7m. Max 7 knots**



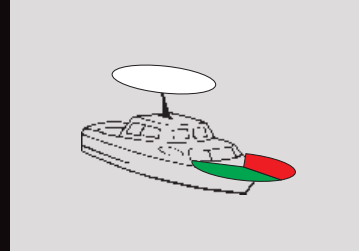
1 All Round White lamp

**Powerboats up to 12m where Masthead and Stern lamps cannot be mounted**



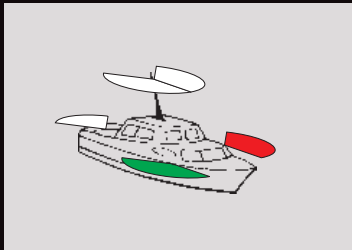
1 All Round White lamp  
1 Port lamp  
1 Starboard lamp

**Powerboats up to 12m where Masthead and Stern lamps cannot be mounted**



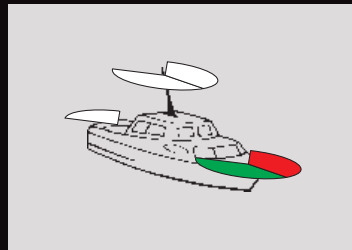
1 All Round White lamp  
1 Bi-Colour lamp

**Powerboats up to 20m**



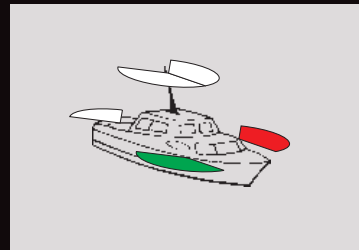
1 Masthead lamp  
1 Port lamp  
1 Starboard lamp  
1 Stern lamp

**Powerboats up to 20m**



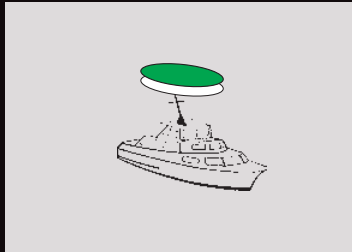
1 Masthead lamp  
1 Bi-Colour lamp  
1 Stern lamp

**Powerboats up to 50m**



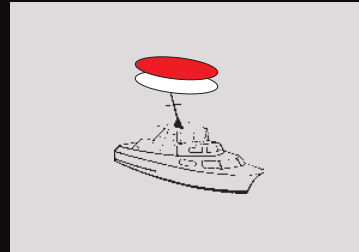
1 Masthead lamp  
1 Port lamp  
1 Starboard lamp  
1 Stern lamp

**A vessel less than 50m engaged in trawling**



1 All Round Green lamp  
1 All Round White lamp  
mounted above one another

**A vessel less than 50m engaged in fishing, other than trawling**



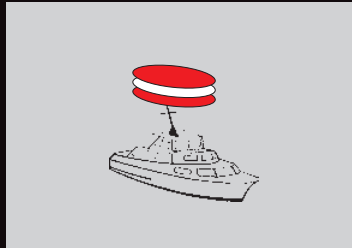
1 All Round Red lamp  
1 All Round White lamp  
mounted above one another

**Powerboats towing with a tow length of less than 200m**



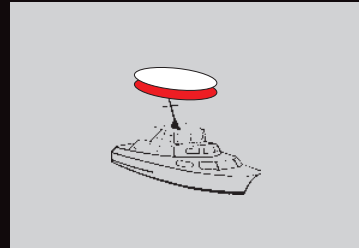
In addition to Port, Starboard and Stern lamps  
1 Towing lamp mounted above the stern lamp  
2 Masthead lamps in a vertical line  
(When the tow length exceeds 200m, three Masthead lamps in a vertical line)

**A vessel engaged in diving operations**



1 All Round Red lamp  
1 All Round White lamp  
1 All Round Red lamp  
mounted above one another

**A vessel engaged in pilotage duty**



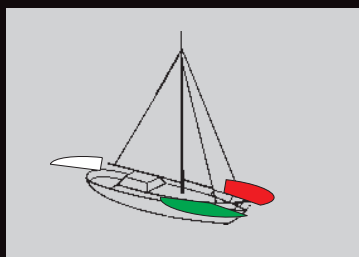
In addition to Port, Starboard, Masthead and Stern lamps  
1 All Round White lamp  
1 All Round Red lamp  
mounted above one another



## IMO COLREG requirements for navigation lighting on sailboats less than 50m LOA (Length Overall).

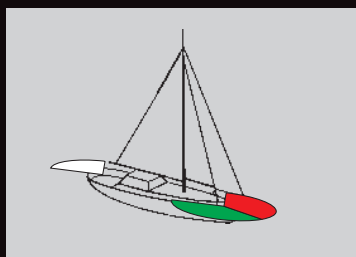
Note - Sailboats under motor adopt the rules for Powerboats.

**Sailboats up to 20m under sail**



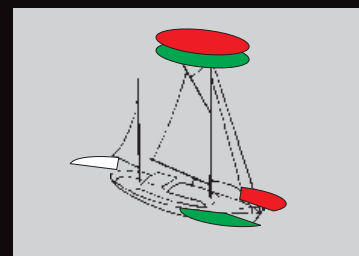
- 1 Port lamp
- 1 Starboard lamp
- 1 Stern lamp

**Sailboats up to 20m under sail**



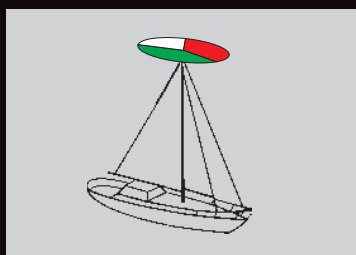
- 1 Bi-Colour lamp
- 1 Stern lamp

**Sailboats more than 20m under sail**



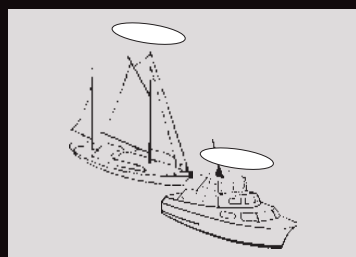
- 1 All Round Red lamp above
- 1 All Round Green lamp
- 1 Port lamp
- 1 Starboard lamp
- or 1 Bi-Colour lamp
- 1 Stern lamp

**Sailboats up to 20m under sail**



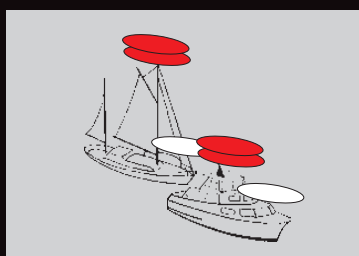
- 1 Tri-Colour lamp

**Sailboats and Powerboats less than 50m at anchor**



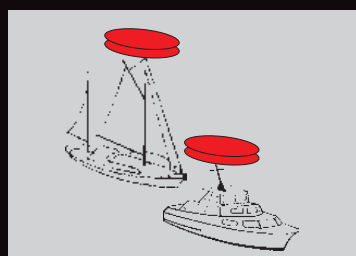
- 1 All Round White lamp

**Sailboats and Powerboats more than 12m grounded**



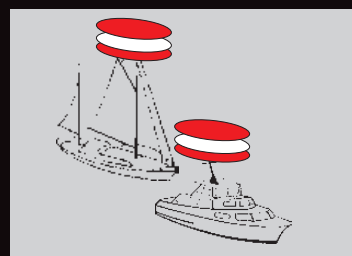
- 1 All Round White lamp
- 2 All Round Red lamps mounted above one another

**Sailboats and Powerboats more than 12m not under command (NUC)**



- In addition to Port, Starboard and Stern lamps
- 2 All Round Red lamps mounted above one another

**Sailboats and Powerboats more than 12m manoeuvring with difficulty (RAM)**



- In addition to Port, Starboard and Stern lamps
- 1 All Round Red lamp
- 1 All Round White lamp
- 1 All Round Red lamp mounted above one another

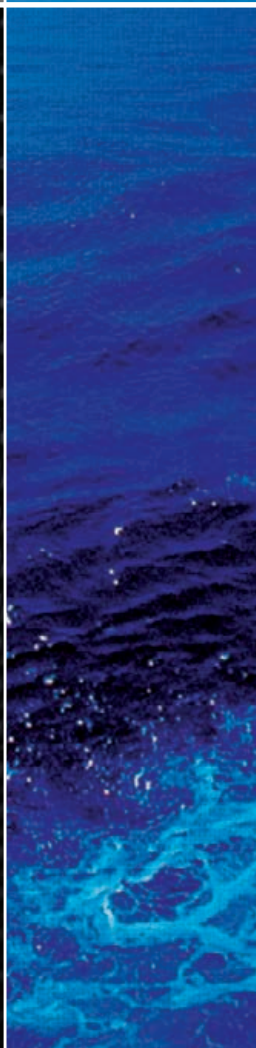
## Hella marine LED Navigation Lamp Quick Reference Guide

	Series Name / Series Number	Visible distance	COLREG Max. length	Vessel type	Approvals	Installation surface	Light colour	Power Consumption	Pg. No.
	NaviLED®PRO 9900 Port	2 NM	50M	Yacht & Powerboat	COLREG, USCG, BSH, Wheelmark	Vertical	Red	< 2W	17
	NaviLED®PRO 9900 Port	3 NM	50M plus	Powerboat	COLREG, USCG, RINA, ABYC A-16	Vertical	Red	< 2W	17
	NaviLED®Compact 0520 Port	2 NM	50M	Yacht & Powerboat	COLREG, USCG, RINA, ABYC A-16, BSH	Vertical	Red	< 1W	21
	NaviLED®Deck Mt 0620 Port	2 NM	50M	Yacht & Powerboat	COLREG, USCG, RINA, ABYC A-16	Horizontal	Red	< 1W	22
	NaviLED®PRO 9908 Starboard	2 NM	50M	Yacht & Powerboat	COLREG, USCG, BSH, Wheelmark	Vertical	Green	< 2W	17
	NaviLED®PRO 9908 Starboard	3 NM	50M plus	Powerboat	COLREG, USCG, RINA, ABYC A-16	Vertical	Green	< 2W	17
	NaviLED®Compact 0520 Starboard	2 NM	50M	Yacht & Powerboat	COLREG, USCG, RINA, ABYC A-16, BSH	Vertical	Green	< 1W	21
	NaviLED®Deck Mt 0620 Starboard	2 NM	50M	Yacht & Powerboat	COLREG, USCG, RINA, ABYC A-16	Horizontal	Green	< 1W	22
	NaviLED®PRO 9909 Stern	2 NM	50M	Yacht & Powerboat	COLREG, USCG, BSH, Wheelmark	Vertical	White	< 2W	17
	NaviLED®PRO 9909 Stern	3 NM	50M plus	Powerboat	COLREG, USCG, RINA, ABYC A-16	Vertical	White	< 2W	17
	NaviLED®Compact 0520 Stern	2 NM	50M	Yacht & Powerboat	COLREG, USCG, RINA, ABYC A-16, BSH	Vertical	White	< 2W	21
	NaviLED®PRO 9940 Masthead	3 NM	20M	Powerboat & Yachts under motor	COLREG, USCG, BSH, Wheelmark	Vertical	White	< 2.5W	17
	NaviLED®PRO 9940 Masthead	5 NM	50M	Powerboat & Yachts under motor	COLREG, USCG, BSH, Wheelmark	Vertical	White	4W	17
	NaviLED®PRO 9941 Bi Colour	2 NM	50M	Yacht & Powerboat	COLREG, USCG, BSH, Wheelmark	Vertical	Red / Green	< 2W	17
	NaviLED®Trio 0650 Tri Colour	2 NM	20M	Yacht	COLREG, USCG, RINA, ABYC A-16, BSH	Horizontal	R G W White	< 3.5W Sailing < 1.5W Anchor	15
	NaviLED®360 0960 White	2 NM	50M	Yacht & Powerboat	COLREG, USCG, BSH, Wheelmark	Horizontal	White	< 2W	19
	NaviLED®360 9910 White	2 NM	50M	Yacht & Powerboat	COLREG, USCG, RINA, ABYC A-16	Horizontal	White	< 2W	19
	NaviLED®360 0910 White	2 NM	50M	Yacht & Powerboat	COLREG, USCG, RINA, ABYC A-16, BSH	Horizontal	White	< 2W	19
	NaviLED®360 0910 Red	2 NM	50M	Yacht & Powerboat	COLREG, USCG, RINA, ABYC A-16, BSH	Horizontal	Red	< 2W	19
	NaviLED®360 0910 Green	2 NM	50M	Yacht & Powerboat	COLREG, USCG, RINA, ABYC A-16, BSH	Horizontal	Green	< 2W	19





*LED Navigation Lamps*



**Hella marine**   
*Vision and Innovation*

## LED Navigation Lamps



## LED Navigation Lamp Technology

Hella marine LED based navigation lamps provide power saving, highly visible and ultra durable lighting for reliability and safety at sea.

### Ultra Low Power Consumption

Combining efficient LED light sources with advanced optic technology, Hella marine LED products deliver more light output per watt than traditional bulb lamps and thus provide considerable power saving.

Hella marine NaviLED®PRO navigation lamps use less than 10% of the power required to run a 25W incandescent bulb navigation lamp certified to the same visible distance.

### No bulbs, No maintenance. Ultra long service life

Hella marine LED technology has no filaments to break, thus making the LED lamps extremely shock and vibration resistant for reliable illumination and safety.

Our engineering teams have developed a unique range of highly demanding tests to lift product reliability to new standards.

### Safe and highly visible

Advanced LED navigation lamp optics deliver optimal horizontal and vertical light distribution according to international standards. They provide enhanced visibility compared to bulb navigation lamps. Cut-off angles are ultra precise, clearly indicating a vessel's movement and heading.



### Fully sealed for life

Each Hella marine LED lamp is a completely sealed opto-electronic device. Proven design, precision engineering, and the use of high impact acrylic materials ensures superior resistance to water, impact, UV and general wear and tear.



### Superior Lens and Optic Materials

Taking ultra durable LED Navigation lighting to a new level, Hella marine specifies Grilamid®, a high performance polyamide manufactured in Switzerland, as a lens option on BSH certified NaviLED®PRO series.

Also used for the lens of the NaviLED®Trio Tri Colour lamp, Grilamid® is a revolutionary transparent plastic with an exceptionally high impact strength and resistance to UV and chemical damage.



### Pre-wired with marine cable

Hella marine LED lamps are pre-wired with quality marine specification tinned cable. The cable is completely sealed to the lamp body providing time saving at installation and reliable electrical connection.



### Multivolt™ technology for durability and safety

Advanced Multivolt™ circuitry provides a uniform level of intensity for reliable and safe illumination across a range of DC inputs such as 8-28 volts or 9-33 volts.

Multivolt™ LED lamps can be connected to 12 or 24 volt systems without modification, providing full light performance and automatic compensation for low battery voltages and voltage drop over long cables and connections. Multivolt™ LED lamps are also reverse polarity and spike protected for enhanced durability even under severe voltage fluctuations.



### Electromagnetic Compatibility (EMC)

All Hella marine products are designed to suppress electromagnetic interference, complying with the emission and immunity limits prescribed in international standards. This protects the radio, communication, navigation and other electrical equipment onboard from possible interference with our products. Where applicable, Hella marine products carry CE marking for European Union legislation, and the C-Tick mark for Australian & New Zealand requirements.



C-Tick is the Australian & New Zealand EMC compliance mark administered by the Australian Communications and Media Authority (ACMA) & Radio Spectrum Management (RSM) New Zealand, and will be transitioning to the RCM mark by 1st March, 2016. Hella marine products will remain compliant to these requirements throughout the transition period and beyond.





**LED Tri Colour with Anchor navigation lamp.**  
Advanced materials and state of the art technology  
for reliability, efficiency and safety at sea.



#### LED Windex Lamps

Power saving and durable lamps to illuminate wind direction indicators.



Voltage	Light Colour	Part Number
8-28V	Red	2307
10-33V	White	2054



#### Windex Adaptor Nut

Machined 316 stainless steel adaptor nut to install a Windex directly onto the LED Tri Colour mounting shaft.

M12 (Mounting Shaft) to 5/16UNC.  
Female to female.

Part Number  
9NM 958 988-402



Packaging for  
aftermarket presentation

#### Ultra low current draw. Power saving on board

Port, Starboard and Stern functions draw less than 3.5W combined.  
The Anchor lamp draws less than 1.5W for substantial power saving compared to the 25W consumed by incandescent Tri Colour lamps.

#### Fully sealed for life. IP 67 Certified

Completely sealed, impervious to saltwater and contaminants.

#### Safe and highly visible

Hella marine lens and optics technology ensures ultra precise horizontal and vertical cut-off angles, clearly indicating a vessel's movement and heading.

#### Ultra durable materials. Ultra long service life

Advanced heavy duty Grilamid® lens and housing, plus proven Hella marine LED technology combines to provide outstanding resistance to vibration, impact and shock loads. Relentless test programs have helped lift product reliability to new standards for ongoing performance and safety in the most demanding conditions.

#### Unique installation and removal system

The NaviLED®Trio installs on a unique 316 stainless steel mounting shaft for a secure attachment and reliable electrical connections.



#### Housing Material

UV resistant, high impact nylon

#### Lens Material

UV resistant, ultra heavy duty Grilamid®

#### Mounting Shaft

316 stainless steel

#### Minimum Visible Distance

2 Nautical Mile (Yacht)

#### Cable

Pre-wired with 400mm of triple core marine cable

#### Operating Voltage

Multivolt™ 8-28V DC

#### Voltage Protection

Spike protected to +500 volts

Reverse polarity protected to -700 volts

#### Power Consumption

Port, Starboard and Stern - Less than 3.5W combined

All Round White / Anchor - Less than 1.5W

#### Degree of Protection

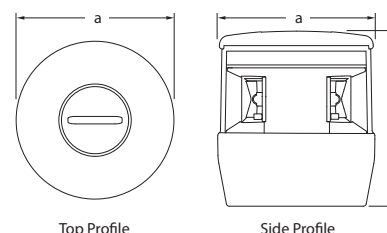
IP 67 - Completely Sealed

#### Weight

400g (including cable)

#### Approvals

BSH, IMO COLREG, USCG, ABYC  
NMSC, Maritime NZ



Top Profile

Side Profile



#### LED Tri Colour with Anchor Lamp

Visibility	Part Number
2 NM	2LT 980 650-001

#### Dimensions

a = 85mm / 3.35"  
b = 95mm / 3.74"





Ultra durable LED navigation lamps for enhanced safety.  
Proven worldwide on commercial and recreational vessels.



Packaging for  
aftermarket presentation

#### Ultra low current draw

NaviLED®PRO lamps use less than 10% of the power required to run a bulb navigation lamp. Port, Starboard and Stern lamps consume less than 3.2 watts combined.

#### No maintenance. Ultra long service life

Hella marine LED technology has no filaments to break making NaviLED®PRO lamps extremely shock and vibration proof for proven reliability and safety in demanding conditions.

#### Multivolt™ 9-33V DC

Advanced electronics ensure reliable illumination and lamp protection even under severe voltage fluctuations and low battery voltages.

#### Safe and highly visible

Hella marine optics deliver 100% correct light output and enhance visibility compared to bulb navigation lamps. Wheelmark/MED versions incorporate self diagnostic technology for long term reliability and safety.

#### Fully sealed for life. IP 67 certified

Each NaviLED®PRO lamp is a completely sealed unit. High impact housings ensure durability from waves and impact. Ultra heavy duty BSH versions use high-tech Grilamid® lens to offer superior strength in extreme conditions.

#### Pre-wired with 2.5m of twin core marine cable

High quality cable assemblies for time saving, completely sealed installations.

#### Internationally certified

Meets the requirements of COLREG, USCG, ABYC A-16, RINA, BSH, Wheelmark, NMSC, Maritime NZ.



Sealed light engine clips into  
mounting shroud for an ultra  
secure attachment.

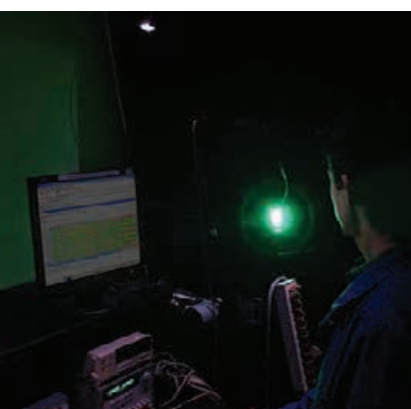


Rear of lamp without shroud.  
Pre-wired with twin core marine cable

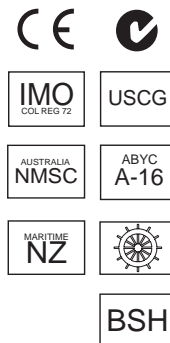
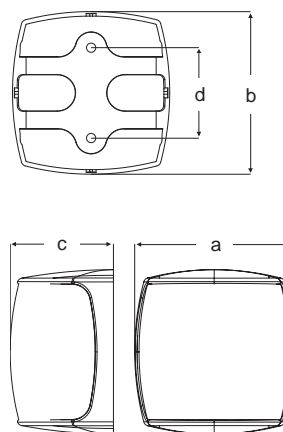
### NaviLED®PRO Photometric Testing

NaviLED®PRO series lamps have ultra precise horizontal and vertical cut-off angles to clearly indicate a vessel's movement and heading.

Every individual NaviLED®PRO lamp is photometrically verified in production by a sophisticated goniometer to ensure compliance with the intensity and cut-off requirements of international navigation lamp standards. After passing photometric testing, a unique serial number is laser engraved onto the lens. This serial number is referenced to individual test reports which are electronically archived by Hella marine, ensuring international navigation lamp standards are consistently met.



<b>Material Description</b>	Hi impact acrylic lens or Ultra heavy duty Grilamid® lens (MED versions only)
<b>Minimum Visible Distance</b>	2 Nautical Mile (Yachts and Powerboats) 3 Nautical Mile (Powerboats only)
<b>Cable</b>	Pre-wired with 2.5m of twin core marine cable
<b>Operating Voltage</b>	Multivolt™ 9-33V DC
<b>Voltage Protection</b>	Spike protected to +500 volts Reverse polarity protected to -700 volts
<b>Power Consumption</b>	Port, Starboard and Stern - Less than 3.2W combined. Masthead - Less than 2.5W
<b>Degree of Protection</b>	IP 67 - Completely Sealed
<b>Weight</b>	150g (including cable)
<b>Approvals</b>	Wheelmark, COLREG, USCG, ABYC A-16 RINA, NMSC, Maritime NZ



**Dimensions**  
a = 87mm / 3.43"  
b = 90mm / 3.54"  
c = 57mm / 2.25"  
d = 50mm / 1.97"

### COLREG, USCG, RINA and ABYC A-16 Certified LED Navigation Lamps.



**LED**  
Multivolt

#### 2 Nautical Mile Powerboat and Yacht Lamps

Lamp Type	Visibility	Black Shroud	White Shroud
Port	2 NM	2LT 959 900-001	2LT 959 900-011
Starboard	2 NM	2LT 959 908-001	2LT 959 908-011
Stern	2 NM	2LT 959 909-001	2LT 959 909-011

\*\* for Powerboats and Sailing Yachts under motor

**LED**  
Multivolt

#### 3 Nautical Mile Powerboat Lamps

Lamp Type	Visibility	Black Shroud	White Shroud
Port	3 NM	2LT 959 900-201	2LT 959 900-211
Starboard	3 NM	2LT 959 908-201	2LT 959 908-211
Stern	3 NM	2LT 959 909-201	2LT 959 909-211
Masthead**	3 NM	2LT 959 940-201	2LT 959 940-211

### COLREG and Wheelmark Certified LED Navigation Lamps.



NaviLED®PRO Wheelmark lamps are type approved and certified according to the Marine Equipment Directive 96/98/EC for inland waterways and the open sea in Europe. A Grilamid® lens is standard for superior strength in extreme conditions. Each single-function NaviLED®PRO BSH lamp is equipped with a sophisticated self diagnostic control. Port and Starboard Grilamid® lens versions appear clear when the lamps are OFF.

**LED**  
Multivolt

#### 2 Nautical Mile Powerboat and Yacht Lamps



Lamp Type	Visibility	Black Shroud	White Shroud
Port	2 NM	2LT 959 900-601	2LT 959 900-611
Starboard	2 NM	2LT 959 908-601	2LT 959 908-611
Stern	2 NM	2LT 959 909-601	2LT 959 909-611
Bi-Colour	2 NM	2LT 959 941-001	2LT 959 941-011

**LED**  
Multivolt

#### 3 and 5 Nautical Mile Masthead Lamps



Lamp Type	Visibility	Black Shroud	White Shroud
Masthead**	3 NM	2LT 959 940-601	2LT 959 940-611
Masthead**	5 NM	2LT 959 940-401	2LT 959 940-411

\*\* for Powerboats and Sailing Yachts under motor



LED efficiency and precision optics for reliable and highly visible all round lighting



**With less than 1.5W of power consumption, NaviLED®360 lamps draw a fraction of the energy required to run a conventional 2 nautical mile incandescent lamp.**

**No maintenance. Ultra long service life**  
Hella marine LED technology has no filaments to break making NaviLED® lamps extremely shock and vibration proof for reliability and safety in demanding conditions.

**Multivolt™ 9-33V DC**  
Advanced electronics ensure reliable illumination and lamp protection even under severe voltage fluctuations and low battery voltages. Sealed within the base or aluminium pole, the Multivolt™ drive circuitry provides reverse polarity, spike and over-voltage protection for long life and reliable operation.

**Safe and highly visible**  
Hella marine optics deliver 100% correct light output and enhance visibility compared to bulb navigation lamps.

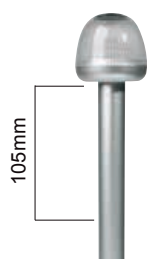
**Fully sealed for life. IP 67 Certified**  
Each NaviLED® lamp is a completely sealed unit, highly UV and corrosion resistant.

**Pre-wired with marine cable**  
Quality twin core marine cable assemblies are used on all lamps ensuring time saving, completely sealed installations.

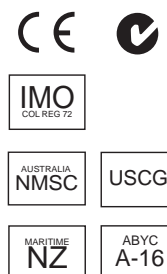
**Internationally certified**  
Meets the requirements of COLREG, USCG, ABYC A-16, RINA, NMSC, Maritime NZ.



**Note -**  
The electronics to drive and protect a NaviLED®360 pole lamp are contained on a circuit board inside the aluminium tube that is sealed by heavy duty heat shrink insulation. This circuit board assembly measures 105mm from the bottom of the lamp's aluminium base.



<b>Material Description</b>	UV resistant, enhanced impact acrylic lens Anodized aluminium lamp base and pole
<b>Minimum Visible Distance</b>	2 Nautical Mile
<b>Cable</b>	Pre-wired with twin core marine cable
<b>Operating Voltage</b>	Multivolt™ 9-33V DC
<b>Voltage Protection</b>	Spike protected to +500 volts Reverse polarity protected to -500 volts
<b>Power Consumption</b>	< 1.5W
<b>Degree of Protection</b>	IP 67 - Completely Sealed
<b>Weight</b>	Surface Mount - 150g (including cable) 12" / 305mm Fold down pole mount - 300g (including cable)
<b>Approvals</b>	IMO COLREG, USCG, RINA, ABYC A-16, NMSC, Maritime NZ







Compact lamp with concealed fastening system

**LED**  
Multivolt

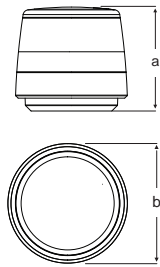
### 2 Nautical Mile Anchor Lamps with compact surface mount base

Light Colour	Visibility	Black Base	White Base
White	2 NM	2LT 980 960-001	2LT 980 960-011

Ultra compact and robust surface mount design with no visible fastenings once installed.

A Grilamid® lens is standard for superior strength.

**HD**  
GRILAMID®  
LENS



**Dimensions**  
a = 56mm / 2.20"  
b = 60mm / 2.36"

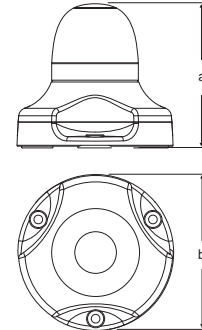


**LED**  
Multivolt

### 2 Nautical Mile All Round Lamps with surface mount base

Light Colour	Visibility	Black Base	White Base
White	2 NM	2LT 980 910-001	2LT 980 910-011
Red	2 NM	2LT 980 910-401	2LT 980 910-411
Green	2 NM	2LT 980 910-201	2LT 980 910-211

Robust surface mount with three mounting holes.



**Dimensions**  
a = 83mm / 3.27"  
b = 90mm / 3.54"



Packaging for aftermarket presentation

### NaviLED®360 Surface Mount Accessory Kit

For applications where access to the cable connection is required, or applications requiring frequent lamp installation and removal.

Kit includes -	Black Base	White Base
1 x Base	8HG 980 917-101	8HG 980 917-111
1 x Cable clamp		
1 x Connector block		



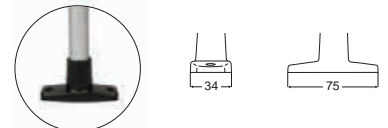
2LT 959 910-011

**LED**  
Multivolt

### 2 Nautical Mile Anchor Lamps with fixed pole mount

Overall Length	Visibility	Black Base	White Base
8" / 204mm	2 NM	2LT 959 910-011	2LT 959 910-111

Robust fixed pole mount with two counter-sunk holes.



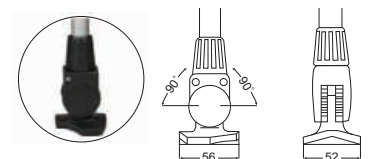
2LT 959 910-621

**LED**  
Multivolt

### 2 Nautical Mile Anchor Lamps with fold down pole mount

Overall Length	Visibility	Black Base	White Base
12" / 305mm	2 NM	2LT 959 910-621	2LT 959 910-721
20" / 500mm	2 NM	2LT 959 910-661	2LT 959 910-761
24" / 610mm	2 NM	2LT 959 910-631	2LT 959 910-731
34" / 850mm	2 NM	2LT 959 910-651	2LT 959 910-751

Lamp pole can be adjusted through 180 degrees and secured with locking collar. Removable wedge for different surface cambers.



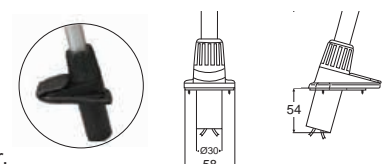
2LT 959 910-431

**LED**  
Multivolt

### 2 Nautical Mile Anchor Lamps with plug-in pole mount

Overall Length	Visibility	Black Base	White Base
24" / 610mm	2 NM	2LT 959 910-431	2LT 959 910-531
42" / 1070mm	2 NM	2LT 959 910-451	2LT 959 910-551

Pole plugs into lamp base and is fixed into position with locking collar. Rubber cap covers hole when pole is removed.





**Compact LED navigation lamps.**  
Attractive, power saving and ultra reliable.



**Designed and manufactured in New Zealand, NaviLED® lamps save power onboard and provide outstanding durability.**

**Ultra low current draw**

NaviLED® lamps use less than 10% of the power required to run a bulb navigation lamp of the same visible distance. Port and Starboard lamps consume less than 2 watts combined.

**No bulbs, No maintenance. Ultra long service life**

Hella marine LED technology has no filaments to break making NaviLED® lamps extremely shock and vibration proof for reliability and safety in demanding conditions.

**Multivolt™ 8-28V DC**

Advanced electronics ensure reliable illumination and lamp protection even under severe voltage fluctuations and low battery voltages.

**Safe and highly visible**

Hella marine optics deliver 100% correct light output and enhanced visibility compared to bulb navigation lamps.

**Fully sealed for life. IP 67 Certified**

Each NaviLED® lamp is a completely sealed unit. High impact housings ensure durability from waves and impact.

**Pre-wired with marine cable**

Single core (120mm) or twin core (2.5m) sheathed marine cable assemblies available. Ensures time saving, completely sealed installations.

**Internationally certified**

Meets the requirements of COLREG, USCG, ABYC A-16, RINA, NMSC, Maritime NZ.



Sealed light engine clips into mounting shroud for an ultra secure attachment.

**How to remove the light engine from the mounting shroud:**

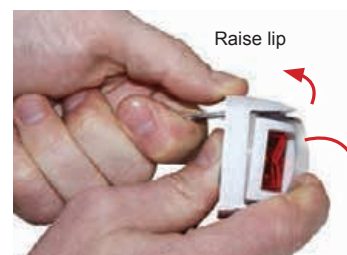
**Step 1**

Insert flat blade here

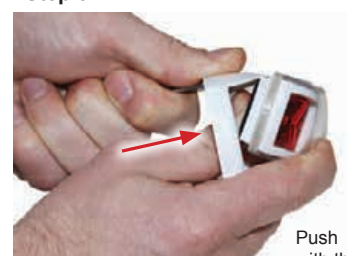


**Step 2**

Raise lip

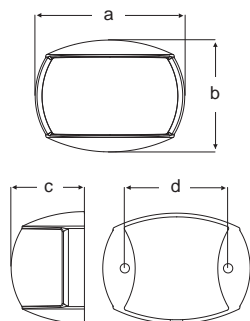


**Step 3**



Push with thumb





#### Dimensions

a = 71mm / 2.80"  
b = 53mm / 2.09"  
c = 33mm / 1.30"  
d = 50 mm / 1.97"

#### Material Description

UV resistant, enhanced impact resistant acrylic lens  
High impact shroud

#### Minimum Visible Distance

2 Nautical Mile (Yachts and Powerboats)

#### Cable

Pre-wired with marine cable

#### Operating Voltage

Multivolt™ 8-28V DC

#### Voltage Protection

Spike protected to +500 volts  
Reverse polarity protected to -700 volts  
Port and Starboard less than 2W combined  
Stern less than 2W, Towing less than 2W

#### Power Consumption

#### Degree of Protection

IP 67 - Completely Sealed

#### Weight

60g (including 120mm single core cable)

#### Approvals

IMO COLREG, USCG, RINA, ABYC A-16,  
NMSC, Maritime NZ



Packaging for  
aftermarket presentation

#### Twin Pack Lamps -

#### Port and Starboard (120mm of single core marine cable)

**LED**  
Multivolt

#### 2 Nautical Mile Powerboat and Yacht Lamps - Coloured outer lens

Lamp Type	Visibility	Black Shroud	White Shroud
Port & Starboard	2 NM	2LT 980 520-801	2LT 980 520-811

**LED**  
Multivolt

#### 2 Nautical Mile Powerboat and Yacht Lamps - Clear outer lens

Lamp Type	Visibility	Black Shroud	White Shroud
Port & Starboard	2 NM	2LT 980 520-901	2LT 980 520-911



Black Shroud / Coloured Lens



White Shroud / Clear Lens

#### Single Lamps (120mm of single core marine cable)

**LED**  
Multivolt

#### 2 Nautical Mile Powerboat and Yacht Lamps - Coloured outer lens

Lamp Type	Visibility	Black Shroud	White Shroud
Port	2 NM	2LT 980 520-001	2LT 980 520-011
Starboard	2 NM	2LT 980 520-201	2LT 980 520-211
Towing	2 NM	2LT 980 520-601	2LT 980 520-611

**LED**  
Multivolt

#### 2 Nautical Mile Powerboat and Yacht Lamps - Clear outer lens

Lamp Type	Visibility	Black Shroud	White Shroud
Port	2 NM	2LT 980 520-101	2LT 980 520-111
Starboard	2 NM	2LT 980 520-301	2LT 980 520-311
Stern	2 NM	2LT 980 520-501	2LT 980 520-511

Rear of lamp clipped into shroud.  
Single core marine cable.



#### Single Lamps (2.5m of twin core marine cable)

**LED**  
Multivolt

#### 2 Nautical Mile Powerboat and Yacht lamps - Coloured outer lens

Lamp Type	Visibility	Black Shroud	White Shroud
Port	2 NM	2LT 980 520-031	2LT 980 520-041
Starboard	2 NM	2LT 980 520-231	2LT 980 520-241

**LED**  
Multivolt

#### 2 Nautical Mile Powerboat and Yacht lamps - Clear outer lens

Lamp Type	Visibility	Black Shroud	White Shroud
Port	2 NM	2LT 980 520-131	2LT 980 520-161
Starboard	2 NM	2LT 980 520-331	2LT 980 520-361
Stern	2 NM	2LT 980 520-531	2LT 980 520-541

Rear of lamp clipped into shroud.  
2.5m twin core marine cable.

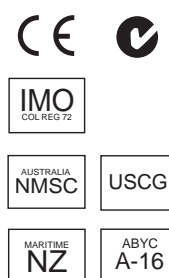




Compact deck mount LED navigation lamps.  
Attractive, power saving and ultra reliable.

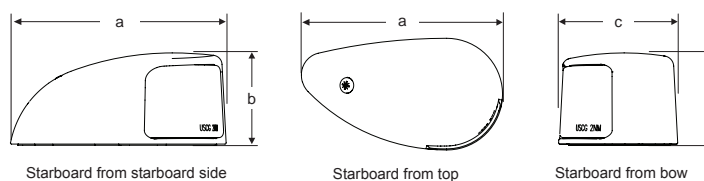


<b>Material Description</b>	UV resistant, enhanced impact resistant acrylic lens High impact shroud
<b>Minimum Visible Distance</b>	2 Nautical Mile (Yachts and Powerboats)
<b>Cable</b>	Pre-wired with 500mm of twin core marine cable
<b>Operating Voltage</b>	Multivolt™ 8-28V DC
<b>Voltage Protection</b>	Spike protected to +500 volts Reverse polarity protected to -700 volts
<b>Power Consumption</b>	Port and Starboard less than 2W combined
<b>Degree of Protection</b>	IP 67 - Completely Sealed
<b>Weight</b>	75g (including cable)
<b>Approvals</b>	IMO COLREG, USCG, RINA, ABYC A-16, NMSC, Maritime NZ



#### Dimensions:

a = 90.0mm / 3.54"  
b = 38.5mm / 1.52"  
c = 50.0mm / 1.97"



#### Twin Pack Lamps - Port and Starboard



Packaging for  
aftermarket presentation

**LED**  
Multivolt

#### 2 Nautical Mile Powerboat and Yacht Lamps - Coloured outer lens

Lamp Type	Visibility	Black Shroud	White Shroud
Port & Starboard	2 NM	2LT 980 620-801	2LT 980 620-811



**LED**  
Multivolt

#### 2 Nautical Mile Powerboat and Yacht Lamps - Clear outer lens

Lamp Type	Visibility	Black Shroud	White Shroud
Port & Starboard	2 NM	2LT 980 620-901	2LT 980 620-911





*Bulb Navigation Lamps*

**Hella marine**   
*Vision and Innovation*

## 2010 Series All Round White / Anchor Lamps

Anchor lamps in a wide range of pole lengths and base types.  
Featuring heavy duty anodized aluminium poles and impact resistant bases.



<b>Material Description</b>	UV and impact resistant plastic housing and lens. Anodized aluminium poles
<b>Minimum Visible Distance</b>	2 Nautical Mile
<b>Bulb</b>	12V/10W Ba15s or 12V/10W SV8.5 included
<b>Installation</b>	Horizontal surface mount. Includes stainless steel screws
<b>Degree of Protection</b>	IP X6
<b>Approvals</b>	IMO COLREG, USCG, ABYC A-16, NMSC, Maritime NZ



2LT 002 492-201

2LT 995 002-131



2LT 995 002-151



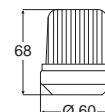
2LT 995 002-031



2LT 995 002-171

### 2 Nautical Mile All Round White / Anchor lamps surface mount

Voltage	Overall Height	Black Base	White Base
12V	2.7" / 68mm	2LT 002 492-201	2LT 002 492-211



### 2 Nautical Mile All Round White / Anchor lamps with fixed mount

Voltage	Overall Height	Black Base	White Base
12V	4" / 102mm	2LT 995 002-001	2LT 995 002-131
12V	8" / 204mm	2LT 995 002-011	2LT 995 002-141



Robust fixed mount with two counter-sunk holes.

### 2 Nautical Mile All Round White / Anchor lamps with fold down pole mount

Voltage	Overall Length	Black Base	White Base
12V	8" / 204mm	2LT 995 002-021	2LT 995 002-151
12V	12" / 305mm	2LT 995 002-051	2LT 995 002-181
12V	20" / 508mm	2LT 995 002-031	2LT 995 002-161
12V	24" / 610mm	2LT 995 002-321	2LT 995 002-121



Lamp pole can be adjusted through 180 degrees and secured at desired angle with locking collar. Removable wedge for installation onto different surface cambers.

### 2 Nautical Mile All Round White / Anchor lamps with plug-in pole mount

Voltage	Overall Length	Black Base	White Base
12V	24" / 610mm	2LT 995 002-041	2LT 995 002-171
12V	36" / 914mm	2LT 995 002-061	2LT 995 002-191
12V	42" / 1066mm	2LT 995 002-071	2LT 995 002-201
12V	48" / 1220mm	2LT 995 002-081	2LT 995 002-211
12V	54" / 1350mm	2LT 995 002-091	2LT 995 002-221



Pole plugs into lamp base and is fixed into position with locking collar. Rubber cap covers hole when pole is removed.

## 2875 Spare Parts

Lens	12V / 10W Bulb
9EL 111 681-001	G1210

## 5002 Series Spare Parts

Lamp housing black.	Rubber cap black.	Plug-in base black	Fold down base black	12V / 10W Bulb
9EL 990 157-001	To suit Plug-in base 9GH 992 157-041	8HG 992 157-021	8HG 992 158-001	N1210
Lamp housing white.	Rubber cap white.	Plug-in base white	Fold down base white	
9EL 990 157-011	To suit Plug-in base 9GH 992 157-051	8HG 992 157-031	8HG 992 158-011	



## 3562 Series Position Lamps

Compact and proven navigation lamps for yachts and powerboats.  
Saltwater resistant and Non-magnetic, 3562 series lamps feature a 'snap lock' housing allowing bulbs to be changed without tools.



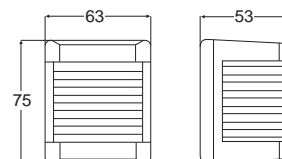
<b>Material Description</b>	UV and impact resistant plastic housing and lens
<b>Minimum Visible Distance</b>	Port and Starboard 1 NM Masthead and Stern 2 NM
<b>Bulb</b>	12V / 10W SV8.5 included
<b>Installation</b>	Vertical surface mount. Mounting base available
<b>Cable Entry</b>	Through base plate with rubber grommet
<b>Degree of Protection</b>	IP 54
<b>Approvals</b>	IMO COLREG, USCG, ABYC A-16, RINA(I) NMSC, Maritime NZ



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### 1 Nautical Mile Powerboat and Yacht Lamps

Lamp Type	Voltage	Black Housing	White Housing
Port	12V	2LT 003 562-035	2LT 003 562-135
Starboard	12V	2LT 003 562-025	2LT 003 562-125
Bi-Colour	12V	2LT 003 562-045	2LT 003 562-145



### 2 Nautical Mile Powerboat and Yacht Lamps

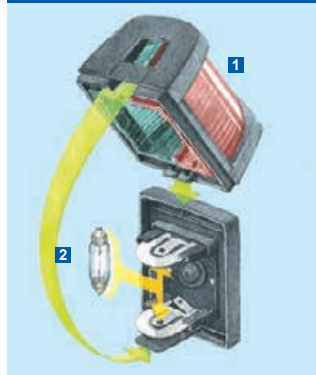
Lamp Type	Voltage	Black Housing	White Housing
Stern	12V	2LT 003 562-015	2LT 003 562-115

### 2 Nautical Mile Powerboat Lamps

Lamp Type	Voltage	Black Housing	White Housing
Masthead**	12V	2LT 003 562-005	2LT 003 562-105

\*\* for Powerboats and Sailing Yachts under Motor

## 3562 Series Spare Parts



<b>1 Lamp housing black</b>	<b>1 Lamp housing white</b>	<b>2 12V / 10W Bulb</b>
Port 9EL 122 562-031	Port 9EL 122 562-111	K1210
Starboard 9EL 122 562-021	Starboard 9EL 122 562-101	<b>24V / 10W Bulb</b>
Stern 9EL 122 562-011	Stern 9EL 122 562-091	K2410
Masthead 9EL 122 562-001	Masthead 9EL 122 562-081	
Bi-colour 9EL 123 669-001	Bi-colour 9EL 123 669-011	

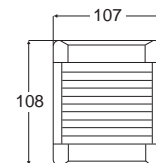


## 2984 Series Position Lamps

Internationally approved navigation lamps. Non-magnetic and saltwater resistant. Housing 'snaps' to base without screws.  
2984 series navigation lamps feature a vertically hanging bulb and contacts in the upper area of each lamp to prevent corrosion.



<b>Material Description</b>	UV and impact resistant plastic housing and lens
<b>Minimum Visible Distance</b>	Port, Starboard and Stern 2 NM, Masthead 3 NM
<b>Bulb</b>	12V / 25W or 24V / 25W BAY15d included
<b>Installation</b>	Vertical surface mount
<b>Cable Entry</b>	Through base plate with rubber grommet
<b>Degree of Protection</b>	IP 55
<b>Approvals</b>	IMO COLREG, BSH, USCG, ABYC A-16, RINA(I) NMSC, Maritime NZ



Packaging for aftermarket presentation

### 2 Nautical Mile Powerboat and Yacht Lamps

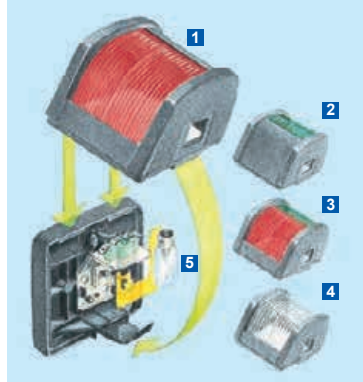
Lamp Type	Voltage	Black Housing	White Housing
Port	12V	2LT 002 984-335	2LT 002 984-385
Port	24V	2LT 002 984-655	
Starboard	12V	2LT 002 984-345	2LT 002 984-395
Starboard	24V	2LT 002 984-645	
Bi-Colour	12V	2LT 002 984-315	2LT 002 984-365
Bi-Colour	24V	2LT 002 984-665	
Stern	12V	2LT 002 984-325	2LT 002 984-375
Stern	24V	2LT 002 984-675	
Towing	12V	2828	
Towing	24V	2828-1	

### 3 Nautical Mile Powerboat Lamps

Lamp Type	Voltage	Black Housing	White Housing
Masthead**	12V	2LT 002 984-305	2LT 002 984-355
Masthead**	24V	2LT 002 984-685	

\*\* for Powerboats and Sailing Yachts under Motor

### 2984 Series Spare Parts



<b>1</b> Lamp housing black Port 9EL 127 083-031	<b>3</b> Lamp housing black Bi-Colour 9EL 127 083-041	<b>5</b> Bulbs 12V / 25W EA1225
Lamp housing white Port 9EL 127 083-101	Lamp housing white Bi-Colour 9EL 127 083-111	24V / 25W EA2425
<b>2</b> Lamp housing black Starboard 9EL 127 083-021	<b>4</b> Lamp housing black Masthead 9EL 127 083-001 Stern 9EL 127 083-011	
Lamp housing white Starboard 9EL 127 083-091	Lamp housing white Masthead 9EL 127 083-071 Stern 9EL 127 083-081	

## 2984 Series Tri Colour Lamps



Tri Colour lamps, and Tri Colour lamps with an integrated All Round White / Anchor Lamp for attachment to yacht masts. Non-magnetic and saltwater resistant. The lamp housing features a bayonet lock for easy bulb change.



Packaging for aftermarket presentation

### Material Description

UV and impact resistant plastic housing and lens

### Minimum Visible Distance

Port and Starboard 2 NM, Stern 2 NM,

All Round White / Anchor 2 NM

### Bulb

12V BAY15d included

### Installation

Horizontal surface mount

### Cable Entry

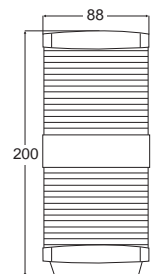
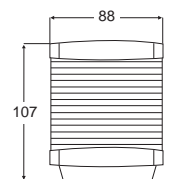
Through base plate with rubber grommet

### Degree of Protection

IP 55

### Approvals

IMO COLREG, BSH, USCG, ABYC A-16, RINA(I) NMSC, Maritime NZ



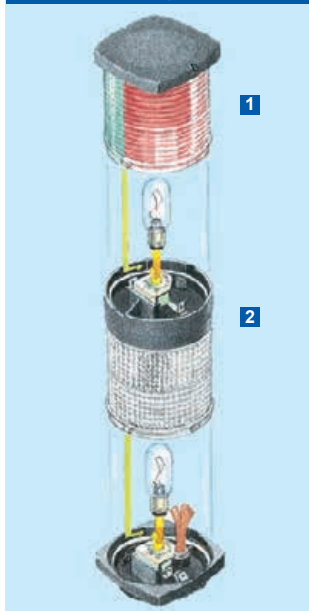
### 2 Nautical Mile Tri Colour Lamp

Lamp Type	Voltage	Black Housing
Tri Colour	12V	2LT 002 984-535

### 2 Nautical Mile Tri Colour Lamp with All Round White

Lamp Type	Voltage	Black Housing
Tri Colour / Anchor Lamp	12V	2LT 002 984-601

## 2984 Series Spare Parts



### Lamp housing black

- 1 Tri-Colour lens 9HD 123 744-041
- 2 Anchor lamp lens 9XS 123 742-001

### Bulb 12V

Tri-Colour lamp	EA1225
Tri-Colour with Anchor lamp	EA1225 EA1210)

### Bulb 24V

Tri-Colour lamp	EA2425
Tri-Colour with Anchor lamp	EA2425 EA2410)

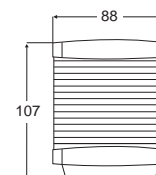
## 2984 Series All Round Lamps



BSH approved, saltwater resistant and non-magnetic, they feature a bayonet lock on the lamp housing for easy bulb change.



<b>Material Description</b>	UV and impact resistant plastic housing and lens
<b>Minimum Visible Distance</b>	2 Nautical Mile
<b>Bulb</b>	12V / 25W or 24V / 25W BAY15d included
<b>Installation</b>	Horizontal surface mount.
<b>Cable Entry</b>	Through base plate with rubber grommet
<b>Degree of Protection</b>	IP 55
<b>Approvals</b>	IMO COLREG, BSH, USCG, ABYC A-16, RINA(I) NMSC, Maritime NZ



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### 2 Nautical Mile All Round White / Anchor Lamps

Lamp Type	Voltage	Black Housing	White Housing
All Round White / Anchor	12V	2LT 002 <b>984</b> -505	2LT 002 <b>984</b> -565
All Round White / Anchor	24V	2LT 002 <b>984</b> -695	

### 2 Nautical Mile All Round Red Lamps

Lamp Type	Voltage	Black Housing
All Round Red	12V	2LT 002 <b>984</b> -525
All Round Red	24V	2LT 002 <b>984</b> -705

### 2 Nautical Mile All Round Green Lamps

Lamp Type	Voltage	Black Housing
All Round Green	12V	2LT 002 <b>984</b> -515
All Round Green	24V	2LT 002 <b>984</b> -715

### 2984 Series Spare Parts

Lamp housing / lens black		Bulb 12V		Bulb 24V	
All Round White / Anchor	9HD 123 <b>744</b> -001	All Round White / Anchor	EA1210	All Round White / Anchor	EA2410
All Round Red	9HD 123 <b>744</b> -021	All Round Red	EA1225	All Round Red	EA2425
All Round Green	9HD 123 <b>744</b> -011	All Round Green	EA1225	All Round Green	EA2425





*LED Deck Floodlights*

**Hella marine**   
*Vision and Innovation*

## LED Deck Floodlights

**LED Deck Floodlight Technology**

**Hella marine LED deck floodlights provide efficient, power saving and ultra durable illumination for reliability and safety at sea.**

**Ultra Low Power Consumption**

Combining efficient LED light sources with advanced optic technology, Hella marine LED products deliver more light output per watt than traditional bulb lamps and provide considerable energy savings.

As an example, Hella marine LED Module 70 lamps consume less than 30% of the power required to run a 55W H3 incandescent bulb floodlight (e.g. Hella marine 7118 series)

**No bulbs, No maintenance. Ultra long service life**

Hella marine LED technology has no filaments to break, making the lamps extremely shock and vibration resistant for reliable illumination and safety.

Our engineering team has developed a unique range of highly demanding tests to lift product reliability to new standards.

**Ultra low heat signature for improved safety**

All Hella marine LED lamps featuring an ultra low heat signature due to their low power consumption. This provides many safety and installation advantages as the risks of heat damage caused by traditional halogen lamps are eliminated.

**Fully sealed for life**

Each Hella marine LED lamp is a completely sealed opto-electronic device. Proven design, precision engineering, and the use of ultra durable materials ensures superior resistance to water, impact, UV radiation and general wear and tear.

**Superior Lens Materials**

Many Hella marine LED floodlights utilise Grilamid®, a high performance polyamide manufactured in Switzerland, as a heavy duty lens material.

Grilamid® is a revolutionary new transparent plastic with an exceptionally high impact strength and resistance to UV and chemical damage.

**Pre-wired with marine cable**

Hella marine LED lamps are pre-wired with quality marine specification tinned cable. The cable is completely sealed to the lamp body providing time saving at installation and reliable electrical connection.

**Multivolt™ technology for durability and safety**

Advanced Multivolt™ circuitry provides a uniform level of intensity for reliable and safe illumination across a range of DC inputs such as 8-28 volts or 9-33 volts.

Multivolt™ LED lamps can be connected to 12 or 24 volt systems without modification, providing full light performance and automatic compensation for low battery voltages and voltage drop over long cables and connections. Multivolt™ LED lamps are also reverse polarity and spike protected for enhanced durability even under severe voltage fluctuations.

**Electromagnetic Compatibility (EMC)**

All Hella marine products are designed to suppress electromagnetic interference, complying with the emission and immunity limits prescribed in international standards. This protects the radio, communication, navigation and other electrical equipment on board from possible interference with our products. Where applicable, Hella marine products carry CE marking for European Union legislation, and the C-Tick mark for Australian & New Zealand requirements.

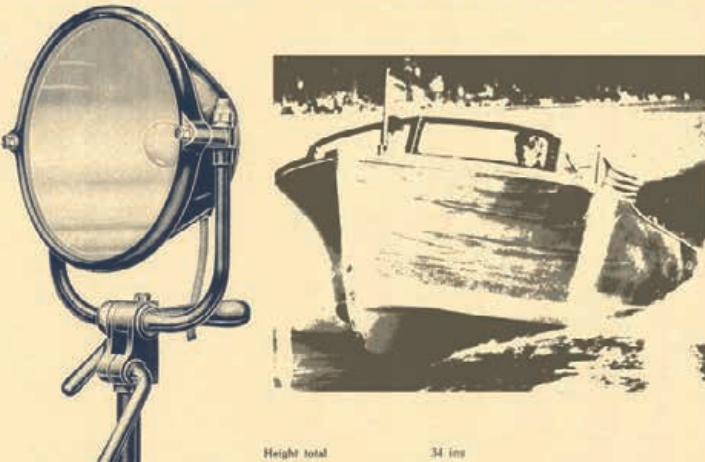


C-Tick is the Australian & New Zealand EMC compliance mark administered by the Australian Communications and Media Authority (ACMA) & Radio Spectrum Management (RSM) New Zealand, and will be transitioning to the RCM mark by 1st March, 2016. Hella marine products will remain compliant to these requirements throughout the transition period and beyond.



**HELLA**

Elektrischer Motorbootscheinwerfer horizontal und vertikal schwenkbar.  
Electric-lamp for motorboats. Projecteur électrique pour canots automobiles.



Scheinwerfer, 240 mm Lichtausstritt  
nach allen Seiten schwenkbar.

Height total	34 ins
Depth total	7 1/8 ins
Diameter of headlight	11 1/2 ins
Diameter of glass	7 1/4 ins
Legs of bracket	2 1/8 ins
Distance between centres	10 1/2 ins
Weight total	12 1/2 lbs

Ausführung ganz schwarz ohne Birne RM. 78.- brutto ohne Halter  
Ausführung ganz schwarz ohne Birne RM. 108.- brutto mit Halter.

60

**Hella marine has been an international pioneer of high quality deck lighting since 1925.**

Today, Halogen, Xenon and LED based Hella marine floodlights all feature advanced lens, optic and reflector designs, stainless steel mounting hardware, impact resistant components and durable construction for enhanced safety and reliability at sea.



AS 5000 LED series

The future of efficient and durable deck lighting is LED based. Compared to traditional halogen bulb based lamps, the energy saving and improved reliability benefits on offer with quality LED lamps are significant.

Hella marine LED Mega Beam and LED Module 70 series lamps illuminate cockpit and deck areas with crisp white light consuming only 15W of power. This represents significant savings compared to the 55W consumed by 12V halogen floodlights.

These power savings are possible due to highly efficient LEDs and optics to provide considerably more light output per watt than halogen based floodlights.

Effective lens and optic engineering play an important role to capture and spread the available light onto effective working surfaces without glare or eye strain.



LED Sea Hawk series

Advances in the luminous efficiency of LED devices has opened doors to the development of a new and unique class of Hella marine LED floodlighting.

The Sea Hawk series offers durable, lightweight and efficient performance in two sizes and performance classes complimenting today's vessels. Reliability and strength is enhanced by high performance Grilamid® selected for the lens of all lamps.

The housings of Sea Hawk XL lamps are injection molded in black and white from a revolutionary thermally conductive polymer that is highly resistant to degradation, even under harsh UV.

This advanced material draws heat away from internal electronics for reliable long-term operation. Utilising thermal polymer eliminates the requirement for an external aluminium heat sink in this class of floodlight, removing potential surface deterioration and material corrosion risks associated with coated aluminium in the harsh marine environment.



Custom Hella marine LED  
Masthead / Floodlight installation  
[www.hallspars.com](http://www.hallspars.com)



## LED Mega Beam



Durable, energy saving LED floodlights



Close range floodlights with the energy saving advantages of Hella marine LED technology.



### Multivolt™ 9-30V DC

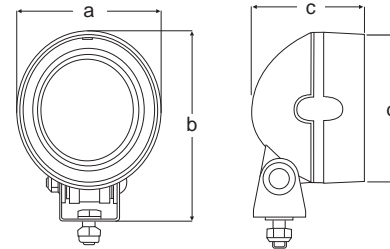
Advanced electronics ensure reliable illumination and lamp protection even under severe voltage fluctuations and low battery voltages.

### Pre-wired with marine cable

High quality sealed cable assemblies for time saving, completely sealed installations.

### Designed and manufactured in Austria

LED Mega Beam lamps carry a 5 year warranty.



### Dimensions

a = 110mm / 4.33"  
b = 145mm / 5.70"  
c = 83mm / 3.27"  
d = 120mm / 4.72"



Evolution 552 [www.evolutionboats.com.au](http://www.evolutionboats.com.au)

### Material Description

UV and impact resistant plastic front housing

Die cast aluminium body, Glass lens

### Bracket

316 stainless steel

### Colour Temperature

6500K

### Cable

Pre-wired with 2.0m of twin core marine cable

### Operating Voltage

Multivolt™ 9-30V DC

### Degree of Protection

IP 67 - Completely Sealed

### Power Consumption

15W ( <1.25A@12V / <0.63A@24V )

### Weight

750g (including cable)

### Light Output

600 lumens

### Approvals

CE, C-Tick



- Completely sealed housing & cable entry
- Pre-wired with marine cable

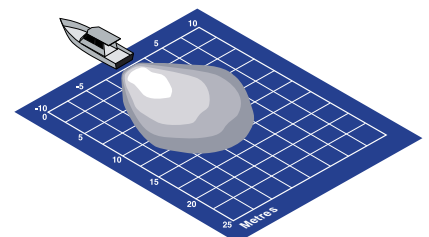


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### Mega Beam LED Deck Floodlights

Voltage	Housing Colour	Part Number
9-30V DC	White Housing	1GM 996 136-221
9-30V DC	Black Housing	1GM 996 136-231



## LED Module 70



LED Module 70

Compact, durable and efficient LED floodlights



Rayglass Protector 11m [www.rayglass.co.nz](http://www.rayglass.co.nz)

Close range floodlights with the energy saving advantages of Hella marine LED technology.

### Multivolt™ 9-30V DC

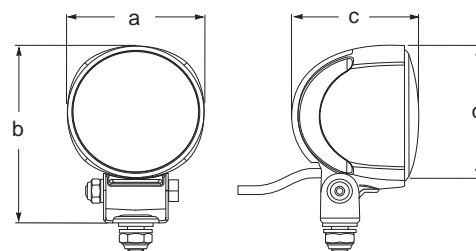
Advanced electronics ensure reliable illumination and lamp protection even under severe voltage fluctuations and low battery voltages.

### Pre-wired with marine cable

High quality sealed cable assemblies for time saving, completely sealed installations.

### Designed and manufactured in Austria

LED Module 70 lamps carry a 5 year warranty.



### Dimensions

a = 83mm / 3.27"  
b = 110mm / 4.33"  
c = 74mm / 2.91"  
d = 83mm / 3.27"

### Material Description

#### Bracket

Die cast aluminium body, Glass lens

#### Colour Temperature

316 stainless steel

#### Cable

6500K

#### Operating Voltage

Pre-wired with 2.0m of twin core marine cable

#### Degree of Protection

Multivolt™ 9-30V DC

#### Power Consumption

IP 67 - Completely Sealed

#### Weight

15W ( <1.25A@12V / <0.63A@24V )

#### Light Output

500g (including cable)

#### Approvals

600 lumens

CE, C-Tick



Packaging for aftermarket presentation

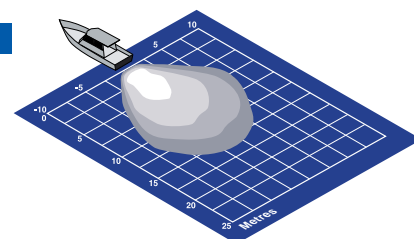


- Completely sealed housing & cable entry
- Pre-wired with marine cable



### Module 70 LED Deck Floodlights

Voltage	Housing Colour	Part Number
9-30V DC	White Housing	1GO 996 176-731
9-30V DC	Black Housing	1GO 996 176-722



## LED Sea Hawk



A new class of ultra efficient, compact and lightweight LED lamps



Rayglass Legend 2800 [www.rayglass.co.nz](http://www.rayglass.co.nz)

**Completely sealed and lightweight, Sea Hawk lamps offer compact and durable illumination.**

### Class leading efficiency

Advanced optics deliver 240 lumens of highly effective crisp white light for an ultra low energy consumption of less than 3W (<0.25A@12V).

### Fully sealed and salt water durable

Sea Hawk lamps are IP 67 and feature a high performance Grilamid® lens for superior strength and resistance to impact and UV.

Tinned marine cable is pre-wired to each lamp for absolute water tightness and reliable electrical connections.

A polished 316 stainless steel bracket allows easy adjustment. Friction mounts hold the lamp steady without the need to adjust fastenings.

### Multivolt™ 9-33V DC

Advanced electronics ensure reliable illumination and lamp protection even under severe voltage fluctuations and low battery voltages.

### Engineered light patterns

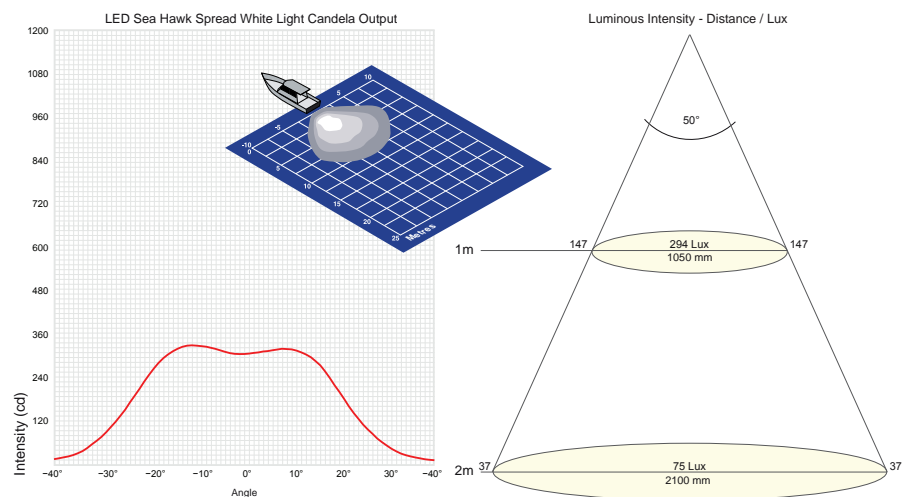
Precision optics provide two light pattern options. Spread lamps are suited for illuminating cockpits and transom areas with a close range, wide spread of light. Spot lamps offer a narrower and more concentrated light pattern for applications such as spreader lighting on yacht masts.



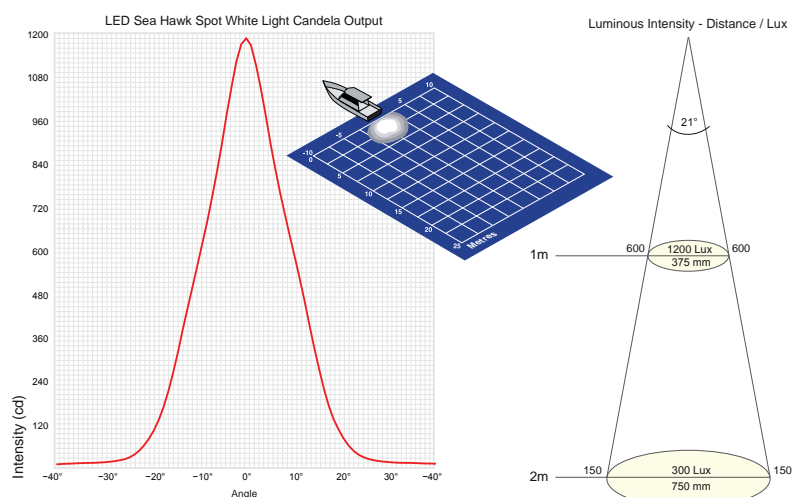
Sea Hawk bracket mount versions contain friction mounts and can be easily adjusted up and down without tools.



### Sea Hawk Candela and Lux performance. Spread.



### Sea Hawk Candela and Lux performance. Spot.







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#### Material Description

UV and impact resistant plastic

#### Bracket

Heavy duty Grilamid® lens

#### Colour Temperature

Polished 316 stainless steel

#### Cable

5500K (White) 1600K (Red)

#### Operating Voltage

Pre-wired with 2.5m of twin core marine cable

#### Degree of Protection

White Lamps Multivolt™ 9-33V DC. Red Lamps 12V DC

#### Power Consumption

IP 67 - Completely Sealed

#### Weight

<3W ( <0.25A@12V / <0.13A@24V )

Bracket mount 250g (including cable)

Recess mount 125g (including cable)

#### Light Output

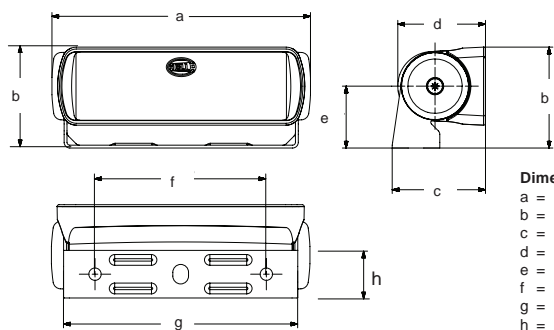
White Lamps - 240 lumens

#### Approvals

CE, C-Tick, ISO 8846 (Ignition Protection)

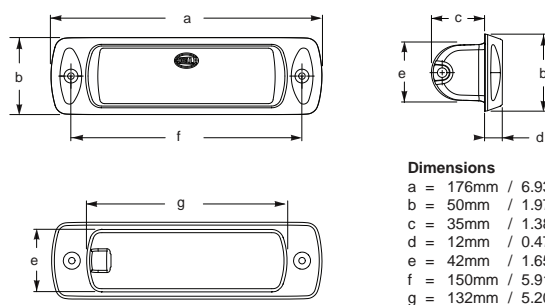


#### Bracket Mount Dimensions



Dimensions	
a =	136mm / 5.35"
b =	53.0mm / 2.08"
c =	49.0mm / 1.93"
d =	46.0mm / 1.81"
e =	32.5mm / 1.28"
f =	90.0mm / 3.54"
g =	123mm / 4.84"
h =	25.0mm / 0.98"

#### Recess Mount Dimensions



Dimensions	
a =	176mm / 6.93"
b =	50mm / 1.97"
c =	35mm / 1.38"
d =	12mm / 0.47"
e =	42mm / 1.65"
f =	150mm / 5.91"
g =	132mm / 5.20"

### Sea Hawk Bracket Mount



#### White Light LED Floodlights - Spread

Voltage	Housing Colour	Part Number
9-33V DC	Black Housing	2LT 980 670-301
9-33V DC	White Housing	2LT 980 670-311



#### White Light LED Deck Lamps - Spot

Voltage	Housing Colour	Part Number
9-33V DC	Black Housing	2LT 980 670-201
9-33V DC	White Housing	2LT 980 670-211



#### Red Light LED Floodlights - Spread

Voltage	Housing Colour	Part Number
12V DC	Black Housing	2LT 980 670-341
12V DC	White Housing	2LT 980 670-351



### Sea Hawk Recess Mount



#### White Light LED Floodlights - Spread

Voltage	Housing Colour	Part Number
9-33V DC	Black Housing	2LT 980 747-101
9-33V DC	White Housing	2LT 980 747-111



#### White Light LED Deck Lamps - Spot

Voltage	Housing Colour	Part Number
9-33V DC	Black Housing	2LT 980 747-001
9-33V DC	White Housing	2LT 980 747-011



#### Red Sea Hawk lamps offer maximum night vision preservation.

Ocean racers, professional sports fisherman and commercial operators recognise the 'non glare' night vision preserving advantages of red Sea Hawk lamps together with their energy saving and durability.

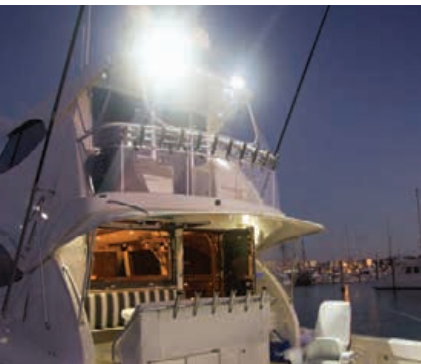


## LED Sea Hawk XL



# LED Sea Hawk XL

High performance LED floodlights utilising hi-tech materials



Riviera 63FB [www.riviera.com.au](http://www.riviera.com.au)

### 'Fit and forget' for a long service life

Each lamp is completely sealed and every aspect, material and component is carefully chosen to ensure longevity in the most demanding offshore conditions without compromise.

### Hi-tech materials

The lens is precision moulded from high performance Grilamid® for strength and durability. The housings are injection molded from a revolutionary thermally conductive polymer that is highly resistant to degradation, even under harsh UV.

This advanced material draws heat away from internal electronics for reliable long-term operation. Utilising thermal polymer eliminates the requirement for an external aluminium heat sink in this class of floodlight, removing potential surface deterioration and material corrosion risks associated with coated aluminium in the harsh marine environment.

### Integrated Dimming

A unique high/low light intensity function is standard with every lamp.

### Engineered light patterns

Sophisticated optics deliver a broad and even illumination without glare or harsh point sources. Spread lamps illuminate a wide, close-range spread over a cockpit, foredeck or working area. Spot lamps provide a narrower, more concentrated illumination suitable for yacht masts or to determine objects in the water during low speed docking.

### Multivolt™ 9-33V DC

Advanced electronics ensure reliable illumination and lamp protection even under severe voltage fluctuations and low battery voltages.

### Pre-wired with three core marine cable

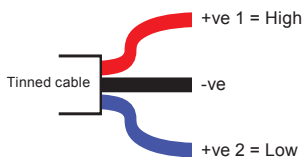
High quality sealed cable assemblies for time saving, completely sealed installations.

### Designed and manufactured in New Zealand

Sea Hawk XL lamps carry a 5 year warranty.



Friction mounts allow adjustment without tools.



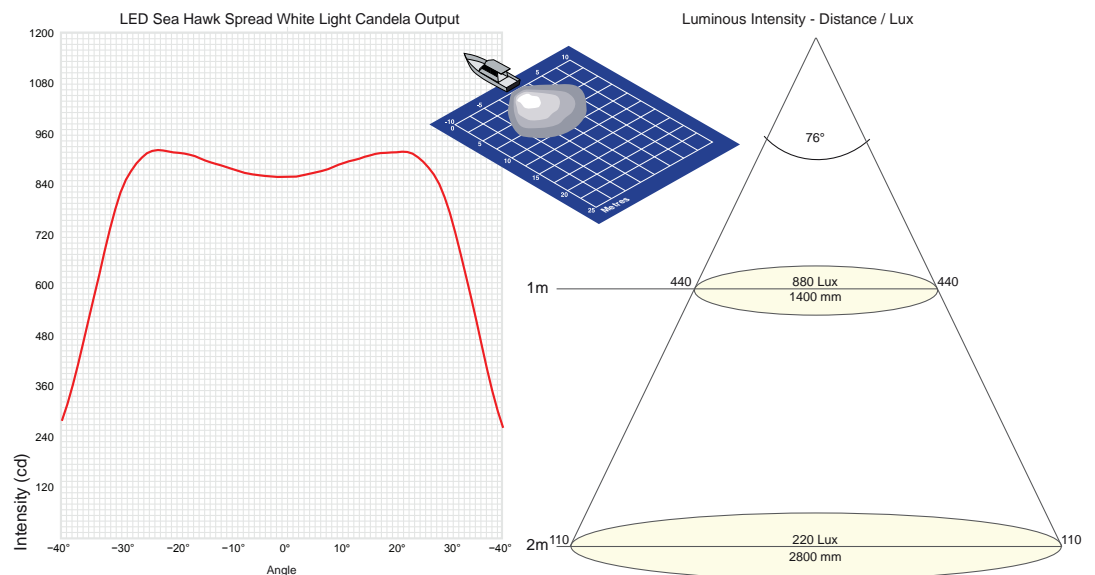
Two-Step high/low intensity via ON-OFF-ON switch.



Completely sealed lamp and cable entry. Polished 316 stainless steel bracket.



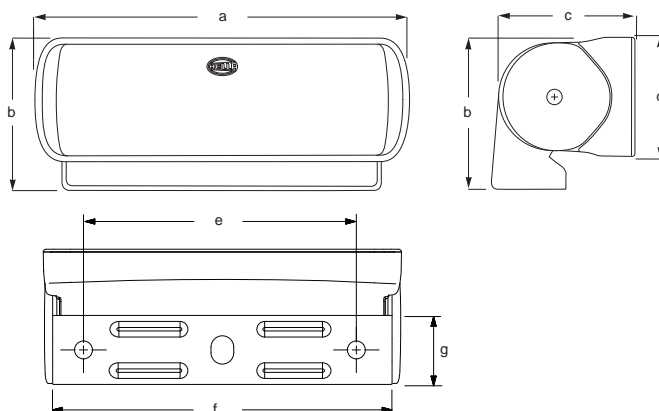
### Sea Hawk XL Candela and Lux performance. Spread.





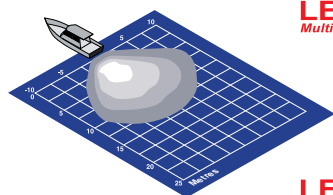
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aftermarket presentation

<b>Material Description</b>	Thermally conductive polymer housing Heavy duty Grilamid® lens
<b>Bracket</b>	Polished 316 stainless steel
<b>Colour Temperature</b>	5500K (White) / 3000K (Warm White)
<b>Cable</b>	Pre-wired with 0.5m of triple core marine cable
<b>Operating Voltage</b>	Multivolt™ 9-33V DC
<b>Degree of Protection</b>	IP 67 - Completely Sealed
<b>Power Consumption</b>	High Intensity Mode 12W ( 1.00A@12V / 0.50A@24V ) Low Intensity Mode 2W ( 0.17A@12V / 0.08A@24V )
<b>Weight</b>	500g (including cable)
<b>Light Output</b>	750 lumens (White) / 550 lumens (Warm White)
<b>Approvals</b>	CE, C-Tick



#### Dimensions

a =	170mm / 6.69"
b =	68mm / 2.68"
c =	58mm / 2.28"
d =	55mm / 2.17"
e =	120mm / 4.72"
f =	154mm / 6.06"
g =	30mm / 1.18"



#### Sea Hawk XL Bracket Mount

**LED**  
Multivolt

##### White Light LED Floodlights - Spread

Voltage	Housing Colour	Part Number
9-33V DC	Black Housing	2LT 980 950-001
9-33V DC	White Housing	2LT 980 950-011

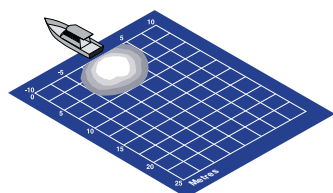
**LED**  
Multivolt

##### Warm White Light LED Floodlights - Spread

Voltage	Housing Colour	Part Number
9-33V DC	Black Housing	2LT 980 950-101
9-33V DC	White Housing	2LT 980 950-111

#### Spread pattern applications

Cockpit  
Foredeck  
Working areas



#### Sea Hawk XL Bracket Mount

**LED**  
Multivolt

##### White Light LED Deck Lamps - Spot

Voltage	Housing Colour	Part Number
9-33V DC	Black Housing	2LT 980 950-201
9-33V DC	White Housing	2LT 980 950-211

#### Spot pattern applications

Low speed docking  
Forward facing to illuminate objects in the water  
Spreader lamps on yacht masts







## AS 5000 LED

*High Performance*

*Ultra Durable*

*No compromise*

**Heavy duty floodlights offering over 5000 lumens for the harshest environments**



**Hella marine AS 5000 LED floodlights are precision engineered to perform without failure, season after season.**

Every aspect, material and component has been carefully selected to ensure longevity in the most demanding environments.

Relentless Hella marine 'test to destruction' development programmes help lift product reliability to new levels. AS 5000 lamps endure the worst of vibration, shock and high impact torture tests.

### **Powerful and efficient**

With over 5000 lumens, AS 5000 lamps offer highly effective illumination with a power consumption of only 60W (5A@12V and 2.5A@24V DC).

### **Fully sealed and salt water durable**

Each lamp is a completely sealed IP 6K 9K unit, impervious to moisture and contaminants. The housing features a unique bonded non-stick coating that will not corrode, discolour, peel or flake even under harsh UV and is highly resistant to cleaning chemicals.

### **Benchmark light distribution**

Hella's optical engineering expertise provides highly effective illumination for working vessels. Wide or narrow light beam patterns offer a crisp white 'close to daylight' 5700K colour temperature. Working under this colour of light reduces the fatigue and eye strain sometimes caused by warmer colour halogen lighting.

### **Multivolt™ 9-33V DC**

Advanced electronics ensure reliable illumination and lamp protection even under severe voltage fluctuations and low battery voltages.

A reduced power mode activates below 11.6V to prevent battery drain when lights are on but the charging system may not be operating.

### **Durable in extreme temperatures**

Tested to operate effectively from  $-40^{\circ}$  to  $+50^{\circ}$  Celsius. Integrated thermal protection ensures longevity of the electrical components at the most extreme operating temperatures.

### **Long term secure installation**

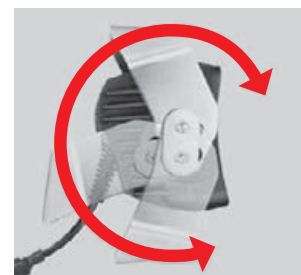
A sturdy 316 stainless steel bracket firmly holds the lamp to withstand harsh vibration and impact.

### **Designed and manufactured in Australia**

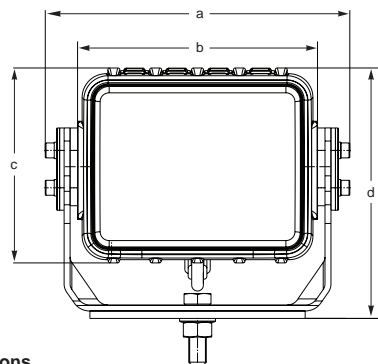
Hella marine AS 5000 lamps carry a 5 year warranty.



Completely sealed lamp and cable assembly.

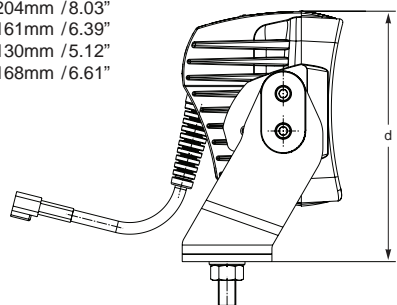


The 316 stainless steel adjustable bracket holds the lamp to withstand harsh vibration and impact.



#### Dimensions

a = 204mm / 8.03"  
b = 161mm / 6.39"  
c = 130mm / 5.12"  
d = 168mm / 6.61"



#### Material Description

Die cast aluminium body. Non-stick surface coating

#### Bracket

316 stainless steel

#### Colour Temperature

5500K (White)

#### Cable

Pre-wired with twin core marine cable with 2 pin DT connector.

#### Operating Voltage

Multivolt™ 9-33V DC

#### Degree of Protection

IP 6K9K - Completely Sealed

#### Power Consumption

60W ( 5A@12V / 2.5A@24V )

#### Operating Temperature

-40°C to + 50°C

#### Weight

2600g (including cable)

#### Light Output

5000 lumens

#### Vibration Rating

750Hz at 3.2mm

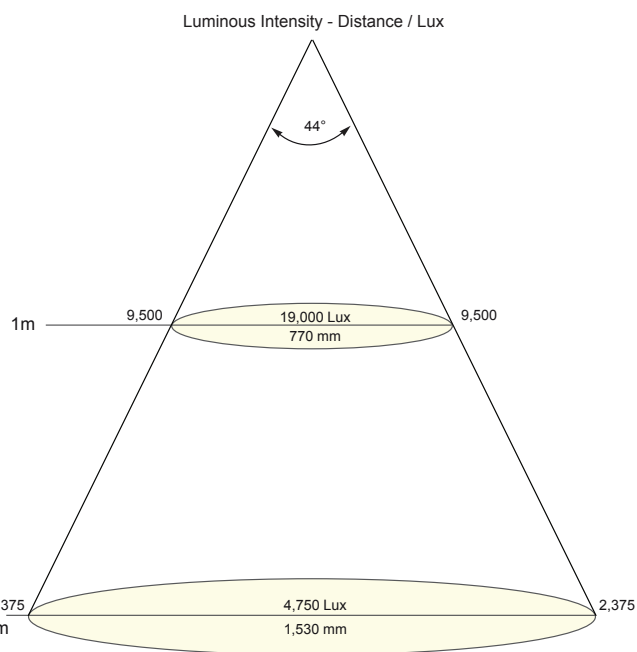
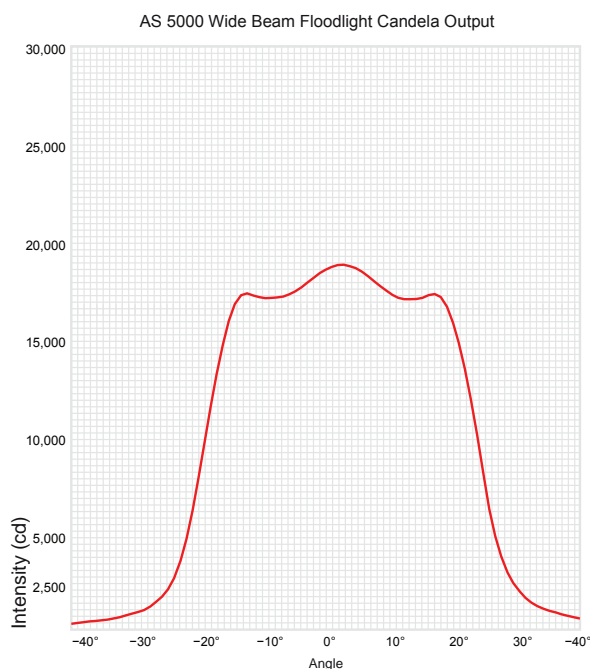
#### Shock Rating

200G

#### Approvals

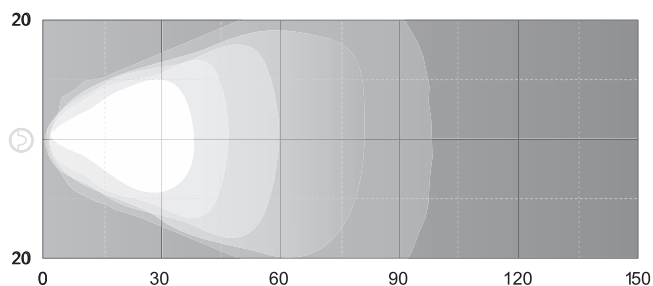
CE, C-Tick, CISPR25 Class 2, ISO13766:2006

#### AS 5000 Candela and Lux performance. Spread.



#### AS 5000 LED Wide Beam

2.5m high at 5°



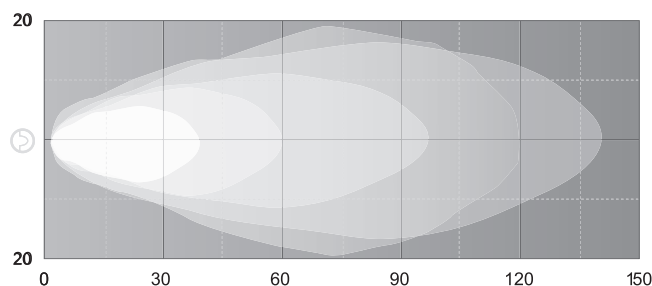
**LED**  
Multivolt

#### White Light LED Floodlight - Wide Beam

Voltage	Housing Colour	Part Number
9-33V DC	Black Housing	1GA 011 293-081

#### AS 5000 LED Narrow Beam

2.5m high at 5°



**LED**  
Multivolt

#### White Light LED Floodlight - Narrow Beam

Voltage	Housing Colour	Part Number
9-33V DC	Black Housing	1GA 011 293-091

#### Accessories for AS 5000 Series

Description	Part Number
100W 24V IP 67 AC-DC Power Supply	8ES 910 345-041
2.5m cable with DT Plug	9.1549.05

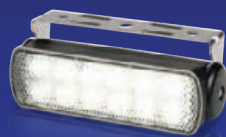


#### Dimensions

L 200mm / 7.87"  
W 68mm / 2.68"  
H 40mm / 1.58"

## LED Deck Floodlight Comparison

1 x LED Sea Hawk



240 lumen output

2 x LED Sea Hawks



480 lumen output

1 x LED Mega Beam



600 lumen output

Total Power Consumption

**Less than 3 watts !**

( <0.25A@12V / <0.13A@24V )



Total Power Consumption

**Less than 6 watts !**

( <0.5A@12V / <0.25A@24V )



Total Power Consumption

**Less than 15 watts !**

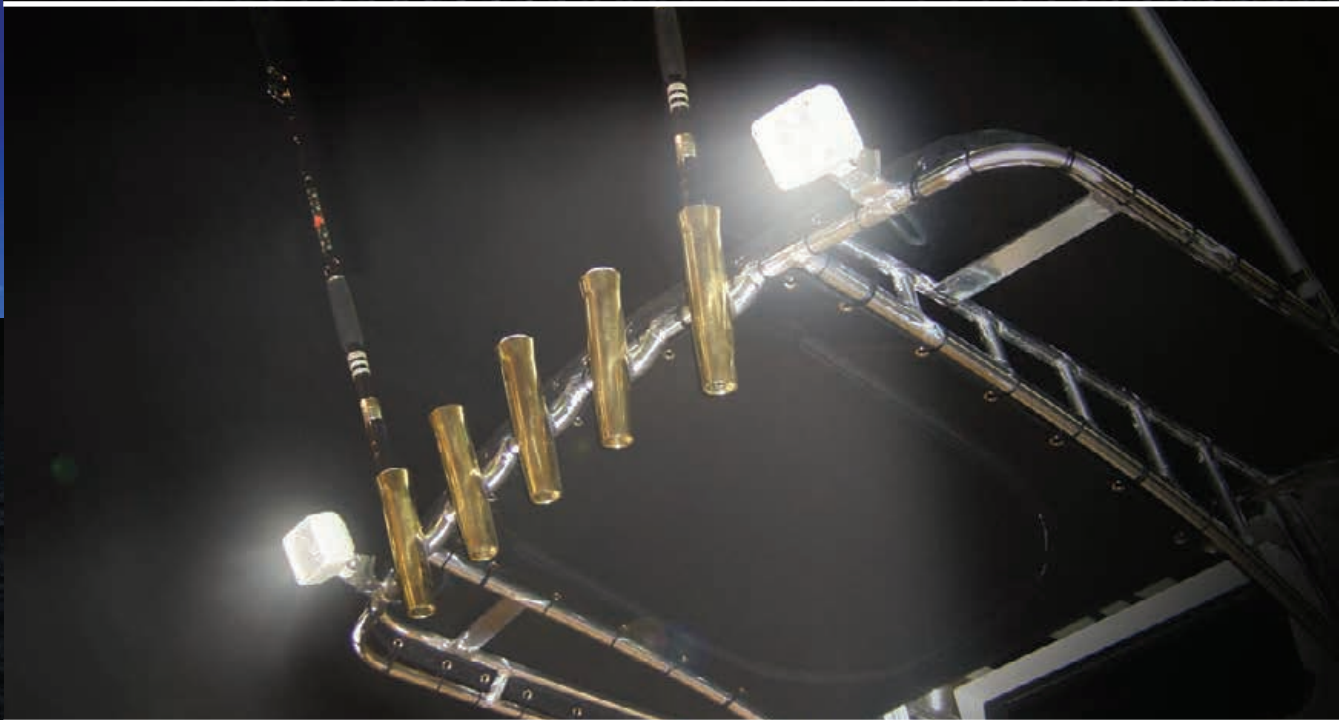
( <1.25A@12V / <0.63A@24V )



Mclay 588 Fisherman [www.mclayboats.co.nz](http://www.mclayboats.co.nz)

Light intensity and pattern comparisons between Hella marine LED floodlights on a 6 metre / 20 foot aluminium boat.





*HID (Xenon) and Halogen Deck Floodlights*

**Hella marine**   
*Vision and Innovation*



## Introduction



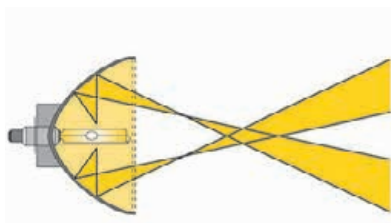
### Xenon Gas Discharge (HID) Technology

HID Deck Floodlights differ from traditional bulb versions. Instead of light being created by passing current through a filament to make it glow, light is created by an arc in a tube filled with a mixture of xenon gas and metal salts. The light arc is shock proof as there is no filament to break.

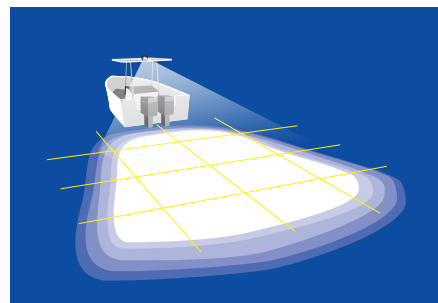
A compact 12V or 24V DC electronic ballast is used to ignite the HID bulb and provide constant levels of light output, even if the vessel's voltage supply fluctuates by up to 10%.

The advantages of using Xenon Gas Discharge (HID) deck floodlights in comparison to halogen versions include:

- 2.5 times the luminous flux (light output) and 35% less power consumption.
- Increased luminance results in a brighter and larger illumination of working areas.
- Light spectrum is similar to daylight – for natural colour reproduction of the environment.
- Vibration resistant light arc instead of a fragile filament.
- Service life up to five times longer – reduced expenditure for bulb replacement.
- Constant brightness – independent of fluctuations of up to 10% in the supply voltage.
- Only 42W power consumption – less strain on the vessel's power supply.



Free Form reflector with Gas Discharge (HID)



### Important information concerning mounting and operation of Xenon Gas Discharge (HID) technology.

- HID deck floodlights are supplied with a wiring harness, relay and fuse. The startup current of 20A (for 12V) or 10A (for 24V) requires a relay under all circumstances.  
A 20A fuse is required for 12V systems, a 15A fuse for 24V systems.
- Complete the electrical connection only with the wiring harness supplied. When extending the wiring harness, sufficient cross section must be ensured.  
The internal resistance of the electrical connection (including relay, fuse and earth lead) between ballast and battery must not exceed 150W (for 12V) or 300W (for 24V) under all circumstances. If the resistance is higher, the current of 20A (for 12V) or 10A (for 24V) required for ignition of the light arc cannot be reached. Inefficient ignition use can cause damage to the electronic ballast.
- Ignition problems can occur when a number of Xenon lamps are started simultaneously. This can result in damage to the electronic ballasts.  
For this reason it is strongly recommended to activate the lamps sequentially with a short time delay of approximately 5-20 seconds depending on the vessels electrical system.

# 6142 and 8534 HID (Xenon) Deck Floodlights

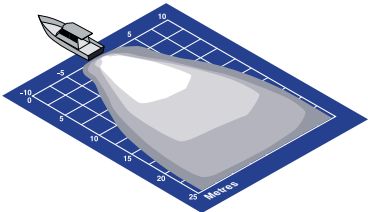


**More light, greater safety, less power consumption, longer life and proven reliability in tough working conditions.**



Hella marine HID floodlights use a D2S Xenon bulb that provides up to 5 times the service life of a traditional halogen bulb. Due to advanced 'Free Form' reflector technology, Hella marine HID floodlights have 2.5 times the light output of halogen floodlights.

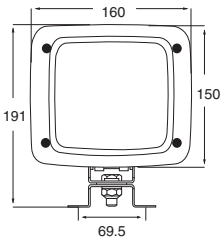
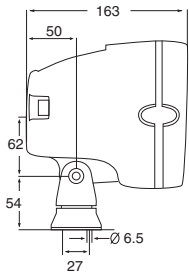
HID floodlights produce a white light very close to daylight, with a greater range and extremely wide deck illumination. The safety benefits of increased natural white light include easier viewing in dark working conditions and dramatically reduced eye strain. A compact 12V or 24V DC electronic ballast provides constant levels of light output, even if the vessel's voltage supply fluctuates by up to 10%. In addition, HID floodlights place less strain on the vessel's electrical system than halogen deck floodlights - total consumption is 42W - 35W for the bulb, 7W for the ballast.



<b>Housing Description</b>	UV and impact resistant plastic housing		<b>Replacement Bulb Type</b>
<b>Bulb</b>	35W D2S bulb included		<b>D2S</b>
<b>Mounting</b>	Upright mounting		35W (XN4000)
<b>Degree of Protection</b>	IP 5K4		
<b>Maximum Output</b>	Approx. 42W (12V) or 41W (24V)		
<b>Operating Voltage</b>	12V DC	9 - 16V	
	24V DC	18 - 32V	

## 6142 Series HID Deck Floodlights with Integrated Ballast

Voltage	Housing Colour	Part Number
12V	White Housing	281536
24V	White Housing	281538

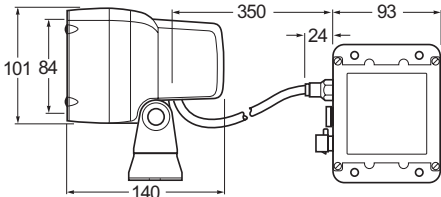
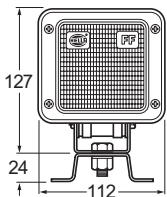


**Spare Parts**  
 9.1536.01  
 Close range insert  
  
 9.1538.01  
 Far reaching insert



## 8534 Series HID Deck Floodlights with Remote Ballast

Voltage	Housing Colour	Part Number
12V	White Housing	281534
24V	White Housing	281535



**Spare Parts**  
 9.1534.01 'FF' insert  
 9.1534.03 12V Ballast  
 9.1535.03 24V Ballast  
 9.1517.08 Bracket





## 7118 and 8518 Series Halogen

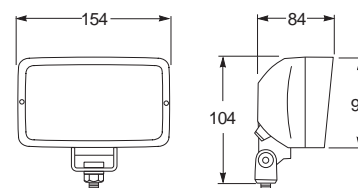


Off White Housing  
Structured Lens

## 7118 Series

Fiber reinforced housing and Free Form reflector for close range homogeneous illumination.

- Hella 'Free Form' reflector technology
- Sealed cable entry gland and pre-wired cable option
- Structured or Crystal Clear lens option
- Extended front edge for lens protection
- 316 Stainless steel mounting hardware



## Replacement Bulb Type

## PK22s

12V / 55W YC1255  
24V / 70W YC2470

## Housing Description

UV and impact resistant plastic housing

## Bulb

12V / 55W H3 bulb included

## Mounting

Upright mounting

## Cable Entry

Sealed cable entry gland

Pre-wired twin core marine cable.

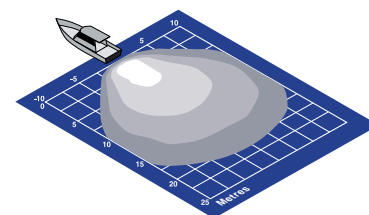
## Degree of Protection

IP X4

## Maximum Output

12V / 55W or 24V / 70W

*Note - Not suitable for 100W bulbs*



## Bracket

Stainless steel bracket for stabilized mounting in areas subject to vibration.  
9.1517.08



## Spare Part

9.2859.02 'FF' insert

## 7118 Series Halogen Deck Floodlights

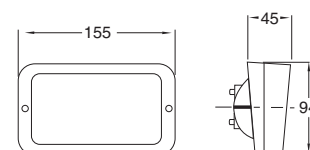
Voltage	Housing Colour	Lens	Cable Entry	Part Number
12V	Off White	Structured Lens	Rubber Grommet	2859
12V	Black	Structured Lens	Rubber Grommet	1519



## 8518 Series - Flush Mount

White fiber reinforced housing and Free Form reflector for close range homogeneous illumination.

- Seal between frame and attachment surface
- Cable entrance through rubber grommet
- Large 135 x 75mm light aperture
- 316 stainless steel screws



## Replacement Bulb Type

## PK22s

12V / 55W YC1255  
24V / 70W YC2470

## Housing Description

UV and impact resistant plastic housing

## Bulb

12V / 55W H3 bulb included

## Mounting

Recess mount - Front inclination 5 degrees

## Cable Entry

Terminals at rear of reflector

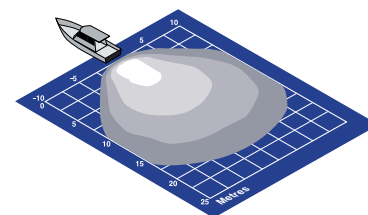
## Degree of Protection

IP X4

## Maximum Output

12V / 55W or 24V / 70W

*Note - Not suitable for 100W bulbs*

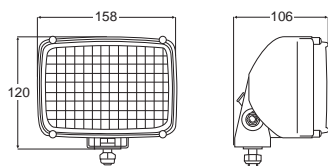


## 8518 Series Flush Mount Halogen Deck Floodlight

Voltage	Housing Colour	Lens	Part Number	Spare Part
12V	Off White	Structured Lens	2860	9.2859.02 'FF' insert

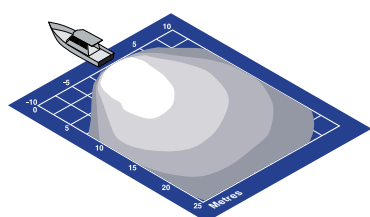
## 8541 and 8542 Series Halogen

## 8541 Series



Wide spread close range illumination with double Free Form reflector. White fibre reinforced plastic housing with extended front edge to protect lens.

- Twin Hella 'Free Form' reflector technology
- Triple the light output compared to conventional lamps of the same size
- Large 145 x 83mm light aperture
- Extended front edge for lens protection
- 316 Stainless steel mounting hardware

**Housing Description**

UV and impact resistant plastic housing

**Bulb**

2 x 12V / 55W H3 bulbs included

**Mounting**

Upright mounting

**Cable Entry**

Pre-wired with 110mm of cable

**Degree of Protection**

IP 54

**Maximum Output**

2 x 12V / 55W or 2 x 24V / 70W

*Note - Not suitable for 100W bulbs***Replacement Bulb Type****PK22s**12V / 55W YC1255  
24V / 70W YC2470**8541 Series Halogen Deck Floodlight**

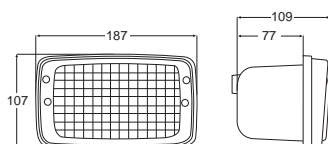
Voltage	Housing Colour	Part Number	Spare Part
12V	White Housing	2830	9.1531.01 'FF' insert

**Bracket**

Stainless steel bracket for stabilized mounting in areas subject to vibration.  
9.1517.08

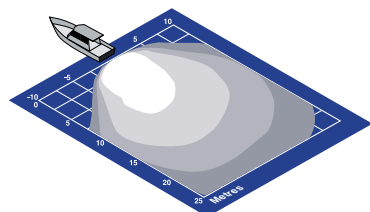


## 8542 Series - Recess Mount



Wide spread close range illumination with double Free Form reflector. Recess mount fibre reinforced plastic housing with extended front edge to protect lens.

- Twin Hella 'Free Form' reflector technology
- Triple the light output compared to conventional deck lamps of the same size
- Extended front edge for lens protection
- Large 145 x 83mm light aperture
- 7° upwards or downwards inclination

**Housing Description**

UV and impact resistant plastic housing

**Bulb**

2 x 12V / 55W H3 bulbs included

**Mounting**

Recess mount. Pre-wired with 250mm of cable

**Degree of Protection**

IP 54

**Maximum Output**

2 x 12V / 55W or 2 x 24V / 70W

*Note - Not suitable for 100W bulbs***Replacement Bulb Type****PK22s**12V / 55W YC1255  
24V / 70W YC2470**8542 Series Recess Mount Halogen Deck Floodlight**

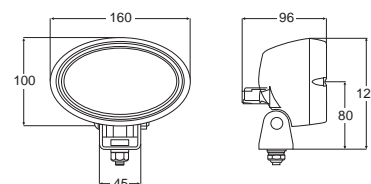
Voltage	Housing Colour	Part Number	Spare Part
12V	White Housing	1GB 998 542-001	9.2859.02 'FF' insert

## 6361 Series Halogen

## 6361 Oval 100 Series

White fibre reinforced housing and Free Form reflector for close range homogeneous illumination. Sturdy housing design for use under heavy duty conditions.

- Extended front edge for lens protection
- Glass lens bonded with reflector to be dust and moisture resistant
- 316 Stainless steel mounting hardware
- Sealed cable entry via threaded gland with nut
- Suitable for applications subject to heavy vibration
- Upright or pendant mounting. Can be rotated through 180°



## Replacement Bulb Type

**PK22s**  
12V / 55W YC1255  
24V / 70W YC2470

## Housing Description

UV and impact resistant plastic housing

## Bulb

12V / 55W or 24V / 70W H3 bulb included

## Mounting

Upright mounting

## Cable Entry

Pre-wired with 300mm of cable

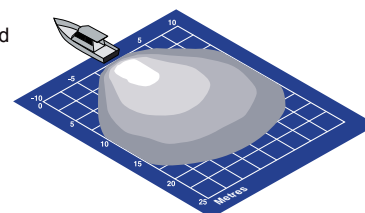
## Degree of Protection

IP 6K 9K

## Maximum Output

12V / 55W or 24V / 70W

*Note - Not suitable for 100W bulbs*



Sealed cable entry gland with nut.  
Pre-wired with 300mm of twin core marine cable.

## 6361 Series Halogen Deck Floodlights

Voltage	Housing Colour	Part Number
12V	White Housing	1GA 996 361-131
24V	White Housing	1GA 996 361-391

## Bracket

Stainless steel bracket for stabilized mounting in areas subject to vibration.  
9.1517.08



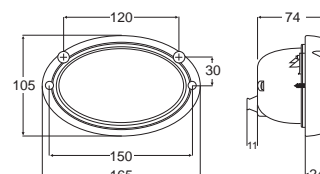
## Spare Part

9.1540.01 'FF' insert

## 6361 Oval 100 Series - Recess Mount

White fibre reinforced housing and Free Form reflector for close range homogeneous illumination. Sturdy housing design for use under heavy duty conditions.

- Extended front edge for lens protection
- Glass lens bonded with reflector to be dust and moisture proof
- Sealed cable entry via threaded gland with nut
- Suitable for applications subject to heavy vibration



## Replacement Bulb Type

**PK22s**  
12V / 55W YC1255  
24V / 70W YC2470

## Housing Description

UV and impact resistant plastic housing

## Bulb

12V / 55W or 24V / 70W H3 bulb included

## Mounting

Recess mount

## Cable Entry

Pre-wired with 300mm of cable

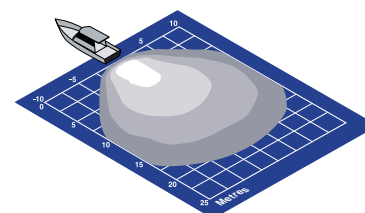
## Degree of Protection

IP 6K 9K

## Maximum Output

12V / 55W or 24V / 70W

*Note - Not suitable for 100W bulbs*



## 6361 Series Recess Mount Halogen Deck Floodlights

Voltage	Housing Colour	Part Number
12V	White Housing	1GA 996 361-141
24V	White Housing	1GA 996 361-401

## Spare Part

9.1540.01 'FF' insert



## 8502 Series Halogen Lights

### 8502 Series - Powerful Twin Beam Hand Held Search Light

Hella marine hand held search lights are vital tools for night sailing and landing manoeuvres.

#### Features:

- Two reflectors and two halogen bulbs on separate switches
- 55W bulb for close range. 100W bulb for long range (12V Version)
- 2 x 70W bulbs (24V Version)
- Trigger switch integrated into the grip allows morse code operation
- Extended front edge for protection of the glass lens

#### Housing Description

Shock and vibration resistant plastic  
High gloss aluminium reflector

#### Bulbs

1 x 12V / 55W H3 bulb included  
1 x 12V / 100W H3 bulb included  
2 x 24V / 70W H3

#### Installation

Spiral cable with cigarette lighter plug  
Extended length 3.5m

#### Degree of Protection

IP X6K



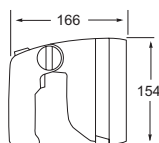
**Deck mount base**  
8HG 998 519-001

#### 8502 Series Hand Held Search Light

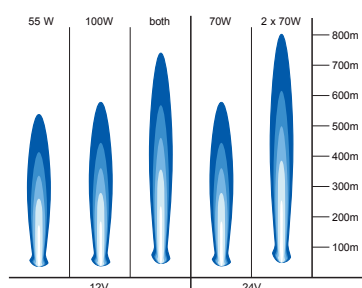
Voltage	Housing Colour	Part Number
12V	Black Housing	1H3 998 502 001

#### Replacement Bulb Type

PK22s	
12V / 55W	YC1255
24V / 100W	YC24100
24V / 70W	YC2470



#### Illumination Distance



### 8502 Series - Powerful Twin Beam Fixed Mount Search Light

Designed for installations through cabin roofs.

#### Features:

- Two reflectors and two halogen bulbs with a single switch on handle
- Two 12V / 55W or 24V / 70W bulbs
- 360° rotation. 30° vertical adjustment
- Extended front edge for protection of the glass lens

#### Housing Description

Shock and vibration resistant plastic  
High gloss aluminium reflector

#### Bulbs

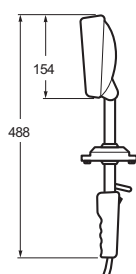
2 x 12V / 55W H3 bulbs included  
2 x 24V / 70W H3

#### Installation

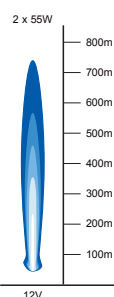
Pre-wired with 350mm of cable  
Grommet sealed. O-ring included

#### Degree of Protection

IP X6K



#### Illumination Distance



#### 8502 Series Fixed Mount Search Light

Voltage	Housing Colour	Part Number
12V	Black Housing	1H3 998 502-021

#### Replacement Bulb Type

PK22s	
12V / 55W	YC1255
24V / 70W	YC2470

#### Spare Parts - Hand Held Search Lights



1



**Deck mount base**  
8HG 998 519-001

#### 1 Insert

1NB 993 880-001

#### Spare Parts - Fixed Mount Search Lights



1

#### 1 Insert

1NB 993 880-001

## 8505 Series Masthead / Floodlight Combination Lamps



### 8505 Series

Deck Floodlight and Masthead Lamp combined in one robust housing.  
Suitable for vessels less than 12m in length.

#### Features:

- 2 Nautical Mile Masthead lamp
- Hella marine 'Free Form' reflector technology
- Flexible mounting arms for mounting on a variety of mast profiles
- Halogen reflector lamp (12V / 20W) with cover for moisture protection
- All metal parts are stainless steel
- Bulb replaces via opening in the cover
- Black or White fiber reinforced housing



#### Housing Description

UV and impact resistant plastic housing

#### Bulbs

12V / 10W SV8.5 and 12V / 20W GX5.3 bulbs included

#### Mounting

Navigation lamp requires wiring through grommet on back plate

Floodlight pre-wired with 110mm of cable

Housing arms flex to fit around mast profile

#### Degree of Protection

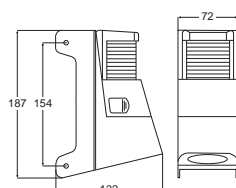
IP X4

#### Maximum Output

Deck lamp 12V / 20W

#### Approvals

IMO COLREG, USCG, ABYC A-16, RINA,  
NMSC, Maritime NZ



#### Replacement Bulb Type

##### Floodlight GX5.3

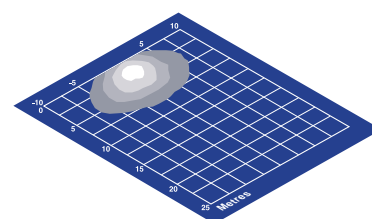
12V / 20W 8GH 998 529-001  
28V / 20W 8GH 998 529-011

##### Masthead SV8.5

12V / 10W K1210  
24V / 10W K2410

### 8505 Series Masthead / Floodlight Lamps

Voltage	Housing Colour	Part Number
12V	Black Housing	2LT 998 505-001
12V	White Housing	2LT 998 505-011



### 8505 Series Spare Parts

#### Floodlight Bulb

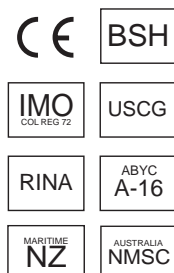
12V / 20W	8GH 998 529-001
28V / 20W	8GH 998 529-011

#### Masthead

##### Bulb

12V / 10W	K1210
24V / 10W	K2410

## 8504 Series Masthead / Floodlight Lamps



### 8504 Series

Deck Floodlight and Masthead Lamp combined in one robust housing.  
Suitable for vessels less than 20m in length.

#### Features:

- 3 Nautical Mile Masthead lamp
- Hella 'Free Form' reflector technology
- Flexible mounting arms for mounting on a variety of mast profiles
- Illuminates large areas of deck or superstructure
- Glass lens bonded with reflector to be dust and moisture resistant
- All metal parts are stainless steel
- Black or White fibre reinforced housing



#### Housing Description

UV and impact resistant plastic housing

#### Bulbs

12V / 10W BAY15d and 12V / 55W H3 bulbs included

#### Mounting

Navigation lamp and Deck Floodlight require separate wiring

Housing arms flex to fit around mast profile

#### Degree of Protection

IP X4

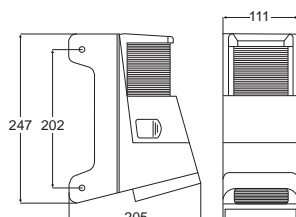
#### Maximum Output

Deck lamp 12V / 55W or 24V / 70W

*Note - Not suitable for 100W bulbs*

#### Approvals

IMO COLREG, BSH, USCG, ABYC A-16, RINA, NMSC, Maritime NZ



#### Replacement Bulb Type

##### Floodlight PK22s

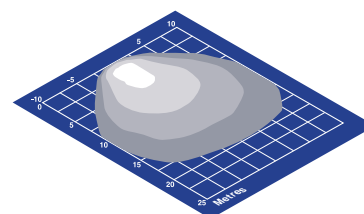
12V / 55W YC1255  
24V / 70W YC2470

##### Masthead BAY15d

12V / 25W EA1225  
24V / 25W EA2425

### 8504 Series Masthead / Floodlight Lamps

Voltage	Housing Colour	Part Number
12V	Black Housing	2LT 998 504-001
12V	White Housing	2LT 998 504-011



### 8504 Series Spare Parts

#### 'FF' Floodlight Insert

9.1533.01

#### Lamp housing white

9EL 127 083-071

#### Floodlight Bulb

12V / 55W YC1255  
24V / 70W YC2470

#### Masthead Bulb

12V / 25W EA1225  
24V / 25W EA2425



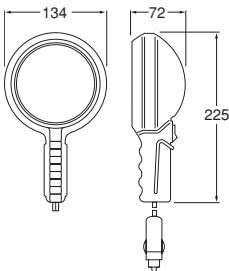
Halogen Spot Lights

Lightweight Hand Held Spot Lights



- Features:**
- Powerful 100W 12V or 50W 24V sealed beam
  - ON / OFF Switch or momentary ON / OFF Switch
  - Plug and cable

<b>Housing Description</b>	Shock and vibration resistant plastic High gloss aluminium reflector
<b>Bulbs</b>	Sealed beam included
<b>Installation</b>	Spiral cable with cigarette lighter plug Extended length 2.5m



Blue Search Lights with ON / OFF Switch

Voltage	Wattage	Housing Colour	Part Number
12V	100	Blue Housing	1520
24V	50	Blue Housing	1525

Black Search Lights with Momentary ON / OFF Switch

Voltage	Wattage	Housing Colour	Part Number
12V	100	Black Housing	1524

- Spare Parts -**
- 9.1520.07 Spiral Cable and Plug
  - 9.1524.06 Switch ON / OFF



Port Fitzroy, Great Barrier Island, New Zealand

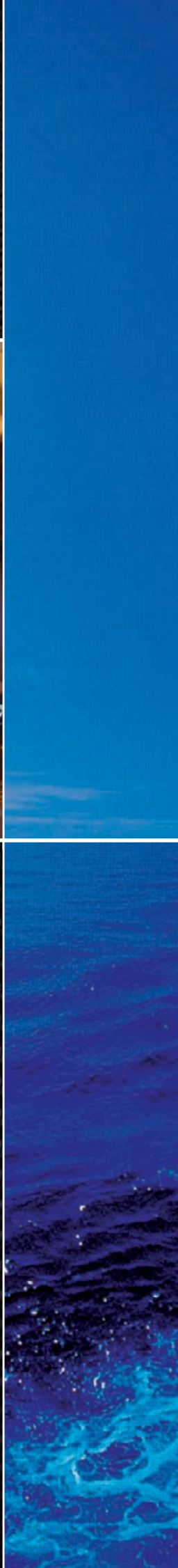






*LED Interior and Exterior Lighting*

**Hella marine**   
*Vision and Innovation*



## LED Interior and Exterior Lighting

*LED Technology*

Hella marine LED interior, exterior and courtesy lamps provide efficient, power saving and ultra durable illumination for reliability and safety at sea.

**Ultra Low Power Consumption**

Combining efficient LED light sources with advanced optic technology, Hella marine LED products deliver more light output per watt than traditional bulb lamps and thus provide considerable energy savings.

As an example, Hella marine DuraLed® heavy duty 36 LED lamps use less than 15% of the power required to run a 60W fluorescent lamp, yet provide a considerably wider, whiter and more intense light pattern.

**Ultra low heat signature for improved safety**

All Hella marine LED lamps feature an ultra low heat signature due to their low power consumption. This provides many safety and installation advantages as the risks of heat damage caused by traditional halogen lamps are completely eliminated.

Hella marine LED lamps can be installed almost anywhere onboard, directly onto timber, fabrics and lightweight composite materials.

**No bulbs, No maintenance. Ultra long service life**

Hella marine LED technology has no filaments to break, thus making the LED lamps extremely shock and vibration resistant for reliable illumination and safety.

Our engineering team has developed a unique range of highly demanding tests to lift product reliability to new standards.

**Fully sealed for life**

Each Hella marine LED lamp is a completely sealed opto-electronic device. Proven design, precision engineering, and the use of high impact acrylic materials ensures superior resistance to water, impact, UV and general wear and tear.

**Pre-wired with marine cable**

Hella marine LED lamps are pre-wired with quality marine specification tinned cable. The cable is completely sealed to the lamp body providing time saving at installation and reliable electrical connection.

**Multivolt™ technology for durability and safety**

Advanced Multivolt™ circuitry provides a uniform level of intensity for reliable and safe illumination across a range of DC inputs such as 8-28 volts or 9-33 volts.

Multivolt™ LED lamps can be connected to 12 or 24 volt systems without modification, providing full light performance and automatic compensation for low battery voltages, and voltage drop over long cables and connections. Multivolt™ LED lamps are also reverse polarity and spike protected for enhanced durability even under severe voltage fluctuations.

**Electromagnetic Compatibility (EMC)**




All Hella marine products are designed to suppress electromagnetic interference, complying with the emission and immunity limits prescribed in international standards. This protects the radio, communication, navigation and other electrical equipment onboard from possible interference with our products. Where applicable, Hella marine products carry CE marking for European Union legislation, and the C-Tick mark for Australian & New Zealand requirements.



C-Tick is the Australian & New Zealand EMC compliance mark administered by the Australian Communications and Media Authority (ACMA) & Radio Spectrum Management (RSM) New Zealand, and will be transitioning to the RCM mark by 1st March, 2016. Hella marine products will remain compliant to these requirements throughout the transition period and beyond.





	Series Name / Series Number	Outside Diameter	Installation Type	Cut out Diameter	Beam Angle	Peak Lux @ 1M	Peak Lux @ 2M	Power Consumption	Incandescent Equivalent*	Page No.
	Ponui 0770 & 0771	70mm	Surface	n/a	32° Spread	105 Lux White	28 Lux White	< 0.8W < 0.07A@12V	10W Halogen	67
	Tiri 0596 & 0597	60x60mm	Recess	50mm	32° Spread	105 Lux White	28 Lux White	< 0.8W < 0.07A@12V	10W Halogen	69
	Tiri 0596 & 0597	60x60mm	Recess	50mm	15° Spot	370 Lux White	92.5 Lux White	< 0.8W < 0.07A@12V	10W Halogen	69
	SpotLED 3980	75mm	Recess	50mm	13° Spot	450 Lux White	112.5 Lux White	< 2.5W < 0.21A@12V	10W Halogen	71
	Rakino 9599 & 0956	75mm	Recess	50mm	32° Spread	105 Lux White	28 Lux White	< 0.8W < 0.07A@12V	10W Halogen	69
	Rakino 9599 & 0956	75mm	Recess	50mm	15° Spot	370 Lux White	92.5 Lux White	< 0.8W < 0.07A@12V	10W Halogen	69
	EuroLED® 95 0940	95mm	Recess	73mm	30° Spread	380 Lux Warm white	95 Lux Warm white	< 4.0W < 0.33A@12V	20W Halogen	73
	EuroLED® 115 0820 & 0828	115mm	Recess & Surface	90mm	36° Spread	385 Lux Warm white	96 Lux Warm white	< 4.0W < 0.33A@12V	20W Halogen	75
	EuroLED® 130 9820, 9950/51	130mm	Surface	n/a	32° Spread	475 Lux White	119 Lux White	4.0W 0.33A@12V	20W Halogen	79
	EuroLED® 150 0630 & 0631	150mm	Recess & Surface	124mm	32° Spread	475 Lux White	119 Lux White	4.0W 0.33A@12V	20W Halogen	77
	Waiheke 0681 & 9076	250x50mm	Recess	240x40mm	26° Spot	450 Lux White	112.5 Lux White	< 2.0W < 0.17A@12V	20W Halogen	65
	Surface Mount 0881 Interior	285x25mm	Surface	n/a	42° Spread	205 Lux White	51 Lux White	< 3.0W < 0.25A@12V	20W Halogen 7W Fluorescent	87
	DuraLed® 12 9700 & 0704	140x65mm	Surface	n/a	120° Spread	60 Lux White	15 Lux White	< 2.5W < 0.20A@12V	20W Halogen 7W Fluorescent	89
	DuraLed® 20 0608	177x100mm	Surface	n/a	64° Spread	390 Lux White	97.5 Lux White	< 4.0W < 0.33A@12V	20W Halogen 11W Fluorescent	91
	DuraLed® 36 9037	177x100mm	Surface	n/a	64° Spread	600 Lux White	150 Lux White	< 7.0W < 0.51@12V	35W Halogen 14W Fluorescent	91
	DuraLed® 50 0604	220x96mm	Surface	n/a	64° Spread	780 lux White	195 Lux White	< 10.0W < 0.80A@12V	50W Halogen 18W Fluorescent	91



Riviera 63 Enclosed FB [www.riviera.com.au](http://www.riviera.com.au)

## ***Welcome to the future of ultra efficient illumination***

Hella marine LED lighting products are sophisticated opto-electronic devices designed for durable, energy efficient, maintenance free operation. Recent quantum leaps in the luminous intensity of LEDs per watt have allowed marine lighting systems to develop significantly to effectively illuminate a vessel's interior.







Riviera 50FB [www.riviera.com.au](http://www.riviera.com.au)

Quality LED lighting provides many significant advantages over traditional filament based sources. Significantly reduced power consumption, increased reliability, reduction in radiated heat and attractive ambient effects are all benefits of modern LED lighting systems. The following are key considerations when selecting LED lighting for marine interior and exterior applications.

#### **Power saving on board**

The single most influential driver for LED technology on most yachts and powerboats is the considerable power saving on offer compared to incandescent lamps. Lighting systems are a major part of a vessel's electrical architecture where consumption can be dramatically reduced. The opportunity to save hundreds of amp hours is available now.

As a recent example, the entire Hella marine LED downlighting system specified for a Riviera 43ft flybridge sportfisher draws less than 2 Amps. To illuminate the same interior layout with halogen lamps would have totalled over 18 Amps. The reduction in cable size and weight together with the safety aspects of an almost zero heat signature was also highly beneficial.

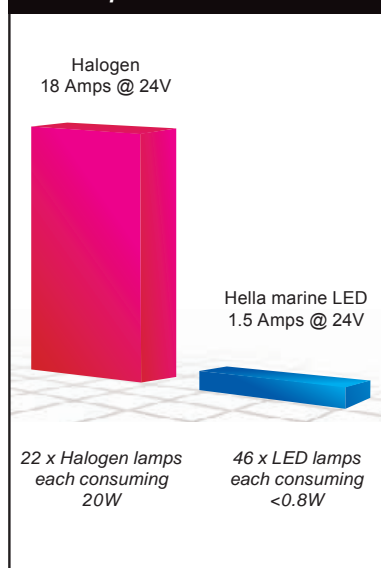
The majority of the lamps specified for the Riviera 43 system are the Rakino series warm white LED downlights. Each lamp consumes less than 0.8W yet produces the equivalent light output of a 10W halogen lamp. Such efficiency is class leading.

#### **Hella marine reliability**

Due to their solid state nature, LEDs do not have filaments to break, however LEDs do require precise current regulation and voltage protection to provide long term reliability. For LED lighting manufacturers, many design and engineering milestones are required to produce durable products that provide ongoing performance in marine applications. Hella marine LED products feature several key advantages such as completely sealed housings, sealed cable entries, effective



#### **LED vs Halogen current draw comparison on Riviera 43FB**





electronic protection, shock, vibration and impact resistant components that all contribute towards outstanding reliability. Compared to incandescent lighting, where a filament inside a bulb may break at any moment, Hella marine LED lighting is 'fit and forget'.

Many LED lamp manufacturers claim operating lifetimes of 50,000 or 100,000 hours, however in many cases these claims are generalized. The high power LED devices are often too new to have been thoroughly tested for such periods. These lifetime estimates are often based on LED component specifications from the device manufacturer rather than the life of the complete lamp in a marine installation.

In the harsh marine environment, salt air corrosion to circuit boards, light degradation due to excessive heat, vibration fatigue, shock loads, voltage fluctuations and low battery voltages all contribute to reduce the operating life of LED lamps without thorough engineering and electronic protection. The supplier's warranty policy, integrity and track record is often a more accurate benchmark on the lifetime and quality of the LED lamp under consideration.

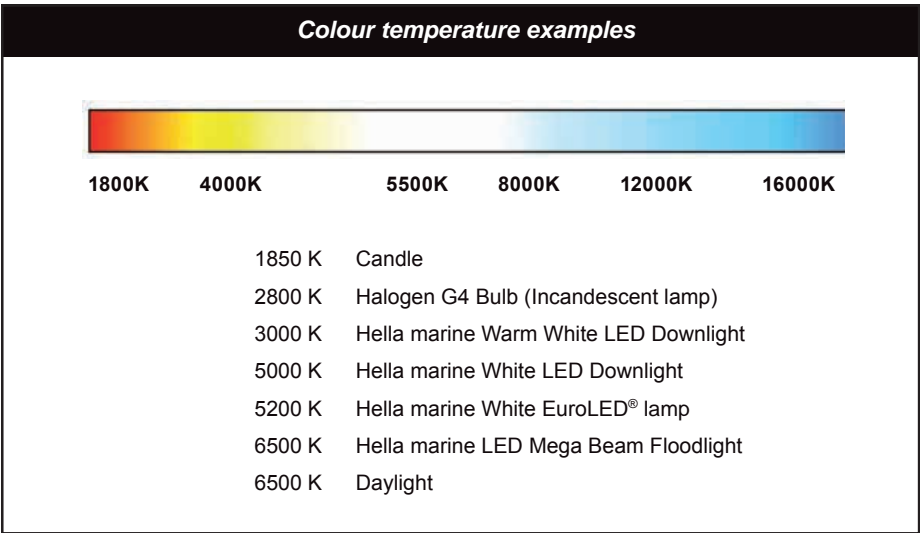
**Colour Temperature and Rendering**

Until recently, the lack of high quality white LED devices with sufficient intensity has been the major factor preventing the acceptance of LEDs for general marine lighting purposes. LEDs had a reputation for appearing 'cold' and 'blue' due to there phosphorous coating heritage. However today's high efficacy devices can rival traditional incandescent light sources for colour and ambience.

When selecting LED interior lighting, colour temperature is an important consideration. Colour temperature is measured in Kelvin and describes the effect of heating an object until it glows incandescently. The emitted radiation, and apparent colour changes in proportion to the temperature; envisioned when considering hot metal in a forge that glows red, then orange, and then white as the temperature increases.

Hella marine describes higher colour temperatures (>5000K or more) as 'cool' white, and lower colour temperatures (<3500 K range) as 'warm white'. 'Neutral white' is in the 4200K range. Cool white is recommended for visual tasks, work areas such as engine rooms, and exterior lighting. Warm white light is suggested for interior spaces as it adds life and vibrancy to people and objects, is considered more flattering to skin tones or fabrics, and makes food look fresh and attractive.

These colour choices should only be an approximate consideration however. Cool white will accentuate blue and green hues in certain fabrics and surfaces, and where



*White light*



*Warm white light*



## Enhancing interiors with attractive colour matched illumination.

Hella marine offers highly efficient LED lamps with colour temperatures in the warm white range of 3000K, or white range of 5000K.

Specialist LED selection and quality control ensures the colour temperature and colour rendering performance is matched across similar series. The result is a uniform colour temperature and ambience throughout a vessel when different lamps are installed.

### Warm White

### White



EuroLED® 115  
0820 series



EuroLED® 115  
0820 series



EuroLED® 95  
0940 series



EuroLED® 95  
0940 series



Rakino  
0956 series



Rakino  
0959 series



Tiri  
0957 series



Tiri  
0956 series



Ponui  
0771 series



Ponui  
0770 series



Waiheke  
0681 series



Waiheke  
0681 series



Oblong  
9680 series



Oblong  
9680 series



Easy Fit  
8560 series



Easy Fit  
8560 series

there are stainless steel or gel coat surfaces. Lighting designers may specify cool white for galley areas and warm white where there is an abundance of varnished timber work instead of high gloss gel coat surfaces.

### Light Output

For an effective comparison of the different products from marine LED manufacturers, many factors must be considered. The best lamp for a given application is no longer the one that solely meets a style requirement. Today, power consumption, efficiency, output and beam angle must be considered together with light colour, shape, and the aesthetics and finish of the housing itself.

The following performance data is worth considering -

### Luminous Flux

Measured in Lumens (lm), luminous flux describes the total quantity of light produced from a lamp. The higher the lumen count, the more intense the light output.

### Luminous intensity

Measured in Candela (cd), luminous intensity is the luminous flux at a particular angle from the light source. Peak candela occurs at 0 degrees, i.e. directly below a lamp.

### Illuminance

Measured in Lux (lx), Illuminance is equal to luminous flux divided by the illuminated area. One lux is equal to one lumen per square meter.

$$\text{Luminous Flux (Lumens)} / \text{Area} = \text{Illuminance (Lux)}.$$

or

$$\text{Illuminance (Lux)} \times \text{Area} = \text{Luminous Flux (Lumens)}$$

If both the area to be illuminated and the desired level of illumination are known, the total number of lumens required can be calculated. Divide the total lumens by the output of the LED lamp under consideration to determine the number of fixtures required to deliver the desired light output.

*E.g., A powerboat salon of 10 square meters and the desired illumination level is 120 Lux, a total of 1200 lumens are required.*

If the LED lamp under consideration has a luminous flux of 80 lumens, 15 lamps will be required (1200 / 80 = 15).

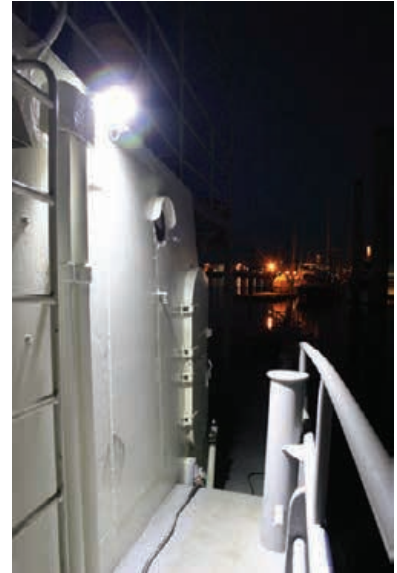
For further comparisons it is also important to consider the beam angle of an LED lamp, and the lux levels available at varying distances from the device. Narrow light beams may provide effective intensity directly under the fitting, but may not evenly illuminate an interior as the light may be too narrow with many shadows between effectively lit areas.





## Hella marine Light Performance Diagrams

No formula exists for lighting designers to directly correlate the luminous flux of the LED component used or the power consumption of the LED device to the performance of the entire LED luminaire. While the lumen output of the LED does describe how much luminous flux is generated, it does not indicate how effectively that light is distributed. The Hella marine light performance diagrams show output and spread in two formats. The Candela curves show peak candela across a range of angles and illustrate the light pattern and peak intensity according to the scale used. (A uniform scale for all diagrams is used to aid product comparisons) The Lux charts show the spread of light, calculated first from the candela curve by determining the angle where half of the peak candela output occurs.



*In Fig 1 below, peak candela is 385cd (measured at 0 degrees). Half of this output (192.5cd) occurs at +/- 18.0 degrees, thus the lamp has a spread of 36 degrees. While there will be light beyond these angles, the majority of light will be occur inside the range shown.*

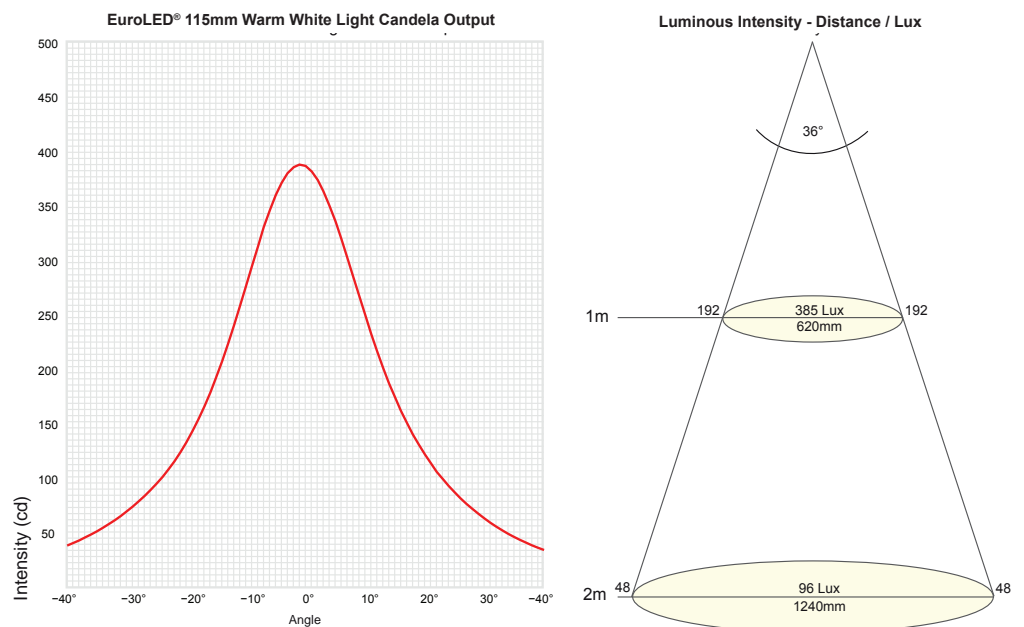
*The lux data shows how much light is cast upon a surface at a given distance.*

*The diagrams indicate peak lux (at 0 degrees), lux at the specified angle and the approximate length of surface area that will be illuminated inside the range shown.*

### Recommended Lux Values

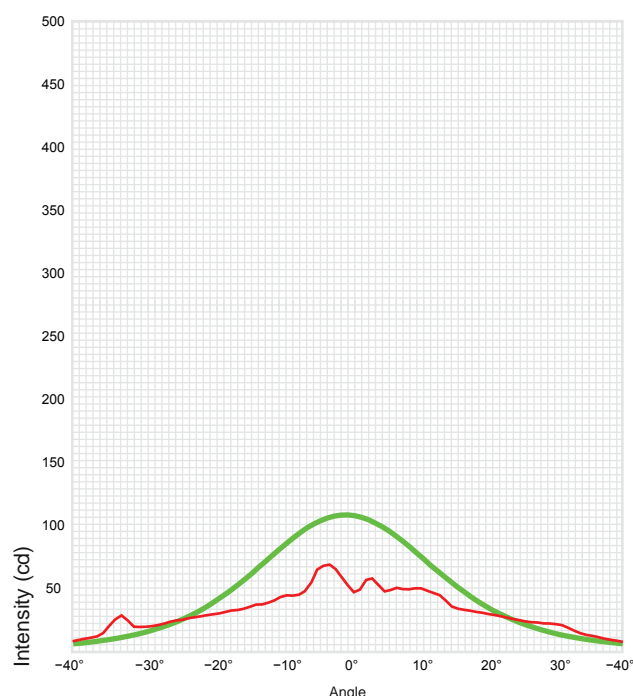
Area	Lux
Engine room	200-250
Galley surfaces	150-250
Heads	150-200
Salon	100-150
Companionway	70-100
Cabins	70-100
Flybridge	70-100
Cockpit	70-100

**Fig 1. Hella marine 0820 series Warm White LED Downlight Candela and Lux performance**





### Hella marine Rakino LED downlight (Spread) Compared to 8508 series halogen downlight.



**LED Downlight**  
Power consumption  
0.8 Watts



**Halogen Downlight**  
Power consumption  
10 watts



### Efficacy

Like efficiency, the efficacy of an LED lamp is the amount of light it produces per unit of electrical power it consumes (lumens per watt). The higher the lumens per watt, the higher the efficiency.

*E.g. A single Hella marine white Rakino LED downlight consumes less than 0.8W and produces around 80 lumens.  $80 / 0.8 = 100$  lumens per watt.*

It may also be an interesting comparison to divide the luminous flux of a lamp by its cost to derive lumens per dollar. The more lumens per dollar (*flux per bucks*), the more light for your investment.

Also, it is important to determine that the efficacy of the LED lamp is measured as the devices total efficacy, not the efficacy of only the LED(s) employed. Power consumed to run an electronic power supply driving and controlling the LED(s) is always a contributor to the lamps total consumption.

### Heat reduction and thermal management

With the power saving benefits of efficient LED based devices also comes heat reduction benefits. The sometimes dangerously high temperatures of 10W and 20W halogen lamps onboard can be eliminated with high efficiency LED technology. This allows boat builders and designers a wide scope of installation possibilities where the air cavity behind incandescent lamps, traditionally reserved for cooling, is no longer required. Efficient LED lamps can be mounted into solid surfaces and composite structures without risk of fire or heat damage to surrounding materials.

Well engineered thermal management of an LED device is essential for long-term durability. A common misconception is that LED's do not generate heat. LEDs consume power and some of this power is also converted into heat, even in the most energy efficient LEDs. In contrast to incandescent lamps however LED's like to 'run cold'. As a rule of thumb, the hotter an LED runs the faster it will degrade. A lower, and in extreme cases much lower light performance will result.

High performance LED's do generate heat, which needs to be coupled to surfaces designed to efficiently transport the heat away from the LED itself. LEDs that overheat, meaning the junction temperature of the LED rises above a set threshold, will permanently degrade and significantly reduce their luminous efficacy.

**A noticeably 'hot to touch' exterior surface of a high output LED interior lamp provides some indication that the light output of the device will deteriorate within a few hundred hours. Hella marine LED lamps will operate 'cool' or 'slightly warm' to the touch after many hours of operation.**

Southstar 37 [www.salthouseboats.com](http://www.salthouseboats.com)





Riviera 43FB [www.riviera.com.au](http://www.riviera.com.au)

### **EuroLED® series** **Lens and Optic engineering**

Precision engineered lens and optic combinations on powerful single LED lamps such as the EuroLED® 150 lamps are essential for efficient performance. The optics work to efficiently capture and distribute light from a highly intense single point source and provide a wide and uniform light pattern without glare or eye discomfort.



Hella marine thermal management expertise, coupled with proven optics and electronic design, ensures the long term durability with minimal degradation over many years of service.

### **Lens and Optic Technology**

To maximise the ever increasing efficacy of advanced LEDs, efficient optic design is essential to capture and spread the available light and to evenly illuminate areas on board.

Unlike incandescent light sources, LED devices begin with a directional light pattern. The goal for optics designers, working an application such as interior down lighting, is to create optics and lens patterns that produce an effective spread of homogeneous illumination throughout the interior. This even spread of light is often more important than how intense a lamp looks when viewed straight on.

All Hella marine LED lamps use efficient optics, lens designs or Free-Form reflector technology to accurately capture and distribute large percentages of available light from the LED source(s).

Examples include:

- Oblong LED step lamps with a 30 degree down angle light beam to illuminate the tread of steps and stairs without dazzle from the lamps themselves.
- Round and Square LED courtesy lamps providing attractive uniform light patterns via an efficient optic and lens with embedded glass spheres for minimum light losses.



Tiara 4200 [www.tiarayachts.com](http://www.tiarayachts.com)



- EuroLED® lamps employ an finely machined optic and lens combination to provide an even spread of bright white light with minimum light losses.
- 9599 series LED downlights with powerful 'Spot' or 'Spread' light distribution patterns without glare.

### ***Lens, Optic Technology and Eye Safety***

To take advantage of the ever increasing efficacy of the most advanced LEDs, efficient optic design is essential to capture and spread the available luminous flux emitted by the LED and to evenly illuminate areas.

With significant advances of LED brightness, eye safety considerations are increasingly important. It is essential for high power LEDs to be coupled with optic designs that protect the eye's retina from possible damage when viewed directly.

It is desirable for the entire lens area of a lamp to be evenly illuminated via an efficient optic rather than using a multiple of LEDs without any optic. Easily visible LEDs inside a luminaire without any optic or lens protection can cause a degree or even significant eye discomfort if viewed directly.

### ***Costs***

Quality LED interior and exterior lamps have shifted lighting systems from an incandescent globe based inside a housing or reflector to complex engineered optoelectronics devices. These devices now incorporate advanced drive circuits, spike and over voltage protection, optics, lenses, plus the LED source itself.

As a result, the added features and benefits of effective LED lighting do carry higher costs compared to incandescent lamps. However, for many applications the substantial power savings, long term reliability and improved safety advantages are a convincing value proposition for astute owners and operators.



Riviera 63FB [www.riviera.com.au](http://www.riviera.com.au)



### ***Night Vision***

***- Why red light does not affect our night vision.***

The human eye contains two types of receptors, the rods and the cones. Rods and cones have an increased sensitivity to frequency bands at different ends of the visual spectrum.

Rods are largely responsible for our day time and colour vision and have an increased sensitivity towards the red band of the visual spectrum. Cones are responsible for our night vision capability and have an increased sensitivity towards the blue, shorter wavelength band of the visual spectrum.

For this reason red light will not affect the sensitivity of the cones and with that our night vision is not affected by the use of red light in the cabin.

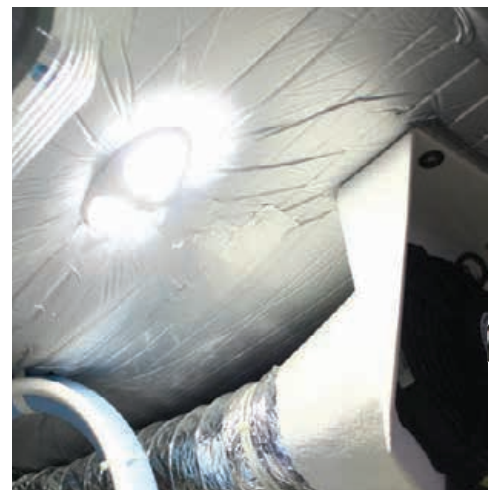




### ***Hella marine heavy duty lamps.***

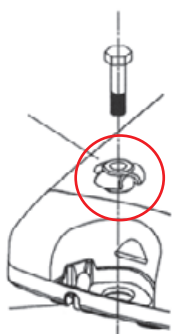
Efficient and reliable LED lighting for engine rooms, machinery spaces, anchor lockers, storage areas, decks and more. Advanced optic and lens combinations provide wide spread illumination supported by sophisticated electronic protection and robust, completely sealed housings.

Hella marine LED products are the proven 'Fit and Forget' choice for illuminating commercial and recreational vessels.



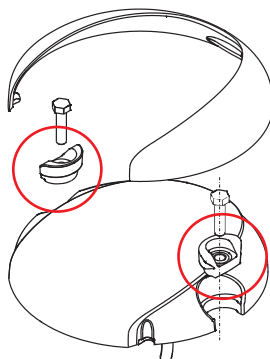
### ***DuraLed® and EuroLED® 130 series design and installation***

Both lamp series are purpose designed for surface mounted installations and feature unique heavy duty fastening components. The fastening load is taken up by pairs of robust nylon bushs to eliminate possible stress on lamp housings.



***DuraLed®***

Completely sealed housings with robust mounting system.



***EuroLED®***

# Flexi-spot

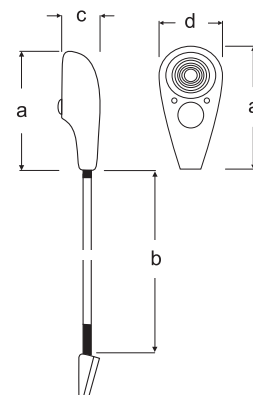


## Energy saving chart table lighting for interior applications.

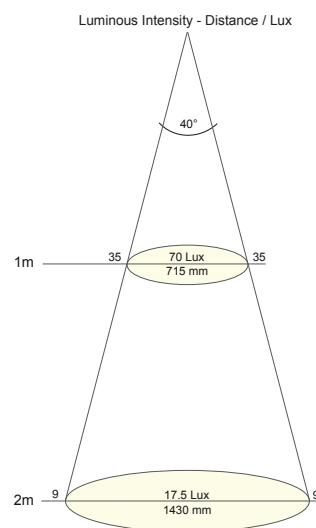
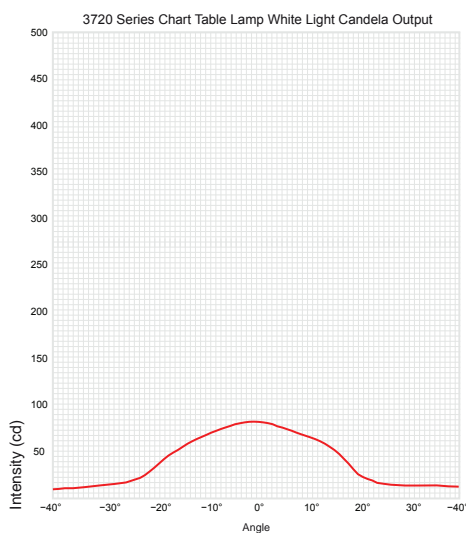
Energy efficient lighting for a variety of interior applications including chart table and navigation area lighting, berth lighting and adjustable reading lights. Available in single red or white LED light or dual colour red and white LED versions with integrated dimming via a rotary switch built into the head.



<b>Housing Description</b>	UV and impact resistant plastic
<b>Arm material</b>	Single colour - Coated steel arm
	Dual colour red/white - 316 stainless steel arm
<b>Cable</b>	Pre-wired with 120mm of twin core cable
<b>Operating Voltage</b>	Multivolt™ 9-31V DC
<b>Power Consumption</b>	< 2W ( <0.16A@12V / <0.08A@24V )
<b>Degree of Protection</b>	IP 53
<b>Weight</b>	150mm - 130g (including cable) 400mm - 230g (including cable)
<b>Approvals</b>	CE, C-Tick



## Flexi-spot Candela and Lux performance. White light.



**Dimensions**

a =	104mm / 4.09"
b =	150mm / 5.91"
	400mm / 15.75"
c =	36mm / 1.42"
d =	46mm / 1.81"

Dual colour LED chart table lamps feature a rotary dial for on/off red/white light control and dimming.



Packaging for aftermarket presentation

**LED**  
Multivolt

CLEAR LENS

### White / Red Light Chart Table LED Lamps

Shaft Length	Black Cover
6" / 150 mm	2JA 343 720-522
16" / 400 mm	2JA 343 720-622

**LED**  
Multivolt

CLEAR LENS

### White Light Chart Table LED Lamps

Shaft Length	Black Cover	White Cover
6" / 150 mm	2JA 343 720-022	2JA 343 720-012
16" / 400 mm	2JA 343 720-122	2JA 343 720-112

**LED**  
Multivolt

CLEAR LENS

### Red Light Chart Table LED Lamps

Shaft Length	Black Cover	White Cover
6" / 150 mm	JA 343 720-022	2JA 343 720-012
16" / 400 mm	2JA 343 720-122	2JA 343 720-112



# Waiheke



Elegant LED lamps offering class leading efficiency and durability.



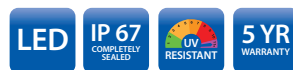
X-50 [www.x-yachts.com](http://www.x-yachts.com)

**Completely sealed lighting ideal for a variety of applications, from interior downlighting to cockpit illumination.**

Power consumption is very low at less than 2.0W (<0.17A@12V / <0.08A@24V) offering substantial energy saving compared to incandescent lighting. The surface temperature is very cool due to the low current draw.

All Waiheke lamps provide comfortable colour temperatures in white and warm white with excellent colour rendering performance. The light colour matches an equivalent Hella marine Rakino series LED downlight for consistent illumination and coordinated ambience throughout a vessel.

500mm of marine cable is pre-wired into each lamp for absolute water tightness and reliable electrical connections.

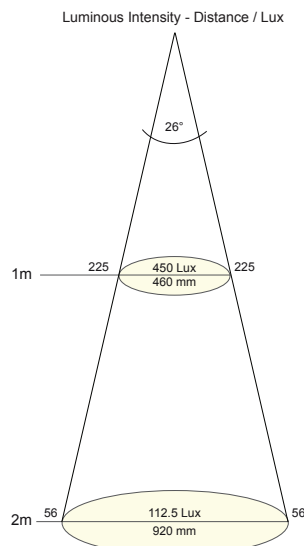
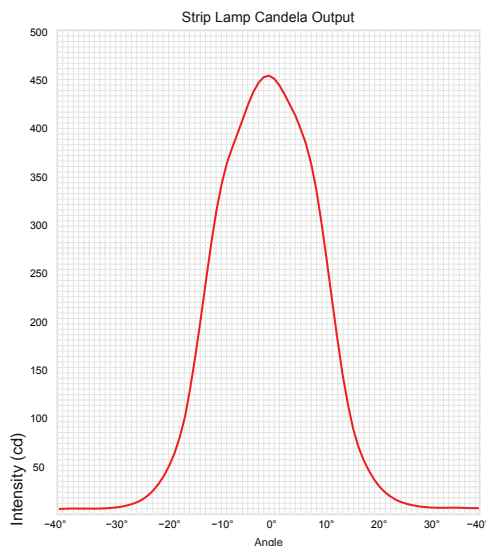


- Completely sealed housing
- Pre-wired with marine cable



316 stainless steel versions feature a unique internal tab lock for secure attachment without visible fastenings.

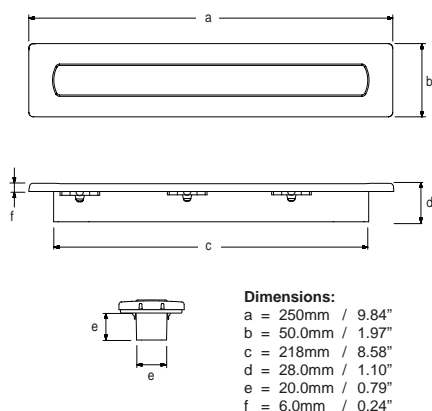
**Waiheke Candela and Lux performance. White light.**





Packaging for aftermarket presentation

<b>Lens Material</b>	UV resistant enhanced impact acrylic
<b>Colour Temperature</b>	5000K (White) 3000K (Warm White)
<b>Dimming</b>	Hella marine Dimmer 5XA 998 <b>572-001</b>
<b>Cable</b>	Pre-wired with 500mm of twin core marine cable
<b>Operating Voltage</b>	12V DC or 24V DC
<b>Power Consumption</b>	< 2.0W ( <0.17A@12V / <0.08A@24V )
<b>Degree of Protection</b>	IP 67 - Completely Sealed
<b>Mounting</b>	Stainless steel screws included
<b>Weight</b>	Stainless rim versions - 165g (including cable) Wide rim versions - 100g (including cable) No rim versions - 85g (including cable)



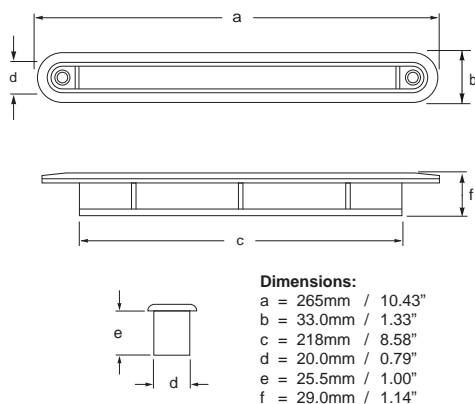
### Waiheke Stainless Steel Rim lamps

#### Multi purpose White LED Lamps

Voltage	Rim Type / Finish	Part Number
12V DC	Wide / Stainless Rim	2JA 980 <b>681-001</b>
24V DC	Wide / Stainless Rim	2JA 980 <b>681-501</b>

#### Multi purpose Warm White LED Strip Lamps

Voltage	Rim Type / Finish	Part Number
12V DC	Wide / Stainless Rim	2JA 980 <b>681-101</b>
24V DC	Wide / Stainless Rim	2JA 980 <b>681-601</b>



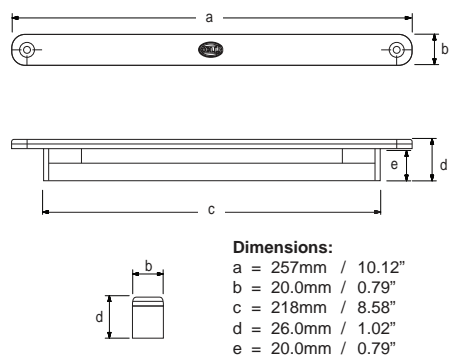
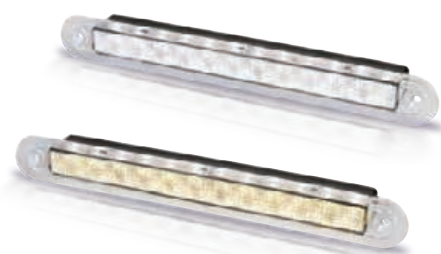
### Waiheke Wide Rim lamps

#### Multi purpose White LED Strip Lamps

Voltage	Rim Type	Part Number
12V DC	Wide (Gasket included)	2JA 959 <b>076-511</b>
24V DC	Wide (Gasket included)	2JA 959 <b>076-611</b>

#### Multi purpose Warm White LED Strip Lamps

Voltage	Rim Type	Part Number
12V DC	Wide (Gasket included)	2JA 959 <b>076-561</b>
24V DC	Wide (Gasket included)	2JA 959 <b>076-551</b>



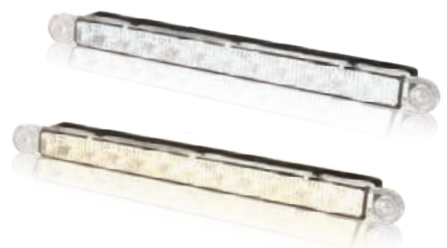
### Waiheke No Rim lamps

#### Multi purpose White LED Strip Lamps

Voltage	Rim Type	Part Number
12V DC	No Rim (No gasket)	2JA 980 <b>681-051</b>
24V DC	No Rim (No gasket)	2JA 980 <b>681-551</b>

#### Multi purpose Warm White LED Strip Lamps

Voltage	Rim Type	Part Number
12V DC	No Rim (No gasket)	2JA 980 <b>681-151</b>
24V DC	No Rim (No gasket)	2JA 980 <b>681-651</b>





# Ponui



Highly efficient brass reading lamps with LED technology.



Riviera 43FB [www.riviera.com.au](http://www.riviera.com.au)

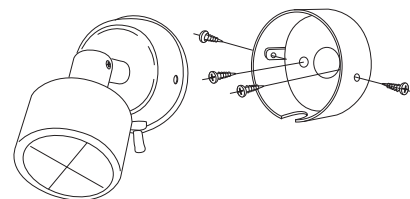
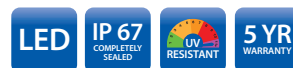
Timeless brass housings combine with energy efficient Hella marine LED technology in a range of attractive and 'cool to touch' reading lamps.

Power consumption is less than 0.8W per lamp. (<0.07A@12V / <0.03A@24V) Hella marine optics provide a uniform distribution of light without glare or eye strain.

A further benefit of the low power consumption is the 'cool to touch' lamp surface, effectively reducing the risks associated with high temperature incandescent reading lamps on board.

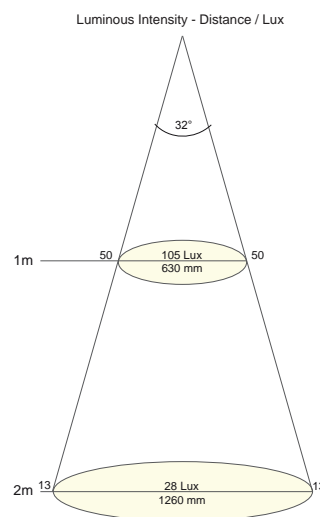
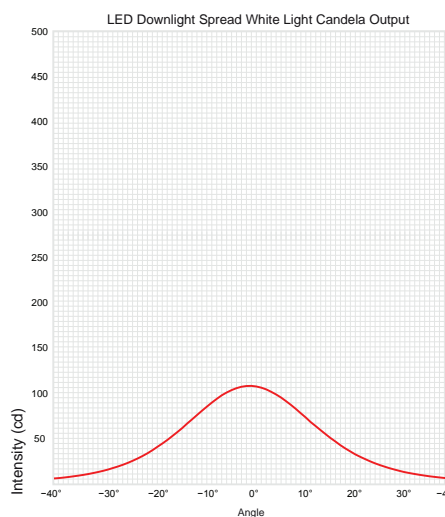
The light colour exactly matches an equivalent Hella marine Rakino or Waiheke series LED lamp for consistent illumination and coordinated ambience throughout a vessel.

Surface finish options include bright chrome or satin nickle. The arm and knuckle offers adjustable swing and pitch to achieve optimum light angles.

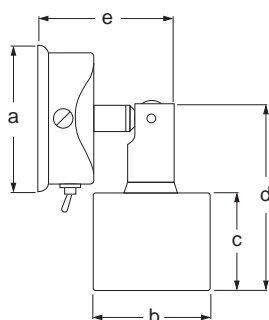


- Bulkhead mount via plastic mounting cup
- Lamp is pre-wired with marine cable

## Ponui Candela and Lux performance. White light.



<b>Lens Material</b>	UV resistant enhanced impact acrylic
<b>Lamp Body Material</b>	Brass
<b>Lamp Body Surface Finish</b>	Bright Chrome or Satin Nickle Chrome
<b>Colour Temperature</b>	5000K (White) / 3000K (Warm White)
<b>Dimming</b>	Dimmed via Hella marine 2 Group Dimmer 5XA 998 572-001
<b>Cable</b>	Pre-wired with single core marine cable.
<b>Operating Voltage</b>	12V DC or 24V DC
<b>Power Consumption</b>	< 0.8W ( <0.07A@12V / <0.03A@24V )
<b>Degree of Protection</b>	Completely sealed light engine
<b>Weight</b>	250g (including cable)



**Dimensions:**

a = 70 mm / 2.76"  
b = 55 mm / 2.17"  
c = 36 mm / 1.42"  
d = 75 mm / 2.95"  
e = 65 mm / 2.56"



*Ponui*

**Ponui Reading Lamps**

**White Light LED Reading Lamps with Switch**

Voltage	Surface Finish & Material	Part Number
12V DC	Bright Chrome Brass	2JA 980 770-201
12V DC	Satin Chrome Brass	2JA 980 770-211
24V DC	Bright Chrome Brass	2JA 980 770-301
24V DC	Satin Chrome Brass	2JA 980 770-311



**Ponui Reading Lamps**

**Warm White Light LED Reading Lamps with Switch**

Voltage	Surface Finish & Material	Part Number
12V DC	Bright Chrome Brass	2JA 980 771-201
12V DC	Satin Chrome Brass	2JA 980 771-211
24V DC	Bright Chrome Brass	2JA 980 771-301
24V DC	Satin Chrome Brass	2JA 980 771-311





# Rakino



# Tiri



**Compact LED downlights offering class leading efficiency and durability.**



Formula Icon 54 [www.formulacruisers.co.nz](http://www.formulacruisers.co.nz)

**Completely sealed with an ultra low power consumption of less than 0.8W, Hella marine Rakino and Tiri series LED downlights offer class leading efficiency and highly effective illumination.**

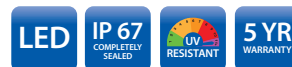
The lamps also run very cool due to their low current draw to provide substantial power saving benefits compared to incandescent lighting.

Advanced Hella marine lens and optic designs provide intense light without glare or eye strain. Two beam angle options are available, a 15° Spot or 32° Spread beam.

The Spot lamp (Peak light angle at 15°) is ideal for installations where the first surface requiring illumination is 1 meter or more from the lamp. Spread lamps (Peak light angle at 32°) are ideal for softer light where the first surface to be illuminated is less than 1 meter from the lamp.

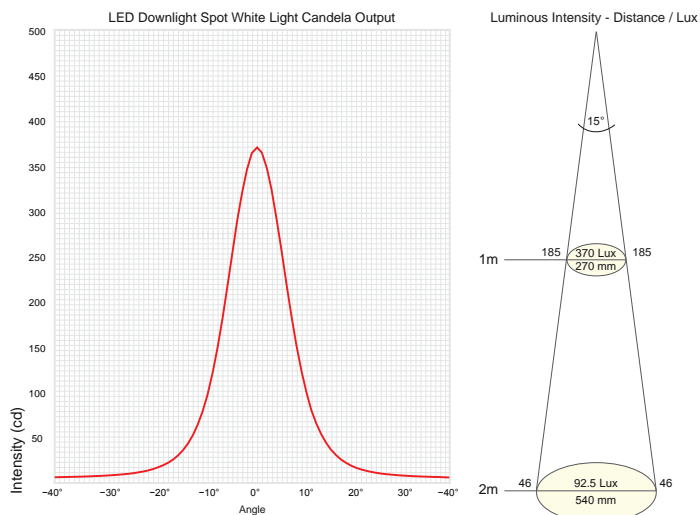
Each lamp is completely sealed and can be installed almost anywhere on board, interior or exterior, wet or dry. The ultra low heat signature will not cause damage to surrounding materials.

Available in 12V or 24V DC versions, these LED lamps can be dimmed and controlled with the Hella marine Dimmer (5XA 998 572-001).

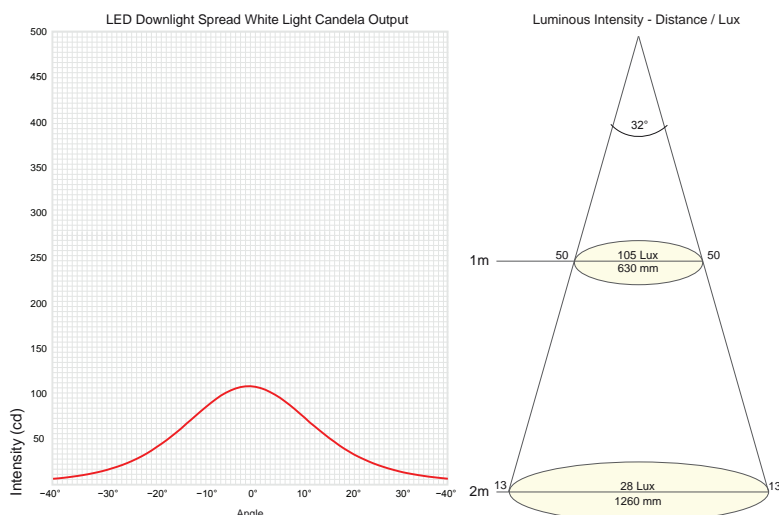


- Completely sealed housing
- Pre-wired with marine cable

## Rakino Spot Candela and Lux performance. White light.



## Rakino Spread Candela and Lux performance. White light.

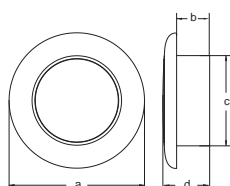




Packaging for  
aftermarket presentation

<b>Lens Material</b>	UV resistant enhanced impact acrylic
<b>Rim Material</b>	UV resistant plastic. 316 stainless steel (Round lamps only)
<b>Colour Temperature</b>	5000K (White) / 3000K (Warm White)
<b>Dimming</b>	Dimmed via Hella marine Dimmer 5XA 998 572-001
<b>Cable</b>	Pre-wired with 120mm of single core marine cable
<b>Operating Voltage</b>	12V DC or 24V DC
<b>Power Consumption</b>	< 0.8W ( <0.07A@12V / <0.03A@24V )
<b>Degree of Protection</b>	IP 67 - Completely Sealed
<b>Mounting</b>	Stainless steel screws included
<b>Weight</b>	45g (including cable)

# Rakino



## Dimensions

a = 75.0 mm / 2.95" with plastic rim  
72.0 mm / 2.83" with stainless steel rim  
b = 18.5 mm / 0.73"  
c = 50.0 mm / 1.97"  
d = 27.0 mm / 1.06"

## Rakino Spread

### White Light LED Downlights - Spread

Voltage	Rim Finish	Part Number
12V DC	Polished stainless rim	2JA 959 599-051
12V DC	White plastic rim	2JA 959 599-001
24V DC	Polished stainless rim	2JA 959 599-151
24V DC	White plastic rim	2JA 959 599-101

### Warm White Light LED Downlights - Spread

Voltage	Rim Finish	Part Number
12V DC	Polished stainless rim	2JA 959 596-051
12V DC	White plastic rim	2JA 959 596-001
24V DC	Polished stainless rim	2JA 959 596-151
24V DC	White plastic rim	2JA 959 596-101

### Red Light LED Courtesy Lamps - Spread

Voltage	Rim Finish	Part Number
12V DC	Polished stainless rim	2XT 980 507-371
12V DC	White plastic rim	2XT 980 507-381
24V DC	Polished stainless rim	2XT 980 508-301
24V DC	White plastic rim	2XT 980 508-321



## Rakino Spot

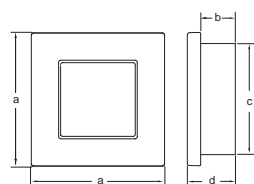
### White Light LED Downlights - Spot

Voltage	Rim Finish	Part Number
12V DC	Polished stainless rim	2JA 959 599-551
12V DC	White plastic rim	2JA 959 599-501
24V DC	Polished stainless rim	2JA 959 599-651
24V DC	White plastic rim	2JA 959 599-601

### Warm White Light LED Downlights - Spot

Voltage	Rim Finish	Part Number
12V DC	Polished stainless rim	2JA 959 596-551
12V DC	White plastic rim	2JA 959 596-501
24V DC	Polished stainless rim	2JA 959 596-651
24V DC	White plastic rim	2JA 959 596-601

# Tiri



## Dimensions

a = 60.0 mm / 2.36"  
b = 16.0 mm / 0.63"  
c = 50.0 mm / 1.97"  
d = 22.0mm / 0.87"

## Tiri Spread

### White Light LED Downlights - Spread

Voltage	Rim Finish	Part Number
12V DC	Chrome plated rim	2JA 980 596-031
12V DC	White plastic rim	2JA 980 596-001
24V DC	Chrome plated rim	2JA 980 596-131
24V DC	White plastic rim	2JA 980 596-101

### Warm White Light LED Downlights - Spread

Voltage	Rim Finish	Part Number
12V DC	Chrome plated rim	2JA 980 597-031
12V DC	White plastic rim	2JA 980 597-001
24V DC	Chrome plated rim	2JA 980 597-131
24V DC	White plastic rim	2JA 980 597-101



## Tiri Spot

### White Light LED Downlights - Spot

Voltage	Rim Finish	Part Number
12V DC	Chrome plated rim	2JA 980 596-531
12V DC	White plastic rim	2JA 980 596-501
24V DC	Chrome plated rim	2JA 980 596-631
24V DC	White plastic rim	2JA 980 596-601

### Warm White Light LED Downlights - Spot

Voltage	Rim Finish	Part Number
12V DC	Chrome plated rim	2JA 980 597-531
12V DC	White plastic rim	2JA 980 597-501
24V DC	Chrome plated rim	2JA 980 597-631
24V DC	White plastic rim	2JA 980 597-601

# Dual Colour SpotLED



Energy saving LED spot lamps featuring an innovative ring of ambient light.



Riviera 43FB Sportfisher [www.riviera.com.au](http://www.riviera.com.au)

Switching between the SpotLED's white light main beam or the ambient colour ring offers a unique illumination option.

Consumption is less than 2.5W (<0.18A@12V), offering more than 75% power saving compared to a 10W G4 halogen lamp.

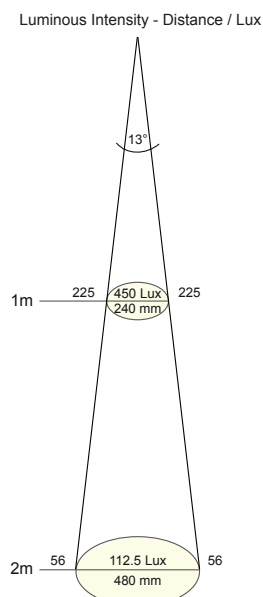
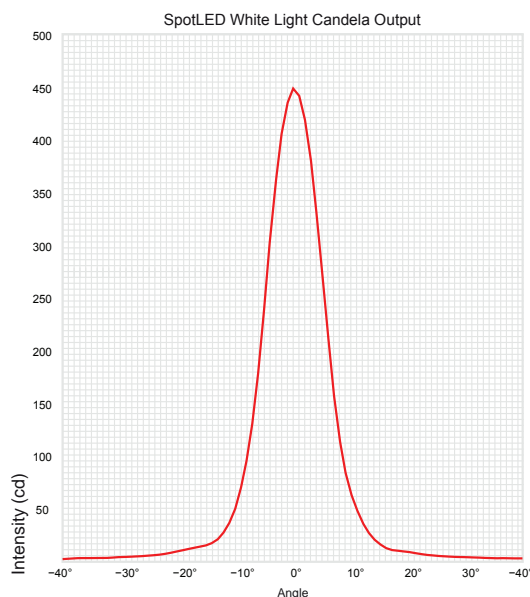
Each lamp features an outer ring of red, white or blue LED light providing additional ambient illumination. The ambient function consumes less than 0.5W and is switched independently. Multivolt™ electronics provide consistent illumination and circuit protection across a range of inputs from 9-31V DC.

Completely sealed, shock and vibration resistant, Hella marine LED lamps provide outstanding reliability as there are no filaments to break. The surface is cool to the touch so will not cause damage to surrounding materials.



- Completely sealed housing
- Pre-wired with triple core cable

## SpotLED Candela and Lux performance. White light.

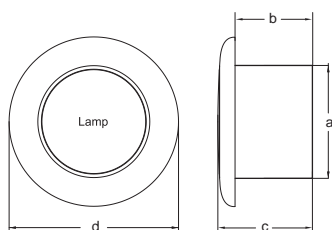






Packaging for  
aftermarket presentation

<b>Lens Material</b>	UV resistant enhanced impact acrylic
<b>Rim Material</b>	UV resistant plastic. 316 stainless steel
<b>Colour Temperature</b>	6000K (White)
<b>Cable</b>	Pre-wired with 200mm of triple core cable
<b>Operating Voltage</b>	Multivolt™ 9-31V DC
<b>Power Consumption</b>	White Spot Light < 2.5W ( <0.21A@12V / <0.03A@24V ) Ambient Light Ring < 0.5W ( <0.07A@12V / <0.03A@24V )
<b>Degree of Protection</b>	IP 6K 9K
<b>Mounting</b>	Stainless steel screws included
<b>Weight</b>	75g (including cable)
<b>Approvals</b>	CE, C-Tick



#### Dimensions

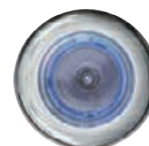
a =	50.0 mm / 1.97"
b =	34.0 mm / 1.34"
c =	41.0 mm / 1.61"
d =	75.0 mm / 2.95" with plastic rim 72.0 mm / 2.83" with stainless steel rim

## Dual Colour SpotLED



### White Light LED Spot Lamps - Blue Ambient Ring

Voltage	Rim Finish	Part Number
9-31V DC	Satin stainless steel rim	2JA 343 980-162
9-31V DC	Polished stainless steel rim	2JA 343 980-152
9-31V DC	Gold stainless steel rim	2JA 343 980-142
9-31V DC	White plastic rim	2JA 343 980-102
9-31V DC	Black plastic rim	2JA 343 980-112



Blue Ambient Ring



White Spot



### White Light LED Spot Lamps - Red Ambient Ring

Voltage	Rim Finish	Part Number
9-31V DC	Satin stainless steel rim	2JA 343 980-062
9-31V DC	Polished stainless steel rim	2JA 343 980-052
9-31V DC	Gold stainless steel rim	2JA 343 980-042
9-31V DC	White plastic rim	2JA 343 980-002
9-31V DC	Black plastic rim	2JA 343 980-012



Red Ambient Ring



White Spot



### White Light LED Spot Lamps - White Ambient Ring

Voltage	Rim Finish	Part Number
9-31V DC	Satin stainless steel rim	2JA 343 980-262
9-31V DC	Polished stainless steel rim	2JA 343 980-252
9-31V DC	Gold stainless steel rim	2JA 343 980-242
9-31V DC	White plastic rim	2JA 343 980-202
9-31V DC	Black plastic rim	2JA 343 980-212



White Ambient Ring



White Spot



Energy efficient downlights offering excellent colour rendering.



Riviera 56FB [www.riviera.com.au](http://www.riviera.com.au)

Hella marine 95mm LED downlights harness state of the art LED technology to provide illumination comparable to 20W incandescent lamps for a fraction of the power consumption.

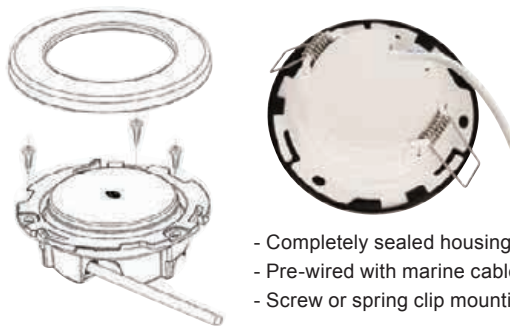
Completely sealed for interior and exterior installations, wet or dry, EuroLED<sup>®</sup> 95mm lamps are the durable choice with class leading efficiency.

Power consumption is less than 4.0W (<0.33A@12V / <0.17A@24V) offering significant reductions in energy use and heat generation when compared to incandescent lighting.

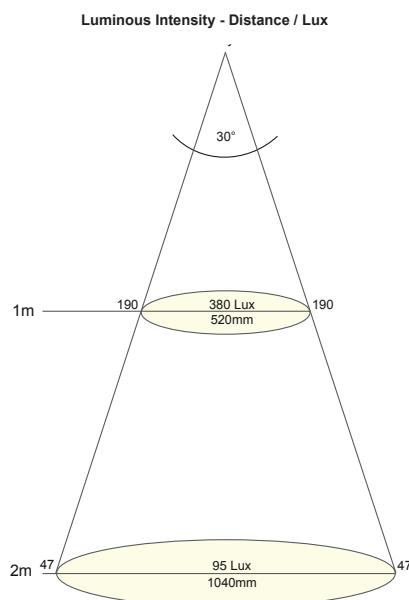
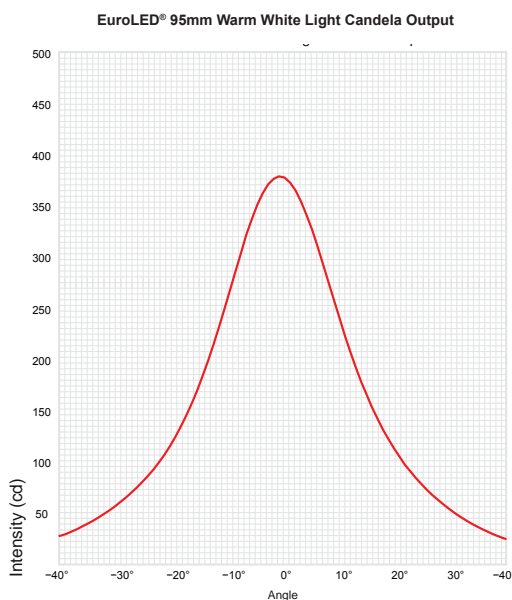
Advanced Hella marine optic engineering provides a wide spread of uniform illumination without glare or eye strain. Precise LED selection ensures class leading colour rendering with interior enhancing colour temperatures in white (5000K) or warm white (3000K).

EuroLED<sup>®</sup> 95mm lamps require no remote drivers or control wires, simply connect the positive and negative cables to 12V or 24V DC systems. Each lamp operates on an input voltage between 10-33V DC and can also be PWM dimmed and controlled via the Hella marine Dimmer (5XA 998 572-001).

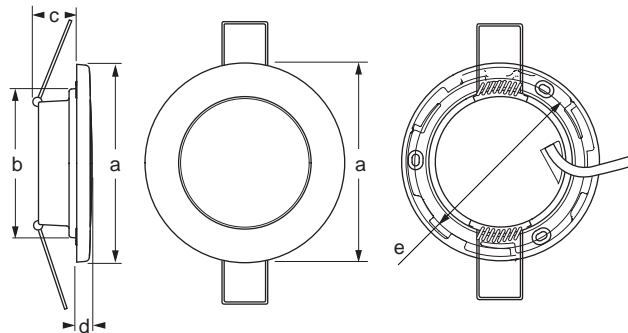
EuroLED<sup>®</sup> downlights offer class leading 'fit and forget' Hella marine technology with impressive illumination.



### EuroLED<sup>®</sup> 95 Candela and Lux performance. Warm White light.



<b>Lens material</b>	UV resistant enhanced impact acrylic
<b>Rim material</b>	UV resistant plastic. 316 stainless steel
<b>Colour Temperature</b>	5000K (White) 3000K (Warm White)
<b>Dimming</b>	PWM. e.g. Via Hella marine 5XA 998 572-001
<b>Cable</b>	Pre-wired with 500mm twin core marine cable
<b>Operating Voltage</b>	10-33V DC
<b>Power Consumption</b>	< 4.0W ( <0.33A@12V / <0.17A@24V )
<b>Degree of Protection</b>	Completely Sealed
<b>Weight</b>	145g (Screw mount version, including cable)
<b>Installation</b>	Recess mount. Screw or Spring Clip options
<b>Approvals</b>	CE, C-Tick



#### Dimensions

a = 95.0 mm / 3.75" with plastic rim
97.0 mm / 3.82" with stainless steel rim
b = 72.0 mm / 2.84"
c = 25.0mm / 0.98" with screw mounting
28.0 mm / 1.10" with spring clips
d = 9.0mm / 0.35"
e = 82.0mm / 3.23" PCD

## EuroLED<sup>®</sup> 95

### EuroLED<sup>®</sup> 95 Screw Mount

**LED**  
Multivolt

#### White Light LED Downlights

Voltage	Rim Finish	Part Number
10-33V DC	White plastic rim	2JA 980 <b>940</b> -001
10-33V DC	Polished stainless steel rim	2JA 980 <b>940</b> -011



**LED**  
Multivolt

#### Warm White Light LED Downlights

Voltage	Rim Finish	Part Number
10-33V DC	White plastic rim	2JA 980 <b>940</b> -101
10-33V DC	Polished stainless steel rim	2JA 980 <b>940</b> -111



### EuroLED<sup>®</sup> 95 Spring Clip Mount

**LED**  
Multivolt

#### White Light LED Downlights

Voltage	Rim Finish	Part Number
10-33V DC	White plastic rim	2JA 980 <b>940</b> -201
10-33V DC	Polished stainless steel rim	2JA 980 <b>940</b> -211



**LED**  
Multivolt

#### Warm White Light LED Downlights

Voltage	Rim Finish	Part Number
10-33V DC	White plastic rim	2JA 980 <b>940</b> -301
10-33V DC	Polished stainless steel rim	2JA 980 <b>940</b> -311





# EuroLED®

— 115 —



Energy efficient downlighting with superior durability.



Belize 52 [www.belizemotoryachts.com.au](http://www.belizemotoryachts.com.au)

Completely sealed 115mm downlights feature a wide spread of illumination with class leading colour rendering and interior enhancing colour temperatures in white or warm white.

Power consumption is less than 4.0W (<0.33A@12V / <0.17A@24V) offering illumination comparable to 20W halogen lighting with substantial power saving and heat reduction.

Sophisticated lens and optic designs provide intense white light without glare or eye strain. Peak beam angle is a wide 36° and the light pattern is very uniform.

EuroLED® 115mm lamps require no remote drivers or control wires, simply connect the positive and negative cables to 12V or 24V DC systems. Each lamp operates on an input voltage between 10-33V DC and can also be PWM dimmed and controlled via the Hella marine Dimmer (5XA 998 572-001).

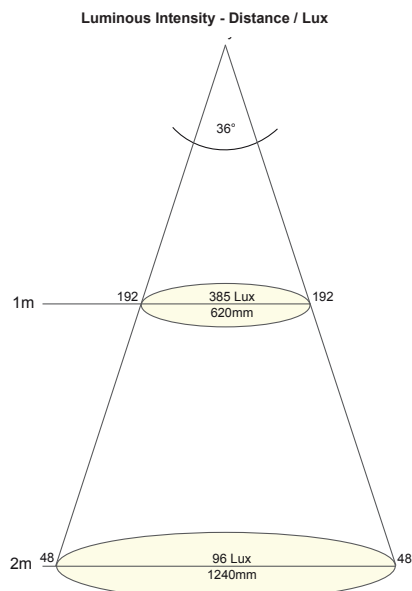
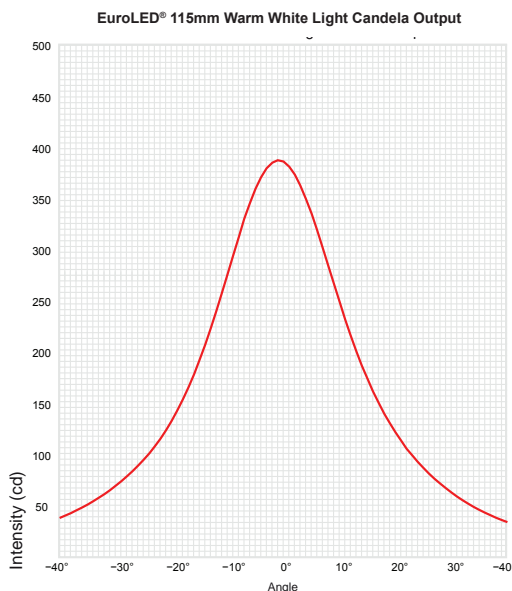
Pre-wired with quality twin core marine tinned cable, each lamp is completely sealed and features a shallow 22mm mounting depth. EuroLED® lamps can be installed almost anywhere on board, interior or exterior, wet or dry. The low heat signature will not cause damage to surrounding materials.

EuroLED® downlights offer class leading 'fit and forget' Hella marine technology with impressive illumination.



- Completely sealed housing
- Pre-wired with marine cable

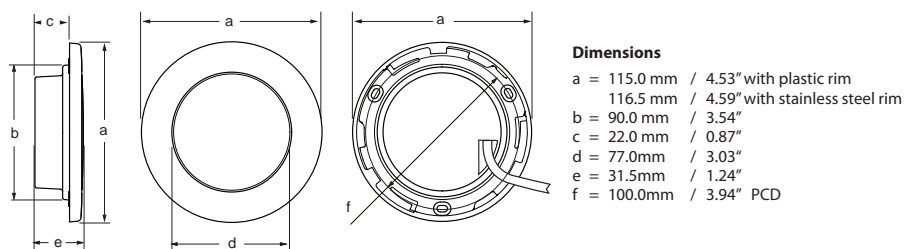
## EuroLED® 115 Candela and Lux performance. Warm White light.



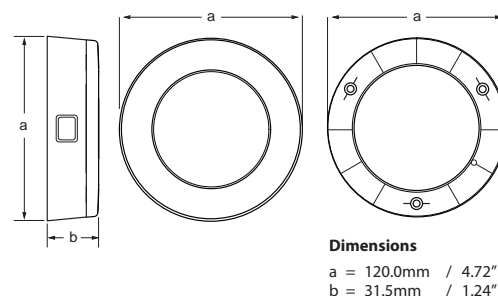
<b>Lens material</b>	UV resistant enhanced impact acrylic
<b>Rim material</b>	UV resistant plastic. 316 stainless steel
<b>Colour Temperature</b>	5000K (White) 3000K (Warm White)
<b>Dimming</b>	PWM. eg Via Hella marine 5XA 998 572-001
<b>Cable</b>	Pre-wired with 500mm twin core marine cable
<b>Operating Voltage</b>	10-33V DC
<b>Power Consumption</b>	< 4.0W ( <0.33A@12V / <0.17A@24V )
<b>Degree of Protection</b>	Completely Sealed
<b>Weight</b>	170g (including cable)
<b>Installation</b>	Recess or Surface Mount with spacer
<b>Approvals</b>	CE, C-Tick



**Lamp**



**Lamp with Spacer and Switch**



## **EuroLED®** — 115 —

### **EuroLED® 115 Screw Mount**

**LED**  
Multivolt

#### **White Light LED Downlights**

Voltage	Rim Finish	Part Number
10-33V DC	White plastic rim	2JA 980 820-002
10-33V DC	Polished stainless steel rim	2JA 980 820-012

**LED**  
Multivolt

#### **Warm White Light LED Downlights**

Voltage	Rim Finish	Part Number
10-33V DC	White plastic rim	2JA 980 820-102
10-33V DC	Polished stainless steel rim	2JA 980 820-112

A white surface mount spacer ring is included with each lamp.

### **EuroLED® 115 Surface Mount with Switch**

**LED**  
Multivolt

#### **White Light LED Downlights**

Voltage	Rim Finish	Part Number
10-33V DC	White plastic rim	2JA 980 828-002
10-33V DC	Polished stainless steel rim	2JA 980 828-012

**LED**  
Multivolt

#### **Warm White Light LED Downlights**

Voltage	Rim Finish	Part Number
10-33V DC	White plastic rim	2JA 980 828-102
10-33V DC	Polished stainless steel rim	2JA 980 828-112

# EuroLED<sup>®</sup>

## 150



Advanced technology for durable and power saving interior and exterior installations.



Southstar 37 [www.salthouseboats.com](http://www.salthouseboats.com)

**Hella marine touch technology makes lighting control beautifully simple.**

Touch the red pad for red light, the white pad for white light. Hold a finger on the pad for two seconds and the lamp will cycle through increasing / decreasing intensity levels until the maximum / minimum intensity is achieved. Release at the intensity level required.

Dual colour EuroLED<sup>®</sup> lamps may also be remotely operated from multiple points via momentary switches. Holding an external switch for two seconds will synchronise the lamps to the same colour and/or intensity level.

Light levels are stored by the lamps circuitry, even when a vessel's batteries are turned off. The lamp will turn on at the colour intensity previously set, regardless of power interruption.

Glare diffusion without light loss is key with any LED lamp to maintain efficiency and safety. Significant eye strain can result from periods of looking directly into a powerful LED point source. Hella marine lens technology provides a safe and uniform light pattern, without glare or discomfort.

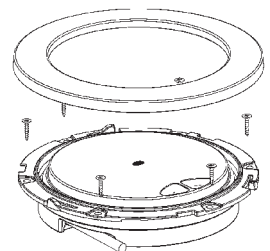
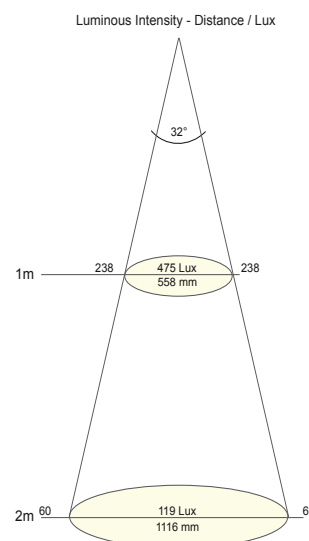
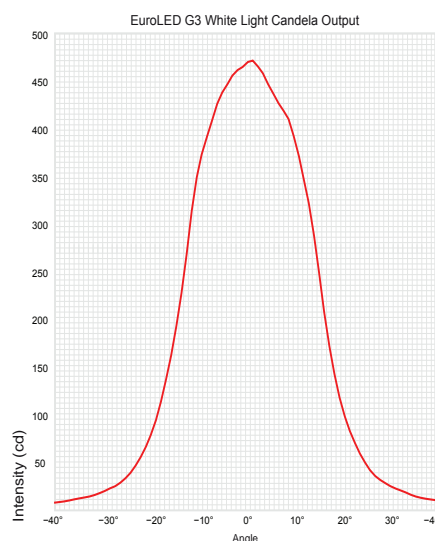
Each EuroLED<sup>®</sup> is completely sealed, highly impact and shock resistant for an ultra long service life. Multivolt<sup>™</sup> electronics provide consistent illumination and protection across a range of voltages from 9-33V DC even under severe voltage fluctuations, low battery voltages and long cable runs.

EuroLED<sup>®</sup> Touch technology provides durable, energy saving illumination for a wide range of commercial and recreational applications.

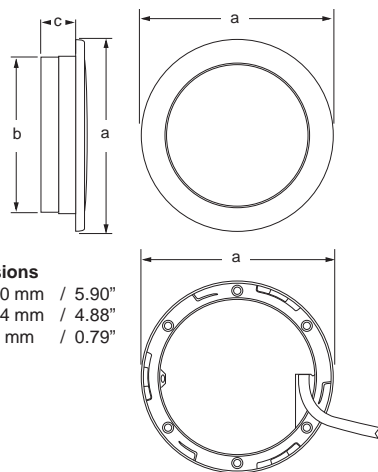


- Completely sealed housing
- Pre-wired with marine cable

**EuroLED<sup>®</sup> 150 Candela and Lux performance. White light.**







#### Dimensions

a = 150 mm / 5.90"  
b = 124 mm / 4.88"  
c = 20 mm / 0.79"

<b>Lens Material</b>	UV resistant enhanced impact acrylic
<b>Rim Material</b>	UV resistant plastic. 316 stainless steel
<b>Colour Temperature</b>	4200K (White) 3000K (Warm White)
<b>Cable</b>	Pre-wired with 500mm of twin core or triple core marine cable
<b>Operating Voltage</b>	Multivolt™ 9-33V DC
<b>Power Consumption</b>	4.0W ( 0.33A@12V / 0.17A@24V )
<b>Degree of Protection</b>	Completely Sealed
<b>Weight</b>	245g (including cable)
<b>Installation</b>	Recess mount
<b>Approvals</b>	CE, C-Tick

**Dual colour EuroLED® Touch 150 lamps with dimming and remote momentary switch control.**  
Touch the pad for ON/OFF or hold finger on the pad to cycle through dimming levels.

**LED**  
Multivolt

#### White / Red Light EuroLED® Touch 150 Lamps

Voltage	Rim Finish	Part Number
9-33V DC	White plastic rim	2JA 980 630-001
9-33V DC	Polished stainless steel rim	2JA 980 630-011

**LED**  
Multivolt

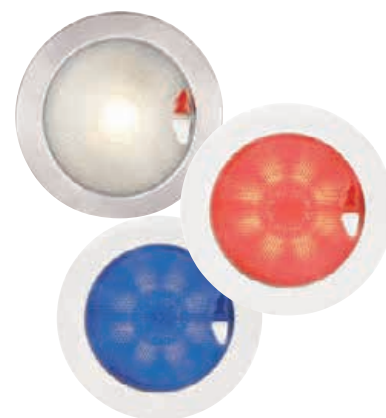
#### Warm White / Red Light EuroLED® Touch 150 Lamps

Voltage	Rim Finish	Part Number
9-33V DC	White plastic rim	2JA 980 630-101
9-33V DC	Polished stainless steel rim	2JA 980 630-111

**LED**  
Multivolt

#### White / Blue Light EuroLED® Touch 150 Lamps

Voltage	Rim Finish	Part Number
9-33V DC	White plastic rim	2JA 980 630-201
9-33V DC	Polished stainless steel rim	2JA 980 630-211



A white surface mount spacer ring is included with each lamp.

**Single colour EuroLED® Touch 150 lamps without dimming or momentary switch control.**  
Touch the white pad for ON, touch the black pad for OFF.

**LED**  
Multivolt

#### White Light EuroLED® Touch 150 Lamps

Voltage	Rim Finish	Part Number
9-33V DC	White plastic rim	2JA 980 630-501
9-33V DC	Polished stainless steel rim	2JA 980 630-511

**LED**  
Multivolt

#### Warm White Light EuroLED® Touch 150 Lamps

Voltage	Rim Finish	Part Number
9-33V DC	White plastic rim	2JA 980 630-601
9-33V DC	Polished stainless steel rim	2JA 980 630-611



A white surface mount spacer ring is included with each lamp.

**Single colour EuroLED® 150 lamps.**

**LED**  
Multivolt

#### White Light EuroLED® 150 Lamps

Voltage	Rim Finish	Part Number
9-33V DC	White plastic rim	2JA 980 631-501
9-33V DC	Polished stainless steel rim	2JA 980 631-511

**LED**  
Multivolt

#### Warm White Light EuroLED® 150 Lamps

Voltage	Rim Finish	Part Number
9-33V DC	White plastic rim	2JA 980 631-601
9-33V DC	Polished stainless steel rim	2JA 980 631-611



A white surface mount spacer ring is included with each lamp.

**Single colour EuroLED® 150 lamps with 0-10V dimming.**

**LED**  
Multivolt

#### Dimming White Light EuroLED® 150 Lamps

Voltage	Rim Finish	Part Number
9-33V DC	White plastic rim	2JA 980 631-001
9-33V DC	Polished stainless steel rim	2JA 980 631-011

**LED**  
Multivolt

#### Warm White Light EuroLED® 150 Lamps

Voltage	Rim Finish	Part Number
9-33V DC	White plastic rim	2JA 980 631-101
9-33V DC	Polished stainless steel rim	2JA 980 631-111



A white surface mount spacer ring is included with each lamp.

# EuroLED<sup>®</sup>

## — 130 —



**Surface mount LED lamps with touch switching.  
Power saving and ultra durable.**



Rayglass Protector 11m [www.rayglass.co.nz](http://www.rayglass.co.nz)

**EuroLED<sup>®</sup> Touch lamps provide red / white, blue / white or white only light control via completely sealed touch sensitive technology.**

Touch the colour pad for red or blue light, the white pad for white light. On the dual colour versions, hold a finger on the pad for more than two seconds and the lamp will cycle through four dimming levels. Release at the intensity required.

Dual colour EuroLED<sup>®</sup> Touch lamps may also be remotely operated by momentary switches. Holding one of the external switches for two seconds will synchronise the lamps to the same colour and/or intensity level.

Light levels are stored by the lamps circuitry, even when a vessel's batteries are turned off. The lamp will always turn on at the colour intensity previously set, regardless of power interruption. EuroLED<sup>®</sup> current draw is 4W on white and less than 1.5W on red or blue to provide significant power savings.

Advanced Hella marine optic technology provides a safe and uniform light pattern, without glare or discomfort.

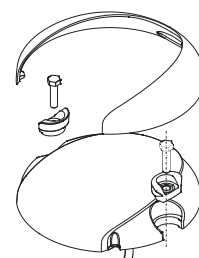
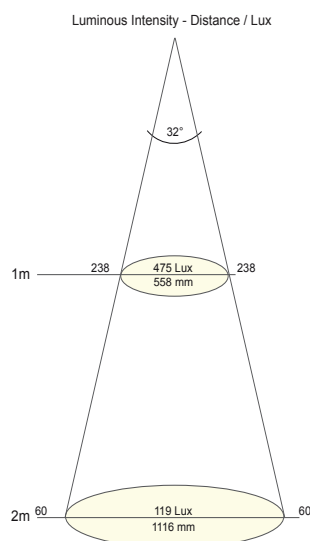
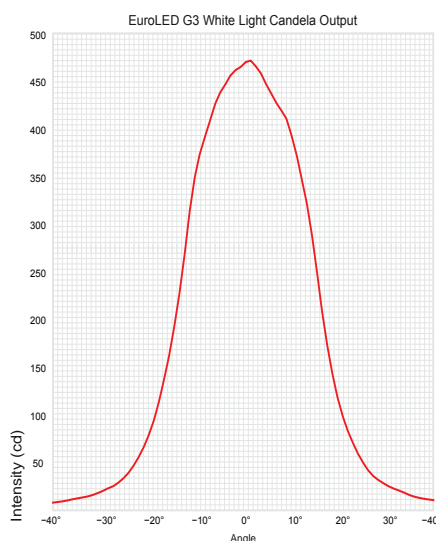
Each lamp is completely sealed, highly impact and shock resistant, for an ultra long service life. Multivolt<sup>™</sup> circuitry provides consistent illumination across a range of voltages from 9-33V DC, even under severe voltage fluctuations.

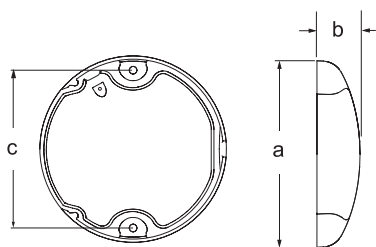
EuroLED<sup>®</sup> provide durable, energy saving lighting for a wide range of commercial and recreational applications.



- Completely sealed housing
- Pre-wired with marine cable
- Mounting bushes eliminate torque loads
- Nylon shroud clips onto lamp body

### **EuroLED<sup>®</sup> 130 Candela and Lux performance. White light.**





#### Dimensions

a = 129.5mm / 5.10"  
b = 29.5mm / 1.16"  
c = 110mm / 4.33"



Packaging for  
aftermarket presentation

<b>Lens Material</b>	UV resistant enhanced impact acrylic
<b>Shroud Material</b>	Heavy duty nylon
<b>Colour Temperature</b>	5000K (White)
<b>Cable</b>	Pre-wired with 2.5m of twin core marine cable
<b>Operating Voltage</b>	Multivolt™ 9-33V DC
<b>Power Consumption</b>	4.0W ( 0.33A@12V / 0.17A@24V )
<b>Operating Temperature</b>	-40°C to +60°C / -40°F to 140°F
<b>Degree of Protection</b>	IP 6K6 6K7 - Completely Sealed
<b>Weight</b>	290g (including cable)
<b>Installation</b>	Surface mount with robust bush mount
<b>Approvals</b>	CE, C-Tick ISO 8846 (Ignition Protection)



**EuroLED® Spacer Rings**

Black spacer 8HG 959 952-002

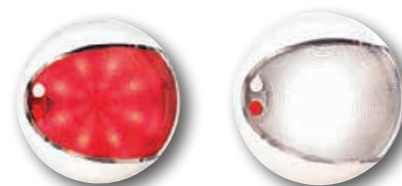
White spacer 8HG 959 952-012

**Dual colour EuroLED® Touch 130 lamps with dimming and remote momentary switch control.**  
Touch the pad for ON/OFF or hold finger to cycle through dimming levels.



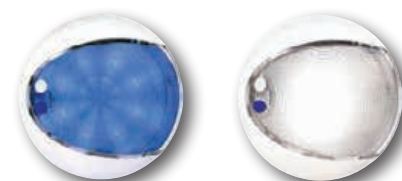
#### White / Red Light EuroLED® 130 Touch Lamps

Voltage	Shroud Colour	Part Number
9-33V DC	White Shroud	2JA 959 950-121
9-33V DC	Black Shroud	2JA 959 950-111



#### White / Blue Light EuroLED® 130 Touch Lamps

Voltage	Shroud Colour	Part Number
9-33V DC	White Shroud	2JA 959 951-121
9-33V DC	Black Shroud	2JA 959 951-111



**Single White EuroLED® Touch 130 lamps without dimming or momentary switch control.**  
Touch the white pad for ON, touch the black pad for OFF.



#### Single White Light EuroLED® 130 Touch Lamps

Voltage	Shroud Colour	Part Number
9-33V DC	White Shroud	2JA 959 950-521
9-33V DC	Black Shroud	2JA 959 950-511



**Single White or Warm White EuroLED® 130 lamps.**



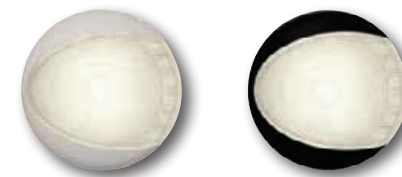
#### White Light EuroLED® 130 Lamps

Voltage	Shroud Colour	Part Number
9-33V DC	White Shroud	2JA 959 820-521
9-33V DC	Black Shroud	2JA 959 820-511



#### Warm White Light EuroLED® 130 Lamps

Voltage	Shroud Colour	Part Number
9-33V DC	White Shroud	2JA 959 820-321
9-33V DC	Black Shroud	2JA 959 820-301





# Easy Fit



Timeless LED courtesy lighting for a variety of interior and exterior lighting applications.



Light is radiated downward at an angle of 30° making these lamps ideal for illuminating on board areas such as steps, stairs, toe kicks, storage areas, companion ways, deck fittings, signs and switches.

Multivolt™ electronics ensure constant light output in 12V or 24V DC systems. Easy Fit series lamps are completely sealed, shock and vibration resistant and represent reliable 'fit and forget' technology.

Each lamp is pre-wired with 120mm of marine tinned cable and supplied with stainless steel screws.



- Completely sealed housing
- Pre-wired with marine cable



Packaging for aftermarket presentation



Mounting with screws.  
Push on plastic cap versions.



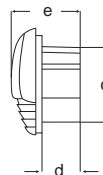
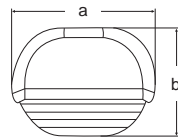
Mounting with screws.  
Stainless steel cap versions



Mounting without screws.  
Push on plastic cap versions only.

*Note - Plastic lamp covers cannot be removed easily once clipped into place.*

<b>Lens Material</b>	UV resistant enhanced impact acrylic
<b>Cap Material</b>	Black, white, chrome plated plastic, polished 316 stainless steel
<b>Cable</b>	Pre-wired with 120mm of twin core marine cable
<b>Operating Voltage</b>	Multivolt™ 12 / 24V DC
<b>Power Consumption</b>	0.5W ( <0.04A@12V / <0.02A@24V )
<b>Degree of Protection</b>	Completely Sealed
<b>Weight</b>	Stainless Cap - 30g (including cable) Plastic Cap - 15g (including cable)
<b>Approvals</b>	CE, C-Tick



#### Dimensions

a = 45mm / 1.77"
b = 31.5mm / 1.24"
c = 25.4mm / 1.00"
d = 14mm / 0.55"
e = 22.7mm / 0.89"



#### White Light Easy Fit LED Step Lamps

Voltage	Cap Finish	Part Number
12 / 24V DC	Chrome plated plastic cap	2JA 998 560-001
12 / 24V DC	White plastic cap	2JA 998 560-011
12 / 24V DC	Gold plated cap	2JA 998 560-081
12 / 24V DC	Black plastic cap	2JA 998 560-111
12 / 24V DC	Satin chrome plated plastic cap	2JA 998 560-121
12 / 24V DC	Polished stainless steel cap	2JA 998 560-161



#### Warm White Light Easy Fit LED Step Lamps

Voltage	Cap Finish	Part Number
12 / 24V DC	Chrome plated plastic cap	2JA 998 560-401
12 / 24V DC	White plastic cap	2JA 998 560-411
12 / 24V DC	Gold plated cap	2JA 998 560-431
12 / 24V DC	Black plastic cap	2JA 998 560-421
12 / 24V DC	Satin chrome plated plastic cap	2JA 998 560-441
12 / 24V DC	Polished stainless steel cap	2JA 998 560-451



#### Blue Light Easy Fit LED Step Lamps

Voltage	Cap Finish	Part Number
12 / 24V DC	Chrome plated plastic cap	2JA 998 560-041
12 / 24V DC	White plastic cap	2JA 998 560-051
12 / 24V DC	Gold plastic cap	2JA 998 560-091
12 / 24V DC	Black plastic cap	2JA 998 560-151
12 / 24V DC	Satin chrome plated plastic cap	2JA 998 560-101
12 / 24V DC	Polished stainless steel cap	2JA 998 560-171



#### Amber Light Easy Fit LED Step Lamps

Voltage	Cap Finish	Part Number
12 / 24V DC	Chrome plated plastic cap	2JA 998 560-301
12 / 24V DC	White plastic cap	2JA 998 560-311
12 / 24V DC	Gold plated cap	2JA 998 560-331
12 / 24V DC	Black plastic cap	2JA 998 560-321
12 / 24V DC	Satin chrome plated plastic cap	2JA 998 560-341
12 / 24V DC	Polished stainless steel cap	2JA 998 560-351



#### Red Light Easy Fit LED Step Lamps

Voltage	Cap Finish	Part Number
12 / 24V DC	Chrome plated plastic cap	2JA 998 560-201
12 / 24V DC	White plastic cap	2JA 998 560-211
12 / 24V DC	Gold plated cap	2JA 998 560-231
12 / 24V DC	Black plastic cap	2JA 998 560-221
12 / 24V DC	Satin chrome plated plastic cap	2JA 998 560-241
12 / 24V DC	Polished stainless steel cap	2JA 998 560-251



#### Accessories to suit Easy Fit series

9AR 994 554-211  
Polished 316 Stainless Steel Cap  
and Mounting Screw Kit.

# Slim Line Courtesy



Attractive, energy efficient lighting for interior and exterior use.



Hella marine Slim Line LED courtesy lamps can be installed almost anywhere on board.

Advanced lens technology provides an even spread of soft light without glare or eye strain. Each lamp is completely sealed, highly shock, impact and vibration resistant, perfectly suited for the demanding marine environment.

Hella marine LED courtesy lamps run very cool due to their low current draw of less than 0.5W (less than 0.04A@12V). This provides safer installation into light weight materials where the heat of incandescent lamps may cause damage to the surrounding structure.

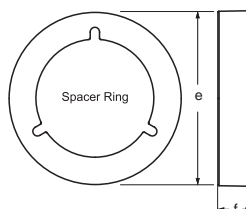
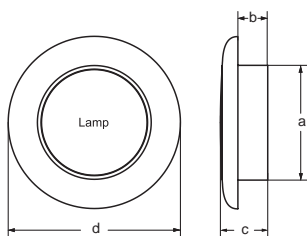


- Completely sealed housing
- Pre-wired with marine cable



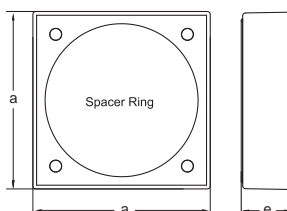
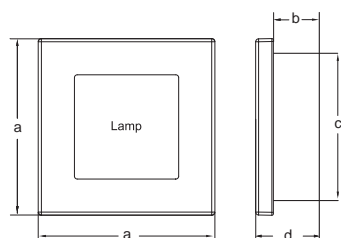
Packaging for aftermarket presentation

<b>Lens Material</b>	UV resistant enhanced impact acrylic
<b>Rim Material</b>	UV resistant plastic. 316 stainless steel
<b>Dimming</b>	Dimmed via Hella marine Dimmer 5XA 998 572-001
<b>Cable</b>	Pre-wired with 120mm of single core marine cable
<b>Operating Voltage</b>	12V DC or 24V DC
<b>Power Consumption</b>	< 0.5W ( <0.042A@12V / <0.02A@24V )
<b>Degree of Protection</b>	IP 67 - Completely Sealed
<b>Mounting</b>	Stainless steel screws included
<b>Weight</b>	50g (including cable)



## Dimensions

a = 50.0 mm / 1.97"
b = 13.0 mm / 0.51"
c = 21.0 mm / 0.83"
d = 75.0 mm / 2.95" with plastic rim
72.0 mm / 2.83" with stainless steel rim
e = 75.0 mm / 2.95"
f = 15.0 mm / 0.59"



## Dimensions

a = 60.0 mm / 2.36"
b = 16.0 mm / 0.63"
c = 50.0 mm / 1.97"
d = 22.0 mm / 0.87"
e = 17.0 mm / 0.67"



## Round Slim Line Lamps

### White Light Round LED Lamps\*

Rim Finish	12V Part Number	24V Part Number
Satin stainless steel rim	2XT 980 500-591	2XT 980 501-591
Polished stainless steel rim	2XT 980 500-521	2XT 980 501-521
Gold stainless steel rim	2XT 980 500-531	2XT 980 501-531
White plastic rim	2XT 980 500-541	2XT 980 501-541
Black plastic rim	2XT 980 500-551	2XT 980 501-551



### Warm White Light Round LED Lamps\*

Rim Finish	12V Part Number	24V Part Number
Satin stainless steel rim	2XT 980 500-791	2XT 980 501-791
Polished stainless steel rim	2XT 980 500-721	2XT 980 501-721
Gold stainless steel rim	2XT 980 500-731	2XT 980 501-731
White plastic rim	2XT 980 500-741	2XT 980 501-741
Black plastic rim	2XT 980 500-751	2XT 980 501-751



## Square Slim Line Lamps

### Warm White Light Square LED Lamps\*

Rim Finish	12V Part Number	24V Part Number
Satin chrome plated rim	2XT 980 580-561	2XT 980 581-561
Chrome plated rim	2XT 980 580-571	2XT 980 581-571
Gold plated rim	2XT 980 580-531	2XT 980 581-531
White plastic rim	2XT 980 580-551	2XT 980 581-551
Black plastic rim	2XT 980 580-541	2XT 980 581-541



### Warm White Light Square LED Lamps\*

Rim Finish	12V Part Number	24V Part Number
Satin chrome plated rim	2XT 980 580-761	2XT 980 581-761
Chrome plated rim	2XT 980 580-771	2XT 980 581-771
Gold plated rim	2XT 980 580-731	2XT 980 581-731
White plastic rim	2XT 980 580-751	2XT 980 581-751
Black plastic rim	2XT 980 580-741	2XT 980 581-741



\*Lamps include a surface mounting spacer ring and stainless steel screws.

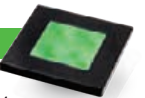
### Green Light Round LED Courtesy Lamps

Rim Finish	12V Part Number	24V Part Number
Satin stainless steel rim	2XT 980 502-091	2XT 980 503-091
Polished stainless steel rim	2XT 980 502-021	2XT 980 503-021
Gold stainless steel rim	2XT 980 502-031	2XT 980 503-031
White plastic rim	2XT 980 502-041	2XT 980 503-041
Black plastic rim	2XT 980 502-051	2XT 980 503-051



### Green Light Square LED Courtesy Lamps

Rim Finish	12V Part Number	24V Part Number
Satin chrome plated rim	2XT 980 582-061	2XT 980 583-061
Chrome plated rim	2XT 980 582-071	2XT 980 583-071
Gold plated rim	2XT 980 582-031	2XT 980 583-031
White plastic rim	2XT 980 582-051	2XT 980 583-051
Black plastic rim	2XT 980 582-041	2XT 980 583-041



### Blue Light Round LED Courtesy Lamps

Rim Finish	12V Part Number	24V Part Number
Satin stainless steel rim	2XT 980 502-291	2XT 980 503-291
Polished stainless steel rim	2XT 980 502-221	2XT 980 503-221
Gold stainless steel rim	2XT 980 502-231	2XT 980 503-231
White plastic rim	2XT 980 502-241	2XT 980 503-241
Black plastic rim	2XT 980 502-251	2XT 980 503-251



### Blue Light Square LED Courtesy Lamps

Rim Finish	12V Part Number	24V Part Number
Satin chrome plated rim	2XT 980 582-261	2XT 980 583-261
Chrome plated rim	2XT 980 582-271	2XT 980 583-271
Gold plated rim	2XT 980 582-231	2XT 980 583-231
White plastic rim	2XT 980 582-251	2XT 980 583-251
Black plastic rim	2XT 980 582-241	2XT 980 583-241



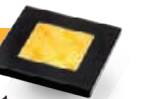
### Amber Light Round LED Courtesy Lamps

Rim Finish	12V Part Number	24V Part Number
Satin stainless steel rim	2XT 980 507-091	2XT 980 508-091
Polished stainless steel rim	2XT 980 507-021	2XT 980 508-021
Gold stainless steel rim	2XT 980 507-031	2XT 980 508-031
White plastic rim	2XT 980 507-041	2XT 980 508-041
Black plastic rim	2XT 980 507-051	2XT 980 508-051



### Amber Light Square LED Courtesy Lamps

Rim Finish	12V Part Number	24V Part Number
Satin chrome plated rim	2XT 980 587-061	2XT 980 588-061
Chrome plated rim	2XT 980 587-071	2XT 980 588-071
Gold plated rim	2XT 980 587-031	2XT 980 588-031
White plastic rim	2XT 980 587-051	2XT 980 588-051
Black plastic rim	2XT 980 587-041	2XT 980 588-041



### Red Light Round LED Courtesy Lamps

Rim Finish	12V Part Number	24V Part Number
Satin stainless steel rim	2XT 980 507-301	2XT 980 508-291
Polished stainless steel rim	2XT 980 507-221	2XT 980 508-221
Gold stainless steel rim	2XT 980 507-231	2XT 980 508-231
White plastic rim	2XT 980 507-241	2XT 980 508-241
Black plastic rim	2XT 980 507-251	2XT 980 508-251



### Red Light Square LED Courtesy Lamps

Rim Finish	12V Part Number	24V Part Number
Satin chrome plated rim	2XT 980 587-261	2XT 980 588-261
Chrome plated rim	2XT 980 587-271	2XT 980 588-271
Gold plated rim	2XT 980 587-231	2XT 980 588-231
White plastic rim	2XT 980 587-251	2XT 980 588-251
Black plastic rim	2XT 980 587-241	2XT 980 588-241



### Surface Mounting Accessories

Black Spacer 8HG 959 993-102  
White Spacer 8HG 959 993-112



### Surface Mounting Accessories

Chrome plated spacer 8HG 959 993-512  
Gold plated spacer 8HG 959 993-522  
Satin chrome plated spacer 8HG 959 993-532  
Black spacer 8HG 959 993-602  
White spacer 8HG 959 993-542



# Oblong Courtesy



Attractive, energy efficient lighting for interior and exterior use.



Hella marine oblong LED lamps are offered as either dedicated step lamps or general courtesy illumination with equal vertical spread.

9680 series lamps feature engineered optics to direct light downwards at 30 degrees safely illuminating deck and step tread surfaces without shining into the eyes.

Completely sealed and ultra durable, Hella marine LED lamps may be installed on a vessel's interior or exterior, wet or dry.

Engineered optics ensure an even spread of light without harsh point sources.

Attractive trim accessories are offered in polished, satin or gold plated 316 stainless steel.

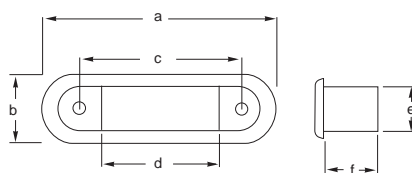


- Completely sealed housing
- Pre-wired with marine cable

<b>Lens Material</b>	UV and impact resistant plastic
<b>Cable</b>	Pre-wired with 120mm of marine cable
<b>Operating Voltage</b>	12V or 24V DC systems
<b>Power Consumption</b>	0.5W ( <0.04A@12V / <0.02A@24V )
<b>Degree of Protection</b>	IP 67 - Completely Sealed
<b>Mounting</b>	Stainless steel screws included
<b>Weight</b>	20g (add 15g for bezel version)
<b>Approvals</b>	CE, C-Tick

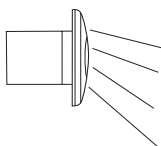


Packaging for aftermarket presentation



## Dimensions

a =	84.0 mm / 3.31"
b =	29.0 mm / 1.14"
c =	58.7 mm / 2.31"
d =	44.0 mm / 1.73"
e =	16.0 mm / 0.63"
f =	20.0 mm / 0.79"



Peak light is directed down at 30 degrees.

## Wide Rim LED Step Lamps

**LED**  
Multivolt

CLEAR LENS

### White Light LED Step Lamps

Rim Finish	Voltage	Part Number
Polished stainless steel rim	10-33V DC	2XT 959 <b>680-811</b>
Gold stainless steel rim	10-33V DC	2XT 959 <b>680-841</b>
Satin stainless steel rim	10-33V DC	2XT 959 <b>680-851</b>

**LED**  
Multivolt

CLEAR LENS

### Warm White Light LED Step Lamps

Rim Finish	Voltage	Part Number
Polished stainless steel rim	10-33V DC	2XT 959 <b>680-411</b>
Gold stainless steel rim	10-33V DC	2XT 959 <b>680-421</b>
Satin stainless steel rim	10-33V DC	2XT 959 <b>680-431</b>

**LED**  
Multivolt

CLEAR LENS

### Green Light LED Step Lamps

Rim Finish	Voltage	Part Number
Polished stainless steel rim	10-33V DC	2XT 959 <b>680-911</b>
Gold stainless steel rim	10-33V DC	2XT 959 <b>680-921</b>
Satin stainless steel rim	10-33V DC	2XT 959 <b>680-931</b>

**LED**  
Multivolt

CLEAR LENS

### Blue Light LED Step Lamps

Rim Finish	Voltage	Part Number
Polished stainless steel rim	10-33V DC	2XT 959 <b>680-611</b>
Gold stainless steel rim	10-33V DC	2XT 959 <b>680-641</b>
Satin stainless steel rim	10-33V DC	2XT 959 <b>680-651</b>

**LED**  
Multivolt

CLEAR LENS

### Red Light LED Step Lamps

Rim Finish	Voltage	Part Number
Polished stainless steel rim	8-28V DC	2XT 959 <b>680-711</b>
Gold stainless steel rim	8-28V DC	2XT 959 <b>680-721</b>
Satin stainless steel rim	8-28V DC	2XT 959 <b>680-731</b>



## Accessories

Polished 316 Stainless Steel Rim  
9AR 998 **019-001**

Gold Plated 316 Stainless Steel Rim  
9AR 998 **019-011**

Satin 316 Stainless Steel Rim  
9AR 959 **685-061**

## Wide Rim LED Courtesy Lamps

**LED**  
Multivolt

### White Light LED Courtesy Lamps

Lens Colour	Voltage	Part Number
Clear	10-33V DC	2XT 959 <b>510-851</b>

**LED**  
Multivolt

### Warm White Light LED Courtesy Lamps

Lens Colour	Voltage	Part Number
Clear	10-33V DC	2XT 959 <b>510-901</b>

**LED**  
Multivolt

### Green Light LED Courtesy Lamps

Lens Colour	Voltage	Part Number
Clear	10-33V DC	2XT 959 <b>510-621</b>

**LED**  
Multivolt

### Blue Light LED Courtesy Lamps

Lens Colour	Voltage	Part Number
Clear	10-33V DC	2XT 959 <b>510-651</b>

### Amber Light LED Courtesy Lamps

Lens Colour	Voltage	Part Number
Amber	12V DC	2XT 959 <b>510-511</b>
Amber	24V DC	2XT 959 <b>510-561</b>
Clear	12V DC	2XT 959 <b>510-501</b>
Clear	24V DC	2XT 959 <b>510-551</b>

### Red Light LED Courtesy Lamps

Lens Colour	Voltage	Part Number
Red	12V DC	2XT 959 <b>510-711</b>
Red	24V DC	2XT 959 <b>510-761</b>
Clear	12V DC	2XT 959 <b>510-701</b>
Clear	24V DC	2XT 959 <b>510-751</b>





# Surface Strip



**Surface mount LED lighting.**  
Ultra durable for interior, exterior or courtesy illumination.



Matt Watson Signature [www.stabicraft.com](http://www.stabicraft.com)

Featuring a completely sealed 10mm profile and class leading efficiency for a wide range of illumination tasks.

The range offers two intensity levels. **Interior Intensity** lamps (<3W) provide a wide spread of powerful illumination in white (5000K) or warm white (3000K) and are recommended as a viable alternative to 7W fluorescent or 10W incandescent based lamps.

The **Courtesy Intensity** range (<2W) provides soft and uniform courtesy light pattern in white, warm white, blue or red. The low profile design offers an effortless, surface mount installation almost anywhere onboard.

Purpose designed for the harsh marine environment, surface mount strip lamps are salt water durable and thoroughly tested to withstand high levels of vibration, impact, and shock loads.

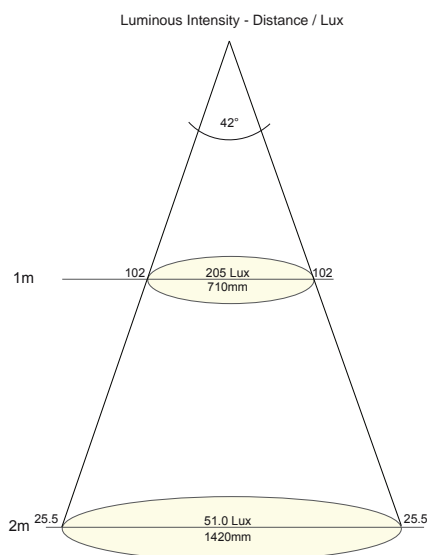
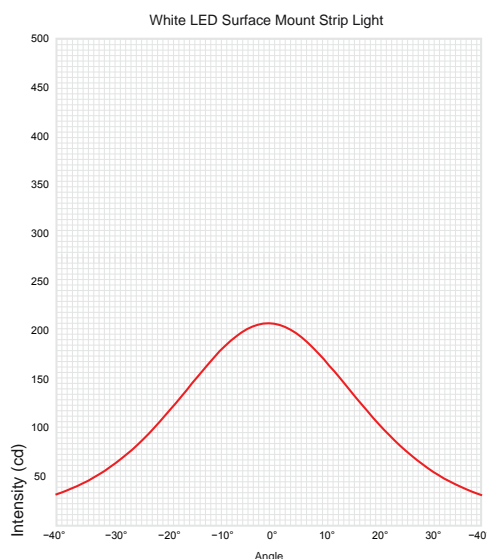
Engineered optics harness and distribute available light without glare, harsh point sources or eye strain. The result is highly effective illumination with minimal energy use.

Quality twin core marine cable is sealed into each lamp for absolute water tightness, reliable electrical connections and ongoing reliability.



- Completely sealed housing
- Pre-wired with marine cable

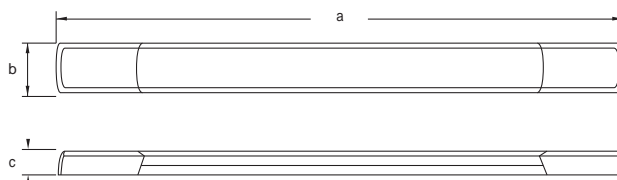
## Surface Strip Interior Intensity Candela and Lux performance. White light.





Packaging for  
aftermarket presentation

<b>Lens Material</b>	UV resistant enhanced impact acrylic
<b>Colour Temperature</b>	5000K (White) 3000K (Warm White)
<b>Dimming</b>	Hella marine Dimmer 5XA 998 572-001
<b>Cable</b>	Pre-wired with 500mm of twin core cable
<b>Operating Voltage</b>	12V DC or 24V DC
<b>Power Consumption</b>	Interior Intensity < 3.0W ( <0.25A@12V / <0.16A@24V ) Courtesy Intensity < 2.0W ( <0.17A@12V / <0.08A@24V )
<b>Degree of Protection</b>	Completely Sealed
<b>Installation</b>	Surface Mount
<b>Weight</b>	75g (including cable)



#### Dimensions

a = 285 mm / 11.22"  
b = 25.0 mm / 1.0"  
c = 10.0 mm / 0.39"

### Interior Intensity Surface Mount Lamps

#### White Light LED Lamps

Voltage	Wattage	Part Number
12V DC	3W	2JA 980 881-002
24V DC	3W	2JA 980 881-102



#### Warm White Light LED Strip Lamps

Voltage	Wattage	Part Number
12V DC	3W	2JA 980 881-202
24V DC	3W	2JA 980 881-302



### Courtesy Intensity Surface Mount Lamps

#### White Light LED Strip Lamps

Voltage	Wattage	Part Number
12V DC	2W	2JA 980 881-012
24V DC	2W	2JA 980 881-112



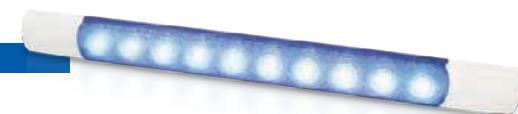
#### Warm White Light LED Strip Lamps

Voltage	Wattage	Part Number
12V DC	2W	2JA 980 881-212
24V DC	2W	2JA 980 881-312



#### Blue Light LED Strip Lamps

Voltage	Wattage	Part Number
12V DC	2W	2JA 980 881-402
24V DC	2W	2JA 980 881-502



#### Red Light LED Strip Lamps

Voltage	Wattage	Part Number
12V DC	2W	2JA 980 881-602
24V DC	2W	2JA 980 881-702



# DuraLed®



**Class leading efficiency offering a wide spread of light.**



Riviera 43FB [www.riviera.com.au](http://www.riviera.com.au)

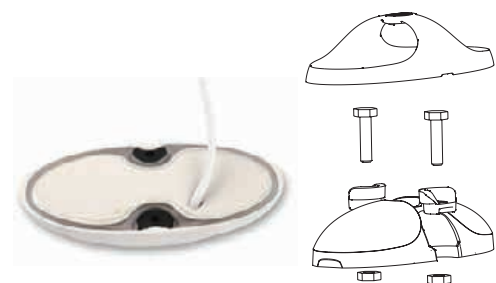
**Completely sealed, compact LED lamps featuring highly efficient LED technology and an ultra wide spread of light.**

Power consumption is low at less than 2.5W (less than 0.20A@12V) yet light performance is comparable to an 8W fluorescent tube lamp.

DuraLed® 12 LED lamps feature precision machined optics to purposely disperse light in a very wide spread pattern. The result is LED technology ideal for engine room illumination, under decks, and to throw light into confined spaces and cavities on a wide range of vessels.

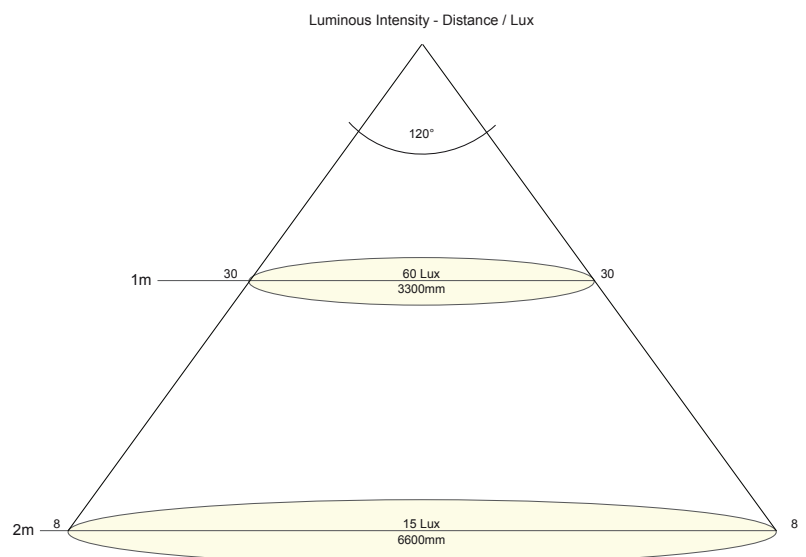
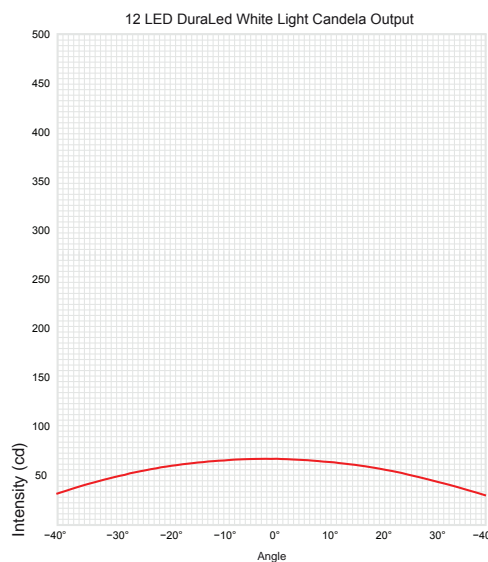
A robust bush mount system secures the surface mount lamp and takes up the torque loads of fastenings.

DuraLed® lamps are thoroughly proven for harsh environments and represent outstanding class leading energy efficiency and maintenance free 'fit and forget' technology.



- Completely sealed housing
- Pre-wired with marine cable
- Mounting bushes eliminate torque loads
- Nylon shroud clips onto lamp body

## DuraLed® 12 LED Candela and Lux performance. White light.

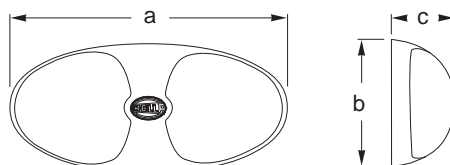






Packaging for  
aftermarket presentation

<b>Lens Material</b>	UV resistant, enhanced impact acrylic
<b>Shroud Material</b>	Heavy duty nylon
<b>Colour Temperature</b>	5000K (White) / 3000K (Warm White)
<b>Cable</b>	Pre-wired with 500mm of twin core marine cable
<b>Operating Voltage</b>	12/24V DC
<b>Power Consumption</b>	< 2.5W ( <0.20A@12V / <0.10A@24V )
<b>Operating Temperature</b>	-40°C to +60°C / -40°F to 140°F
<b>Degree of Protection</b>	IP 67 - Completely Sealed
<b>Weight</b>	115g (including cable)
<b>Installation</b>	Surface mount with robust bush mount
<b>Approvals</b>	CE, C-Tick, ISO 8846 (Ignition Protection)



**Dimensions**  
a = 140 mm / 5.51"  
b = 65.0 mm / 2.56"  
c = 32.0 mm / 1.26"

## DuraLed®

### DuraLed® 12 LED

**LED**  
Multivolt

#### White Light DuraLed® 12 LED Lamps

Voltage	Shroud Colour	Part Number
12 / 24V DC	White Shroud	2JA 959 700-101
12 / 24V DC	Black Shroud	2JA 959 700-121



**LED**  
Multivolt

#### Warm White Light DuraLed® 12 LED Lamps

Voltage	Shroud Colour	Part Number
12 / 24V DC	White Shroud	2JA 959 700-701
12 / 24V DC	Black Shroud	2JA 959 700-711



### DuraLed® 12 LED with Heavy Duty Switch

**LED**  
Multivolt

#### White Light DuraLed® 12 LED Lamps with Switch

Voltage	Shroud Colour	Part Number
12 / 24V DC	White Shroud with switch	2JA 980 704-001
12 / 24V DC	Black Shroud with switch	2JA 980 704-021



**LED**  
Multivolt

#### Warm White Light DuraLed® 12 LED Lamps with Switch

Voltage	Shroud Colour	Part Number
12 / 24V DC	White Shroud with switch	2JA 980 704-501
12 / 24V DC	Black Shroud with switch	2JA 980 704-521



# DuraLed®



**Heavy duty marine lamps.**  
**Outstanding intensity, class leading efficiency and proven durability.**



**Powerful white light for heavy duty applications and a safe, energy efficient and reliable alternative to incandescent and fluorescent lighting.**

Designed for engine rooms, storage lockers, lazarettes and many heavy duty applications where reliability must not be compromised. Advanced Hella marine lens and optic engineering ensures a wide spread of light without glare or harsh point sources.

Product reliability is second to none, proven worldwide in thousands of highly demanding applications. Each lamp is a completely sealed design, highly impact resistant and shock resistant, ensuring an ultra long service life.

DuraLed® lamps are surface mounted and feature a unique installation system where the fastening load is taken up by a heavy duty nylon bush to eliminate possible stress on the lamp housing.

Hella marine Multivolt™ circuitry provides constant illumination and circuit protection from 9-33V DC, even under severe voltage fluctuations. Spike protection, reverse polarity protection and over voltage protection are all built-in benefits of the sophisticated electronics inside each lamp.



- Completely sealed housing and cable entry
- Pre-wired with marine cable



Completely sealed unit with robust bush mounts.



20 and 36 LED DuraLed® packaging option for aftermarket presentation

<b>Lens Material</b>	UV resistant, enhanced impact acrylic
<b>Colour Temperature</b>	5000K (Cool White)
<b>Cable</b>	Pre-wired with 2.5m of twin core marine cable
<b>Operating Voltage</b>	9-33V DC
<b>Voltage Protection</b>	Spike protected to +500 volts Reverse polarity protected to -700 volts
<b>Power Consumption</b>	20 LED < 4W ( <0.33A@12V / <0.17A@24V ) 36 LED < 7W ( <0.51A@12V / <0.28A@24V ) 50 LED < 10W ( <0.80A@12V / <0.39A@24V )
<b>Operating Temperature</b>	-40°C to +60°C / -40°F to 140°F
<b>Degree of Protection</b>	IP 67 - Completely Sealed
<b>Weight</b>	20 and 36 LED 345g (including cable) 50 LED 450g (including cable)
<b>Installation</b>	Surface mount with robust bush mount
<b>Approvals</b>	CE, C-Tick, ISO 8846 (Ignition Protection)

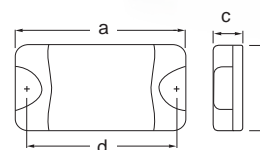
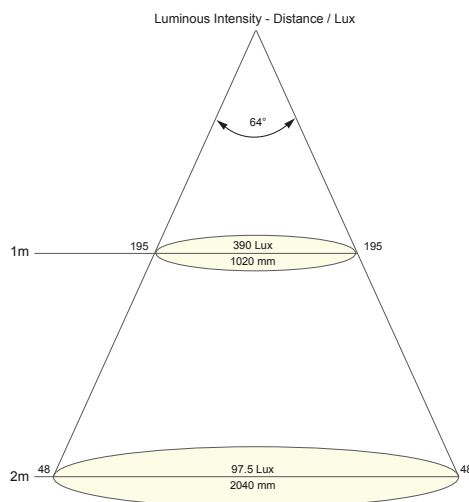
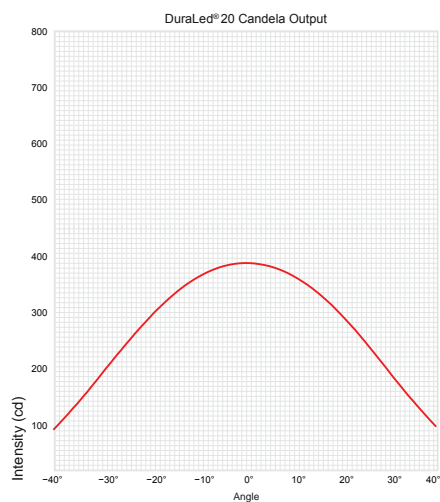


## DuraLed® 20 LED

**LED**  
Multivolt

### DuraLed® 20 LED White Light Lamps

Voltage	Packaging	Part Number
9-33V DC	Carton	2JA 980 608-001
9-33V DC	Blister	2JA 980 608-002



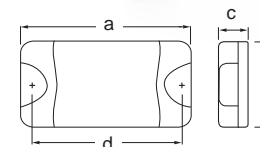
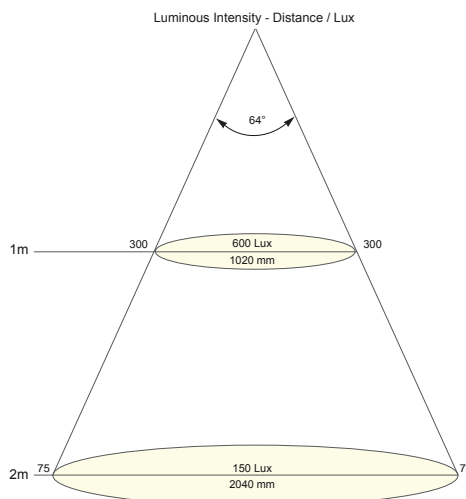
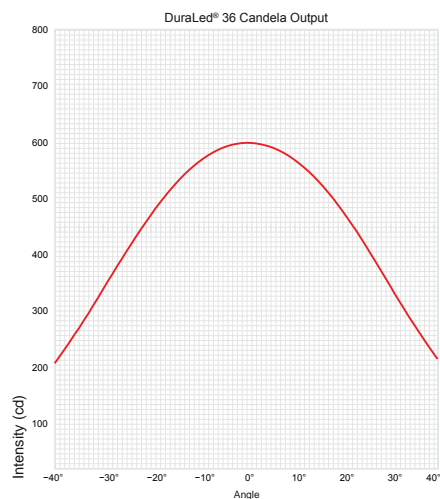
**Dimensions**  
a = 177mm / 6.97"  
b = 100mm / 3.94"  
c = 30mm / 1.18"  
d = 148mm / 5.83"

## DuraLed® 36 LED

**LED**  
Multivolt

### DuraLed® 36 LED White Light Lamps

Voltage	Packaging	Part Number
9-33V DC	Carton	2JA 959 037-521
9-33V DC	Blister	2JA 959 037-522



**Dimensions**  
a = 177mm / 6.97"  
b = 100mm / 3.94"  
c = 30mm / 1.18"  
d = 148mm / 5.83"

## DuraLed® 50 LED

**LED**  
Multivolt

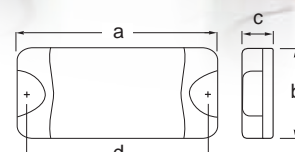
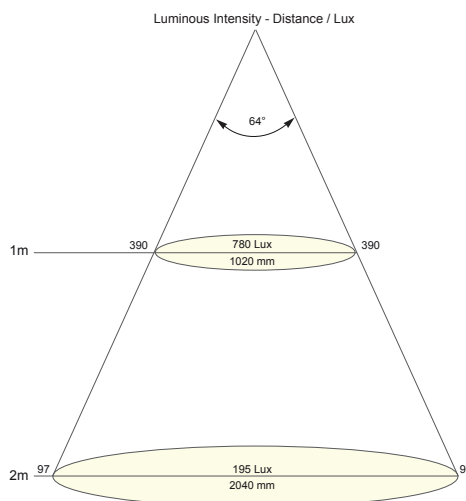
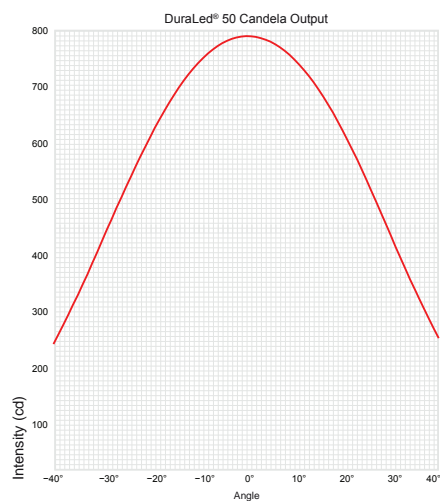
### DuraLed® 50 LED White Light Lamp

Voltage	Packaging	Part Number
9-33V DC	Carton	2JA 980 604-011

**LED**  
Multivolt

### DuraLed® 50 LED White/Red Light Lamp

Voltage	Packaging	Part Number
9-33V DC	Carton	2JA 980 604-061*
		*30xWhite 20xRed LEDs



**Dimensions**  
a = 220mm / 8.66"  
b = 96mm / 3.78"  
c = 31mm / 1.22"  
d = 193mm / 7.60"





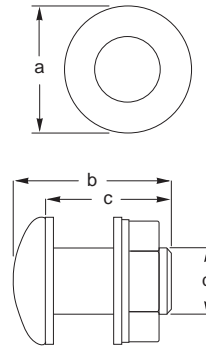
**Sealed LED lamps specially designed for illuminating livewells**



Completely sealed, power saving LED Livewell / Baitwell lamps are designed for installation into live bait tanks with wall thicknesses up to 26mm. Supplied with a plastic nut and rubber gaskets for a watertight seal, installation is swift and secure into often inaccessible locations.



<b>Housing Description</b>	Heavy duty polycarbonate
<b>Installation</b>	Pre-wired with 120mm of cable
<b>Operating Voltage</b>	12V DC
<b>Power Consumption</b>	0.5W ( < 0.04A@12V / < 0.02A@24V )
<b>Degree of Protection</b>	IP 67 - Completely sealed
<b>Mounting</b>	Single hole Rubber gaskets included
<b>Weight</b>	75g (including cable)



Dimensions	
a =	50.0 mm / 1.97"
b =	49.0 mm / 1.93"
c =	40.0 mm / 1.57"
d =	26.0 mm / 1.02"



Packaging for  
aftermarket presentation

**White Light LED Livewell Lamp**

Voltage	Lens Colour	Part Number
12V	Clear	2JA 998 543-051

**Blue Light LED Livewell Lamp**

Voltage	Lens Colour	Part Number
12V	Clear	2JA 998 543-031

**Amber Light LED Livewell Lamp**

Voltage	Lens Colour	Part Number
12V	Amber	2JA 998 543-001

**Red Light LED Livewell Lamp**

Voltage	Lens Colour	Part Number
12V	Red	2JA 998 543-021

## Spare Parts

## Round Lamp Rims

## Suits Series

9596, 9599 (Rakino)  
3980 (SpotLED)  
0500, 0501, 0502, 0503,  
0507, 0508 (Round Slim line)

Description	Edge Type	Part Number
Black Plastic Rim	Soft Edge	9AB 959 505-202
White Plastic Rim	Soft Edge	9AB 959 505-312
Polished 316 S/S Rim	Soft Edge	9AB 959 505-502
Gold Plated 316 S/S Rim	Soft Edge	9AB 959 505-522
Satin Chrome Plated 316 S/S Rim	Soft Edge	9AB 959 505-562
White Plastic Rim	Square Edge	9AB 959 505-912
Polished 316 S/S Rim	Square Edge	9AB 959 505-402

## Round Courtesy Surface Mount Spacer Rings

## Suits Series

0500, 0501, 0502, 0503,  
0507, 0508 (Round Slim line)

Description	Part Number
Black Plastic Spacer	8HG 959 993-102
White Plastic Spacer	8HG 959 993-112



## Square Lamp Rims

## Suits Series

0596, 0597 (Tiri)  
0580, 0581, 0582, 0583,  
0587, 0588 (Square Slim line)

Description	Part Number
Black Plastic Rim	9AB 959 585-202
White Plastic Rim	9AB 959 585-312
Chrome Plated Plastic Rim	9AB 959 585-012
Gold Plated Plastic Rim	9AB 959 585-022
Satin Chrome Plated Plastic Rim	9AB 959 585-032

## Square Courtesy Surface Mount Spacer Rings

## Suits Series

0500, 0501, 0502, 0503,  
0507, 0508 (Square Slim line)

Description	Part Number
Black Plastic Spacer	8HG 959 993-602
White Plastic Spacer	8HG 959 993-542
Chrome Plated Plastic Spacer	8HG 959 993-512
Gold Plated Plastic Spacer	8HG 959 993-522
Satin Chrome Plated Plastic Spacer	8HG 959 993-532



## Easy Fit Step Lamp Caps

## Suits Series

8560 (Easy Fit Step)

Description	Part Number
Black Cap	9AB 994 554-032
White Cap	9AB 994 554-012
Chrome Plated Cap	9AB 994 554-002
Gold Plated Cap	9AB 994 554-022
Satin Chrome Plated Cap	9AB 994 554-062
Polished 316 Stainless Steel Cap (with screws)	9AR 994 554-211



## Wide Rim Rectangular Courtesy Lamp Rims

## Suits Series

9680 (Oblong Step)  
9510 (Wide Rim Courtesy)

Description	Part Number
Polished 316 Stainless Steel Rim	9AR 998 019-001
Gold Plated 316 Stainless Steel Rim	9AR 998 019-011
Satin Chrome Plated 316 Stainless Steel Rim	9AR 959 685-061



## EuroLED® 130mm Accessories

## Suits Series

9950, 9951 (EuroLED® Touch)  
9820 (EuroLED®)

Description	Part Number
Black Nylon Shroud	9HD 959 027-002
White Nylon Shroud	9HD 959 027-012
Screw Boss (Pack of 2)	9NH 959 028-012



## EuroLED® 130mm Spacer Rings

## Suits Series

9950, 9951 (EuroLED® Touch)  
9820 (EuroLED®)

Description	Part Number
EuroLED® 130 Black Plastic Spacer	8HG 959 952-002
EuroLED® 130 White Plastic Spacer	8HG 959 952-012



## Fluorescent Lamps



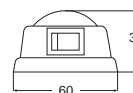
### Transistorised Fluorescent Tube Lamps

Modern, attractive and power saving fluorescent lights for a variety of interior applications. The combination of advanced electronics and efficient compact fluorescent tubes ensures lower power consumption than incandescent lamps for the same light output.

#### Further benefits include:

- Flicker free noiseless operation
- Homogeneous spread of light
- Vibration and shock resistance
- Reliable ignition even at extremely low temperatures
- Prevention of early blackening of the fluorescent tube
- Reverse polarity protection
- ON / OFF switch integrated into housing
- Interference suppressed to VDE 0879

<b>Housing Description</b>	Impact resistant plastic
<b>Light Source</b>	TL8 Fluorescent tube included
<b>Installation</b>	6.3mm flat-plug connectors



#### Fluorescent Tube Interior Lamps

Voltage / Wattage	Length	Part Number
12V / 7W	255mm	2642
24V / 7W	255mm	2642-24V

#### Light output comparison

Compact 7W fluorescent tube produces light output equivalent to a 40W incandescent bulb.

**7W Tube**  
(2G7)



#### Fluorescent Tube Interior Lamps

Voltage / Wattage	Length	Part Number
12V / 11W	355mm	2643
24V / 11W	355mm	2643-24V

#### Light output comparison

Compact 11W fluorescent tube produces light output equivalent to a 75W incandescent bulb.

**11W Tube**  
(2G7)



#### Fluorescent Tube Interior Lamps

Voltage / Wattage	Length	Part Number
12V / 8W	440mm	2644
24V / 8W	440mm	2644-24V

#### Light output comparison

Compact 8W fluorescent tube produces light output equivalent to a 40W incandescent bulb.

**8W Tube**  
(TL8W)



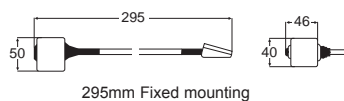
## Chart Reading Lamps

## 4532 Series

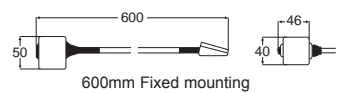
Adjustable lamps for navigation areas.

An ON/OFF switch is integrated into the lamp head.

A red lens is included for optional 'non glaring' night illumination.



295mm Fixed mounting



600mm Fixed mounting

**Housing Description**

Plastic

**Bulb**

12V / 6W BA9s included

**Installation**

Pre-wired with 100mm of cable

**Maximum Output**

6W

12V / 6W Bulb  
(HL126X)

## 4532 Series Halogen Interior Lamps

Voltage	Arm Length	Part Number
12V	296mm	2633
12V	600mm	2636

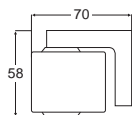
## 4532 Series

Compact and functional mini halogen spot lamps for navigation areas, berths and applications where adjustable light is required.

A red lens is included for optional 'non glaring' night illumination.

An ON/OFF switch is integrated into the lamp head.

Vertical and horizontal joint for rotating and pivoting.

**Housing Description**

Plastic

**Bulb**

12V / 6W BA9s included

**Installation**

Pre-wired with 100mm of cable

**Maximum Output**

5W

12V / 6W Bulb  
(HL126X)

## 4532 Series Incandescent Interior Lamps

Voltage	Housing Colour	Part Number
12V	Black Housing	2637
12V	White Housing	2637W

## 4192 Series

Ideal berth or chart reading lamps. Shutter tilts to switch lamp ON and OFF.

Adjustable light opening.

**Housing Description**

Plastic

**Bulb**

10W SV8.5 (Not included)

**Installation**

2 flat plug connectors 6.3mm

**Maximum Output**

10W



## 4192 Series Incandescent Interior Lamps

Voltage	Housing Colour	Lens Colour	Part Number
12V	White Housing	Clear	2JA 004 192-071
12V	Black Housing	Clear	2JA 004 192-001
12V	White Housing	Red	2JA 004 192-081
12V	Black Housing	Red	2JA 004 192-041

12V / 5W Bulb  
(L125)  
24V / 5W Bulb  
(L245)

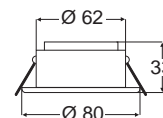
## General Interior / Exterior Lamps

## 8508 Series

Water resistant recess mount halogen lamps suitable for interior or exterior installations. The reflector uses a 10W bulb. Bulbs up to 20W can also be used. Supplied with a silicon seal to prevent the glass lens from vibrating. Spring clip mounting.



<b>Material Description</b>	Solid brass housing Stainless steel cover ring
<b>Bulb</b>	12V / 10W Halogen G4 included
<b>Degree of Protection</b>	IP 65
<b>Installation</b>	Pre-wired with 150mm of cable
<b>Maximum Output</b>	20W



## 8508 Series Halogen Interior / Exterior Lamps

Voltage	Housing Colour	Part Number
12V	Chrome Housing	2JA 998 508-001
12V	White Housing	2791

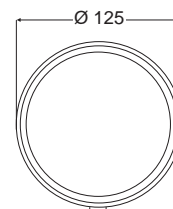
**12V / 10W Bulb**  
(YM1210)  
**24V / 10W Bulb**  
(YM2410)

## 8513 Series

Water resistant marine lamps made from tough polycarbonate with a foam rubber gasket. Suitable for interior or exterior installations. Mounting screws included. Integrated ON / OFF switch.



<b>Housing Description</b>	Impact resistant polycarbonate
<b>Bulb</b>	12V / 10W SV8.5 included
<b>Installation</b>	Pre-wired with 70mm of cable
<b>Maximum Output</b>	15W



## 8513 Series Halogen Interior / Exterior Lamps

Voltage	Housing Colour	Part Number
12V	White Housing	2610M
12V	White Housing with Switch	2617M

**12V / 10W Bulb**  
(K1210)  
**24V / 10W Bulb**  
(K2410)

**Spare Part**  
Clear Lens  
2.9800.08





*LED Trailer Lighting and Accessories*

**Hella marine**   
*Vision and Innovation*



## Submersible LED Trailer Lamps



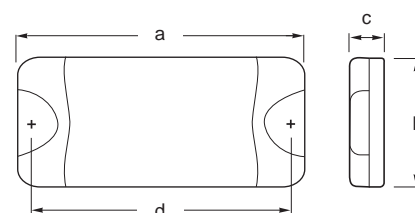
Hella marine LED trailer lamps are the highly visible, maintenance free solution for reliable and safe boat trailer lighting.

Designed and manufactured in New Zealand, every product is a completely sealed, maintenance free unit. They are also proven shock, vibration, UV and corrosion resistant and represent true 'fit and forget' technology.

Sophisticated internal electronics reduce the effect of voltage drop, ensuring ongoing safety. This means Hella LED lamps perform at full brightness across a range of voltages unaffected by voltage drop that can dull bulb lamps due to long cable runs, joins, terminals and plugs in a boat trailer's wiring.

### DuraLED® Combi-S Lamps

<b>Lens Material</b>	Grilamid®
<b>Mounting</b>	Designed to be mounted horizontally
<b>Operating Voltage</b>	Suitable for 12 volt and 24 volt systems
<b>Power Consumption</b>	Rear Position 1W, Indicator 5W, Stop 5W,
<b>Voltage Protection</b>	Spike, Over Voltage and Reverse Polarity
<b>Cable</b>	Pre-wired with 2.5m of multi-core cable
<b>Approvals</b>	ADR compliant



#### Dimensions

a = 220mm / 8.66"
b = 96mm / 3.78"
c = 25mm / 0.98"
d = 193mm / 7.60"



**LED**  
Dualvolt

### 2378 LED Submersible Rear Combination Lamps

ADR  
COMPLIANT

12/24  
DUALVOLT



New Combi-S lamps are 6mm thinner than regular DuraLED® lamps.

Description	Part Number
Rear Position / Stop / Indicator	2378
Rear Position / Stop / Indicator	2378-BL*

\*Denotes blister packaged version



**LED**  
Dualvolt

### 2377 LED Submersible Rear Combination Lamps

ADR  
COMPLIANT

12/24  
DUALVOLT



Description	Part Number
Rear Position / Stop / Indicator / Reflector	2377
Rear Position / Stop / Indicator / Reflector	2377-BL*

\*Denotes blister packaged version

**LED**  
Dualvolt

### 2377 LED Trailer Lighting Kit

ADR  
COMPLIANT

12/24  
DUALVOLT



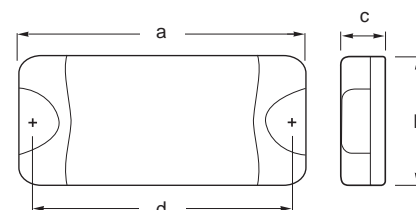
Description	Part Number
2 x 2377	Combination Lamps
1 x 2559	Number Plate Lamp
1 x 4921	7 Pole Flat Trailer Plug



## Submersible LED Trailer Lamps

**DuraLED® Combi Lamps**

<b>Lens Material</b>	High impact acrylic
<b>Mounting</b>	Designed to be mounted horizontally
<b>Operating Voltage</b>	Suitable for 12 volt and 24 volt systems
<b>Power Consumption</b>	Rear Position 1W, Indicator 5W, Stop 5W, *Reverse 3W (*2380 only)
<b>Voltage Protection</b>	Spike, Over Voltage and Reverse Polarity
<b>Cable</b>	Pre-wired with 6m (2379) or 2.5m (2380)
<b>Approvals</b>	ADR compliant

**Dimensions**

a =	220mm / 8.66"
b =	96mm / 3.78"
c =	31mm / 1.22"
d =	193mm / 7.60"

**LED**  
Dualvolt**2379 LED Submersible Rear Combination Lamps****ADR**  
COMPLIANT12/24  
DUALVOLT

<b>Description</b>	<b>Part Number</b>
Rear Position / Stop / Indicator	2379
Rear Position / Stop / Indicator	2379-BL*

\*Denotes blister packaged version

**LED**  
Dualvolt**2379 LED Trailer Lighting Kit****ADR**  
COMPLIANT12/24  
DUALVOLT

<b>Description</b>	<b>Part Number</b>
2 x 2379	Combination Lamps
1 x 2559	Number Plate Lamp
2 x 2920	Red Reflex Reflectors
1 x 4921	7 Pole Flat Trailer Plug

**LED**  
Dualvolt**2380 LED Submersible Rear Combination Lamps****ADR**  
COMPLIANT12/24  
DUALVOLT

<b>Description</b>	<b>Part Number</b>
Rear Position / Stop / Indicator / Reverse	2380
Rear Position / Stop / Indicator / Reverse	2380-BL*

\*Denotes blister packaged version



## Submersible LED Trailer Lamps

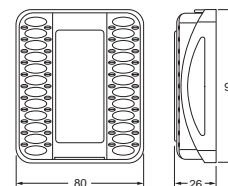


2394 and 2395 series lamps feature a modern clear lens with black mounting base. The full combination of functions are offered including LED stop, rear position and rear indicator lamps, number plate illumination plus an integrated 18cm<sup>2</sup> red reflector.

Low power consumption and long life equates to economical running costs. Each lamp is completely sealed against dust and moisture ingress. Optic appears clear until illuminated.

## 2394 &amp; 2395 Series LED Combination Lamps

<b>Lens Material</b>	Heavy duty Grilamid® lens
<b>Mounting</b>	Horizontal or vertical
<b>Operating Voltage</b>	Suitable for 12 volt and 24 volt systems
<b>Power Consumption</b>	Rear position 1W, Indicator 2W, Stop 2W
<b>Voltage Protection</b>	Spike, Over Voltage and Reverse Polarity
<b>Cable</b>	Pre-wired with multi-core cable
<b>Approvals</b>	ADR compliant



**LED**  
Dualvolt

## LED Trailer Lighting Kit

**ADR**  
COMPLIANT

12/24  
DUALVOLT



Description	Cable Length	Part Number
1 x 2394 Rear Position / Stop / Indicator	0.5m	2VB 980 720-811
1 x 2395 Rear Position / Stop / Indicator / Number Plate	0.5m	



**Mounting bracket -  
Spare Part**

9.2394.09

**LED**  
Dualvolt

## LED Submersible Rear Combination Lamps

**ADR**  
COMPLIANT

12/24  
DUALVOLT



Description	Cable Length	Part Number
1 x Rear Position / Stop / Indicator	0.5m	2394
18 x Rear Position / Stop / Indicator	0.5m	2394-BULK
1 x Rear Position / Stop / Indicator	6.0m	2394-6M
10 x Rear Position / Stop / Indicator	6.0m	2394-6MBULK
Description	Cable Length	Part Number
1 x Rear Position / Stop / Indicator / Number Plate	0.5m	2395
18 x Rear Position / Stop / Indicator / Number Plate	0.5m	2395-BULK
1 x Rear Position / Stop / Indicator / Number Plate	6.0m	2395-6M
10 x Rear Position / Stop / Indicator / Number Plate	6.0m	2395-6MBULK



**Mounting bracket -  
Spare Part**

9.2394.09

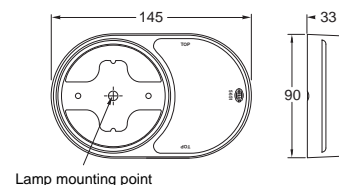
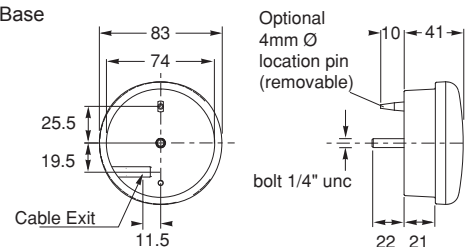


## Submersible LED Trailer Lamps



## 2399 Series LED Combination Lamps

<b>Lens Material</b>	High impact acrylic
<b>Mounting</b>	Single Bolt, optional Red Reflex Reflector Base
<b>Operating Voltage</b>	Suitable for 12 volt and 24 volt systems
<b>Power Consumption</b>	Rear position 1W, Indicator 3W, Stop 3W
<b>Voltage Protection</b>	Spike, Over Voltage and Reverse Polarity
<b>Cable</b>	Pre-wired with 2.5m of cable Kit pre-wired with 6m of cable
<b>Approvals</b>	ADR compliant

LED  
Dualvolt

## 2399 LED Submersible Rear Combination Lamps

ADR  
COMPLIANT12/24  
DUALVOLT

Description	Part Number
Single Rear Position / Stop / Indicator Lamp	2399BL
Pair of Rear Position / Stop / Indicator Lamps	2399

## Reflector Bases to suit 2399 lamps

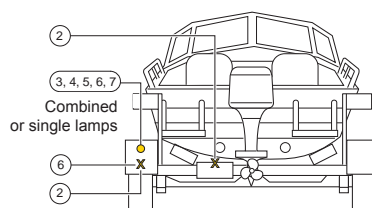
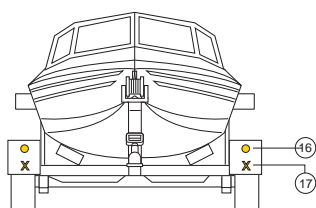
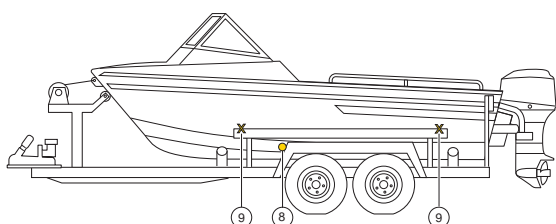
Description	Part Number
Red Reflector Horizontal Mount Base	2934-H
Red reflector Vertical Mount Base	2934-V

LED  
Dualvolt

## 2399 LED Trailer Lighting Kit

ADR  
COMPLIANT12/24  
DUALVOLT

Description	Part Number
2 x 2399 Combination Lamps (6m Cable)	2399-TP
1 x 2559 Number Plate Lamp	
2 x 2934H Reflector Base Horizontal	
1 x 4921 7 Pole Flat Trailer Plug	



## #. Lamp Function

2	License Plate Lamps	ADR 48/00
3	Rear Direction Indicator Lamps	ADR 6/00 Cat.2
4	Rear Position Lamps	ADR 49/00
5	Stop Lamps	ADR 49/00
6	Rear Reflex Reflectors	ADR 47/00
7	Reversing Lamps	ADR 1/00
8	Side Reflex Reflectors	ADR 47/00
9	Side Marker Lamps	ADR 45/01 or ADR 74/00
16	Front Position Lamps	ADR 49/00
17	Front Reflex Reflectors	ADR 47/00

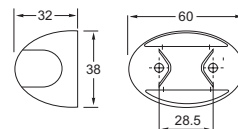
## Submersible LED Position Lamps


**LED**  
Multivolt

## DuraLED® Front End Outline Lamps

**ADR**  
COMPLIANT


<b>Product Description</b>	Amber Front End Outline (FEOL) LED
<b>Operating Voltage</b>	Multivolt™ 8-28V DC
<b>Installation</b>	Pre-wired with 500mm of cable. Bulk packs pre-wired with 2.5m or 5.0m of cable



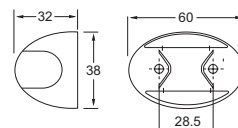
Pack Size and Description	Part Number
Single Pack (500mm of cable)	2051
Pack of 4 (2.5m of cable)	2051-BULK


**LED**  
Multivolt

## DuraLED® Front Position / End Outline Lamps

**ADR**  
COMPLIANT


<b>Product Description</b>	White Front End Outline (FEOL) LED
<b>Operating Voltage</b>	Multivolt™ 8-28V DC
<b>Installation</b>	Pre-wired with 500mm of cable. Bulk pack pre-wired with 2.5m of cable
<b>ECE Compliance</b>	E4 02 7575



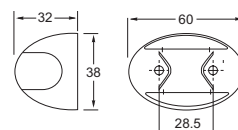
Pack Size and Description	Part Number
Single Pack (500mm of cable)	2054
Pack of 4 (2.5m of cable)	2054-BULK


**LED**  
Multivolt

## DuraLED® Side Marker Lamps

**ADR**  
COMPLIANT


<b>Product Description</b>	Red / Amber Side Marker LED Lamp
<b>Operating Voltage</b>	Multivolt™ 8-28V DC
<b>Installation</b>	Pre-wired with 500mm of cable. Bulk pack pre-wired with 2.5m of cable Super Seal version has 150mm of cable terminated with a Super Seal Connector



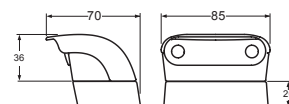
Pack Size and Description	Part Number
Single Pack (500mm of cable)	2053
Pack of 4 (2.5m of cable / no SS)	2053-BULK
Super Seal connector and pigtail loom (2.5m of cable)	2053S-BULK


**LED**  
Multivolt

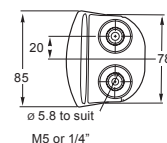
## LED Number Plate Lamps

**ADR**  
COMPLIANT


<b>Voltage</b>	LED Multivolt™ 10-33V DC
<b>Cable</b>	Pre-wired with 500mm of cable. Bulk pack pre-wired with 2.5m of cable



Pack Size and Description	Part Number
LED Number Plate Lamp	2559
Pack of 8 with mounting spacer	2559-BULK



**7 Pole Plastic Plug**

<b>Maximum Load</b>	20A@12V
	10A@24V

**7 Pole Plastic Plug**

<b>Pack Size</b>	<b>Part Number</b>
Single Pack	4902

**7 Pole Plastic Socket**

<b>Maximum Load</b>	20A@12V
	10A@24V

**7 Pole Plastic Socket**

<b>Pack Size</b>	<b>Part Number</b>
Single Pack	4912

**7 Pole Metal Plug**

<b>Maximum Load</b>	20A@12V
	10A@24V

**7 Pole Metal Plug**

<b>Pack Size</b>	<b>Part Number</b>
Single Pack	4911
Pack of 25	4911-BULK

**7 Pole Metal Socket**

<b>Maximum Load</b>	20A@12V
	10A@24V

**7 Pole Metal Socket**

<b>Pack Size</b>	<b>Part Number</b>
Single Pack	4901
Pack of 25	4901-BULK

**7 Pole Flat Socket**

Impact resistant, UV stabilised, plastic, spring loaded lid.  
Nickel contacts for excellent electrical performance.

<b>Maximum Load</b>	20A@12V
	10A@24V

**7 Pole Flat Socket**

<b>Pack Size</b>	<b>Part Number</b>
Single Pack	4920

**7 Pole Flat Plug**

Impact resistant, UV stabilised, plastic, spring loaded lid.  
Nickel contacts for excellent electrical performance.

<b>Maximum Load</b>	20A@12V
	10A@24V

**7 Pole Flat Plug**

<b>Pack Size</b>	<b>Part Number</b>
Single Pack	4921





## Trailer Plugs and Sockets



### Trailer Plug Holder

Minimises potential damage to plug

#### Mounting

Screw mounting on trailer drawbar or any convenient location.

#### Trailer Plug Holder

Pack Size	Part Number
Single Pack	8000



### Flat Plug Holder

Flat plug holder to suit 7 Pole Flat Plug (Part Number 4921)

#### Flat Plug Holder

Pack Size	Part Number
Single Pack	8009
Pack of 20	8009-BULK



### Trailer Socket Bracket

Zinc steel. Eliminates the need to drill vehicle.

#### Trailer Socket Bracket

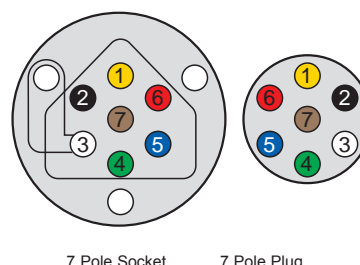
Pack Size	Part Number
Single Pack	8022

## 7 Pole Connector Wiring Specification

Terminal No.	Connect to	Colour
1	Left flasher lamps	Yellow
2	Reversing lamps	Black
3	Earth	White
4	Right flasher lamps	Green
5	Service brakes (auxiliary) *	Blue
6	Stop lamps	Red
7	Tail, licence plate and clearance lamps	Brown

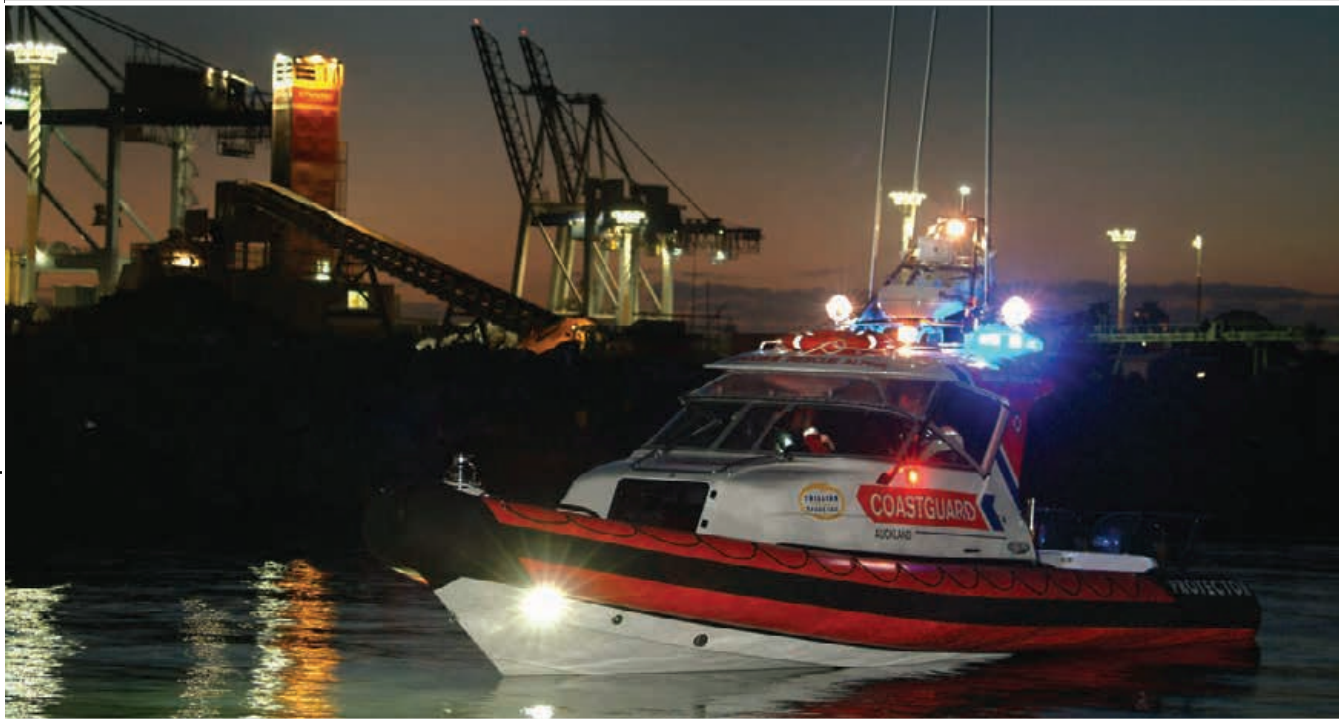
Note: If a separate earth cable is not used on the vehicle, the earthing strip supplied should be fitted into pin 3 of socket and under mounting screw

\* Where service brakes are not fitted, terminal No. 5 may be used for auxiliaries.

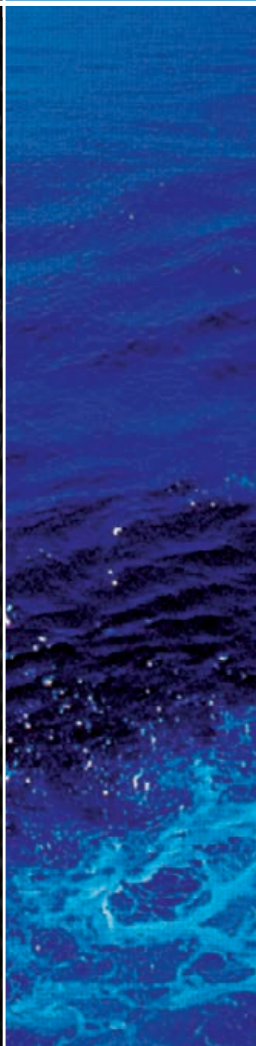


7 Pole Socket

7 Pole Plug



## Accessories





## Oscillating Fans

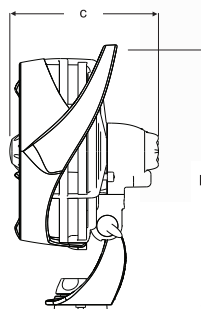
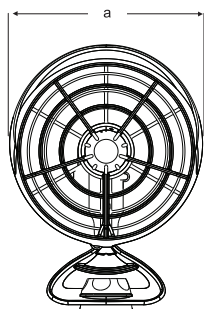


## Two Speed 'Turbo 2.0' Oscillating Fans

Highly regarded Hella marine Turbo fans are strengthened by the arrival of the Turbo 2.0 series.

Now featuring an oscillating function to deliver refreshingly cool air circulation on board, Turbo 2.0 fans continue with Hella's benchmark quiet operation, low power consumption and proven durable materials.

- Quality German motor for quiet operation
- Low power consumption <4W (<0.33A@12V)
- High / Low fan speed control
- On / Off oscillation control
- Safety blade guard front and rear
- Side, upright or pendant mounting
- Pre-wired with 1.8m / 6ft of cable



## Dimensions

- a = 181mm / 7.13"  
b = 252mm / 9.92"  
c = 139mm / 5.47"

## Material Description

Impact resistant plastic

## Switch

Integrated 2 stage rotary

## Output

Speed 1: 70 litre/sec.

Speed 2: 95 litre/sec.

## Power Consumption

<4W (<0.33A@12V)

## Installation

Pre-wired with 1.8m / 6ft of cable

## Two Speed Oscillating Fan 'Turbo 2.0'

Voltage	Housing Colour	Part Number
12V	Black Housing	8EV 003 366-002
12V	White Housing	8EV 003 366-022

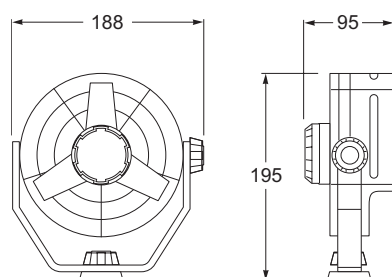




**Two Speed 'Turbo' Fans**

Internationally respected Hella Turbo fans may be turned and pivoted in all directions and locked into position.

- Quality German motor provides very quiet operation
- 150mm diameter fan blade with guard
- High air moving capacity with low power consumption
- Two speed switch in front of the blade guard
- Side, upright or pendant mounting

**Material Description**

Impact resistant plastic

**Switch**

Integrated 2 stage rotary

**Output**

Speed 1: 70 litre/sec.

Speed 2: 95 litre/sec.

**Power Consumption**

6.5W

**Installation**

Pre-wired with 140mm of cable

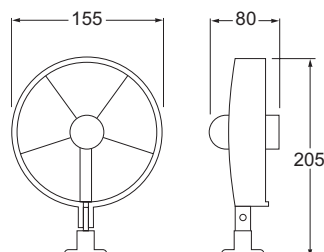
**Fan 'Turbo'**

Voltage	Housing Colour	Part Number
12V	Black Housing	8EV 003 361-002
12V	White Housing	8EV 003 361-022
24V	Black Housing	8EV 003 361-012

**Single Speed 'Jet' Fan**

Economy fan with similar styling to the popular 'Turbo' models.  
Can be turned and pivoted in all directions, and locked in position.

- 130mm diameter fan blade with guard
- Switch in front of the blade guard
- Side, upright or pendant mounting

**Material Description**

Impact resistant plastic

**Switch**

ON/OFF switch

**Output**

40 litres/sec.

**Power Consumption**

3.5W

**Installation**

Pre-wired with 140mm of cable

**Fan 'Jet'**

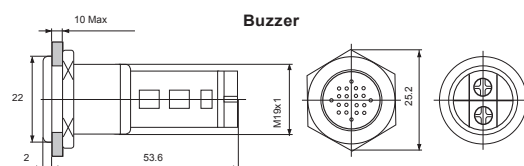
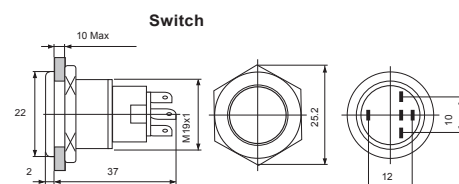
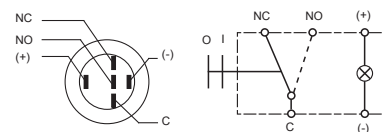
Voltage	Housing Colour	Part Number
12V	Black Housing	8EV 006 239-001

## LED Illuminated Switches and LED Pilot Lamps

### Exterior durable, stainless steel switches featuring a ring of LED light.

Manufactured from 304 stainless steel, these through panel mount switches are IP 67 rated when installed and ideal for switching lighting or installing into custom switch panels. The light rings may be wired to show power to a system or signal circuit activation.

<b>Material</b>	304 Stainless Steel
<b>Contact Material</b>	Silver Alloy
<b>Terminal Type</b>	5 Pin (2.8 x 0.5mm) switches 2 screws for buzzer
<b>Panel Thickness</b>	1~ 10mm
<b>Insulation Resistance</b>	≥ 1000MΩ
<b>Contact Resistance</b>	≤ 50mΩ
<b>Operating Temp</b>	-20°C~ +55°C
<b>Max. Switch Rating</b>	5A
<b>Degree of Protection</b>	IP 67 for switches IP 50 for buzzer
<b>Buzzer sound intensity</b>	>80dB (1m)



#### Stainless Steel Switches with LED Ring - Latching

Light Colour	Voltage	Operation	Part Number
Red	12V DC	On / Off	8HG 958 455-001
Blue	12V DC	On / Off	8HG 958 455-011
Red	24V DC	On / Off	8HG 958 455-101
Blue	24V DC	On / Off	8HG 958 455-111

#### Stainless Steel Switches with LED Ring - Momentary

Light Colour	Voltage	Operation	Part Number
Red	12V DC	Momentary	8HG 958 455-201
Blue	12V DC	Momentary	8HG 958 455-211
Red	24V DC	Momentary	8HG 958 455-301
Blue	24V DC	Momentary	8HG 958 455-311

#### Stainless Steel Buzzers with LED Ring

Light Colour	Voltage	Operation	Part Number
Red	12V DC	Buzzer	8HG 958 456-001
Red	24V DC	Buzzer	8HG 958 456-101



**8572 Series - 2 Group Light Dimmer****Features:**

- Precise dimming control for 1 or 2 light groups
- Voltage regulation & 'soft-start' bulb protection
- Low voltage battery protection
- 12V and 24V DC

The Hella marine 2 Group Light Dimmer provides precise dimming control for one or two separate light groups, and sophisticated voltage regulation with a 'soft-start' feature to lengthen the life of filament bulbs. The dimmer also provides low voltage protection against deep battery discharge.

When batteries are charged voltage can rise to 14.4V on 12V systems or 28.8V on 24V systems, this can shorten the life of bulbs.

The 2 Group Dimmer increases bulb life through sophisticated internal voltage regulation, ensuring the lighting circuit voltage does not rise above 12V or 24V.

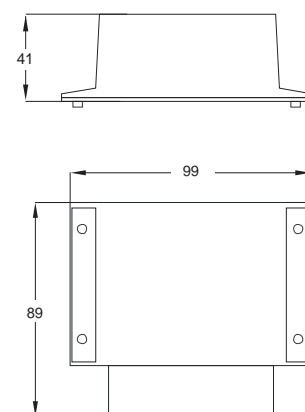
As halogen bulbs also have a high inrush current on start up, the 2 Group Dimmer features 'soft-start' to further lengthen bulb life.

The dimmers low voltage protection also protects against deep battery discharge.

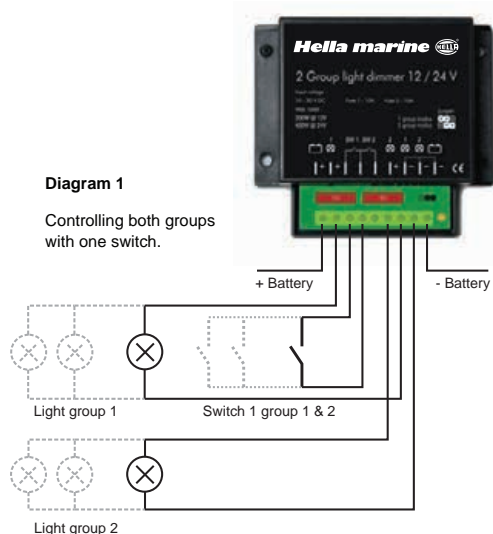
Lights will turn off automatically when battery voltage is lower than 9V on a 12V system or lower than 18V on a 24V system. Lights can be switched on again when the battery is charged and reaches 12V or 24V respectively.



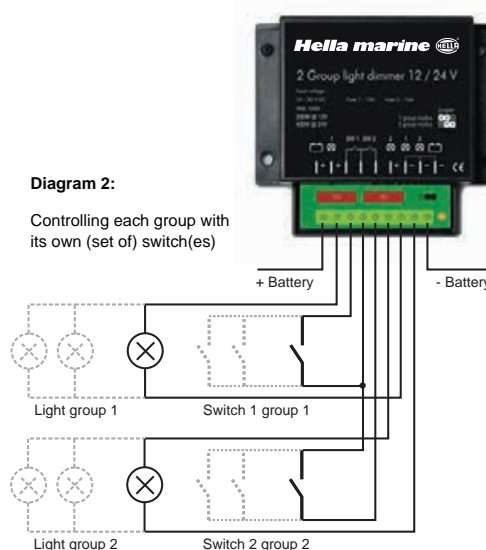
<b>Max. Load</b>	200W at 12V and 400W at 24V
<b>Max. Load Per group</b>	100W at 12V and 200W at 24V
<b>Input Voltage Range</b>	8 - 30V DC
<b>System Voltage</b>	12V or 24V DC
<b>Number of Groups</b>	2
<b>Switches Per Group</b>	Unlimited
<b>Switch Type</b>	Momentary normally open
<b>Weight</b>	140 grams
<b>Protections</b>	Overload, Temperature, Low voltage
<b>Fuse</b>	2 x 10A

**Diagram 1**

Controlling both groups with one switch.

**Diagram 2:**

Controlling each group with its own (set of) switch(es)

**2 Group Light Dimmer**

**Part Number**

5XA 998 572-001



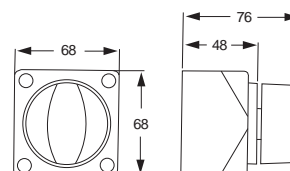
## Battery Master Switches



### 275 Amp Battery Master Switch

Removable plates for connection from all sides allow the switch to be stand alone or locked together with other switches. The control knob can not be removed whilst in an ON or OFF position, however it can be removed by switching to an anti-clockwise 45° position. Suitable for surface or recess mounting into a 52mm diameter hole.

<b>Material Description</b>	Impact resistant plastic Tin plated copper studs and nuts
<b>Termination Stud Size</b>	2 x 10mm (3/4")
<b>Operation</b>	ON / OFF
<b>Degree of Protection</b>	IP 56
<b>Max. Load 12 / 24V DC</b>	Continuous 275 Amps Intermittent 455 Amps (5 minutes) Cranking 1250 Amps (10 seconds)
<b>Max. Voltage</b>	48V DC



#### 275 Amp Battery Master Switch

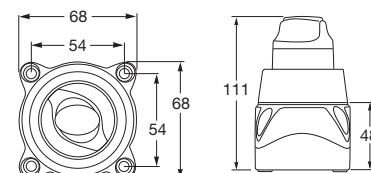
Part Number 4640



### 275 Amp Easyfit Battery Master Switch

The Easyfit battery switch allow installations through varying panel thicknesses via a removable threaded ring allowing for panel thicknesses up to 19mm (3/4"). The switch can also be surface mounted and the key is removable.

<b>Material Description</b>	Impact resistant plastic Tin plated copper studs and nuts
<b>Termination Stud Size</b>	2 x 10mm (3/4")
<b>Operation</b>	ON / OFF
<b>Degree of Protection</b>	IP 56
<b>Max. Load 12 / 24V DC</b>	Continuous 275 Amps Intermittent 455 Amps (5 minutes) Cranking 1250 Amps (10 seconds)
<b>Max. Voltage</b>	48V DC



#### 275 Amp Battery Master Switch

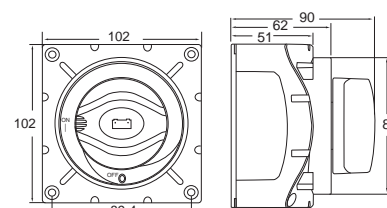
Part Number 4722



### 600 Amp Battery Master Switch

Removable plates for connection from all sides allow the switch to be stand alone or locked with battery distribution modules. Control knob can not be removed whilst in an ON or OFF position, however it can be removed by switching to an anti-clockwise 45° position. Surface or recess mounting by cutting an 85mm diameter hole.

<b>Material Description</b>	Impact resistant plastic Tin plated copper studs and nuts
<b>Termination Stud Size</b>	2 x 12mm (1/2")
<b>Operation</b>	ON / OFF
<b>Degree of Protection</b>	IP 56
<b>Max. Load 12 / 24V DC</b>	Continuous 600 Amps Intermittent 800 Amps (5 minutes) Cranking 2500 Amps (10 seconds)
<b>Max. Voltage</b>	48V DC



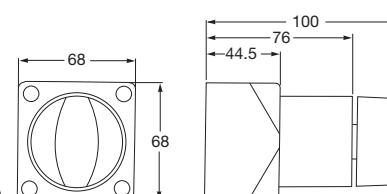
#### 600 Amp Battery Master Switch

Part Number 4720

### Remote Operated Battery Master Switch

Remote operated battery switch that may be used manually, or remotely with a separate switch (not supplied). Battery switch may be mounted closer to the battery reducing cable lengths. Complete with removable key.

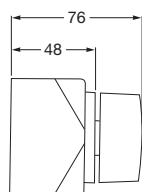
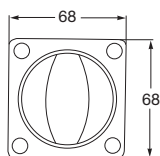
<b>Material Description</b>	Impact resistant plastic Tin plated copper studs and nuts
<b>Termination Stud Size</b>	2 x 10mm (3/4")
<b>Operation</b>	ON / OFF
<b>Degree of Protection</b>	IP 56
<b>Max. Load 12 / 24V DC</b>	Continuous 275 Amps Intermittent 455 Amps (5 minutes) Cranking 1250 Amps (10 seconds)
<b>Voltage Range</b>	9.5-32V DC



#### Remote Operated 275 Amp Battery Master Switch

Part Number 4724

## Battery Selector Switches

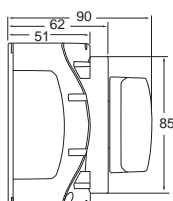
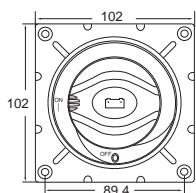
**200 Amp Battery Selector Switch**

Compact battery selector switch with identical dimensions to the 4640 battery master switch to select either from two power sources or combine together. Will also isolate from the power sources.

<b>Material Description</b>	Impact resistant plastic Tin plated copper studs and nuts
<b>Termination Stud Size</b>	3 x 10mm (3/4")
<b>Operation</b>	1-2-Both-OFF
<b>Degree of Protection</b>	IP 56
<b>Max. Load 12 / 24V DC</b>	Continuous 200 Amps - B1 or B2 Intermittent 300 Amps (5 minutes) Cranking 1000 Amps (10 seconds)
<b>Max. Voltage</b>	48V DC

**200 Amp Battery Master Switch**

Part Number 4723

**350 Amp Battery Selector Switch**

Removable plates for connection from all sides allow the switch to be stand alone or locked with other modules. Necessary for on board systems fed from 2 or more batteries and whose supply comes from more than 1 generator. Rotary switch in 4 switch positions of battery 1-2-Both-OFF. Switch can also be pad locked. Suitable for surface or recess mounting by cutting an 85mm diameter hole.

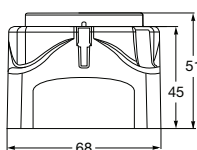
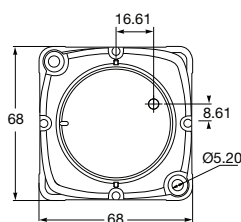
<b>Material Description</b>	Impact resistant plastic Tin plated copper studs and nuts
<b>Termination Stud Size</b>	3 x 10mm (3/4")
<b>Operation</b>	1-2-Both-OFF
<b>Degree of Protection</b>	IP 56
<b>Max. Load 12 / 24V DC</b>	Continuous 350 Amps - B1 or B2 Continuous 500 Amps - B1 and B2 Intermittent 500 Amps (5 minutes) Cranking 1500 Amps (10 seconds)
<b>Max. Voltage</b>	48V DC

**350 Amp Battery Selection Switch**

Part Number 4721

**Digital Voltage Sensitive Relay (DVSR) - "Dual battery charging made easy"**

The DVSR allows charging of two independent battery banks from a single charging source. When the voltage on the start battery rises to 13.4V (26.8V) the DVSR engages allowing the 2nd battery to charge. When charging stops and voltage falls to 12.8V (25.6V) the DVSR will disengage, isolating the two batteries from each other. Dual sensing functionality enables the sensing of two battery banks, allowing two way charging. This system eliminates the possibility of draining the start battery and protects sensitive electronic equipment powered from the auxiliary battery from harmful engine start up spikes. New features include zero power consumption in storage mode and a remote LED status light option.



<b>Housing Description</b>	Impact resistant plastic Tin copper studs and nuts
<b>Termination Stud Size</b>	2 x 6mm (1/4")
<b>Degree of Protection</b>	IP 56
<b>Voltage</b>	Dual Voltage 12/24V DC
<b>Power Consumption</b>	VSR Disengaged 1.8 mA (1.6 mA) VSR Engaged 90 mA (170 mA) In Storage Mode 0 mA
<b>Max. Load</b>	140 Amps
<b>Dimensions</b>	68 x 68 x 50mm (W x D x H)

**Voltage Sensitive Relay**

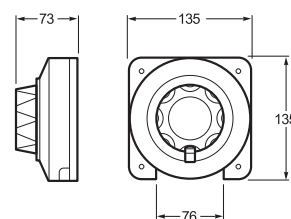
Part Number 3099

## Battery Switches



## Heavy Duty Battery Master Switch

<b>Description</b>	Enables switching from battery 1 or 2 or linking of both batteries. May also be used as a manual isolator when charging batteries.
<b>Operation</b>	1-2-Both-OFF
<b>Max. Load</b>	12V / 175A or 24V / 87.5A (continuous)



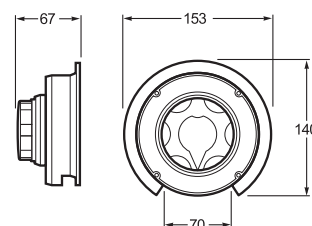
## Heavy Duty Battery Master Switch

**Part Number**  
2765



## Dual Battery Master Switch

<b>Description</b>	For 6-36V DC battery systems with alternators or generators. Water and vapour resistant. USCG safety conformance.
<b>Operation</b>	1-2-Both-OFF
<b>Max. Load</b>	12V / 500A or 24V / 250A (10 seconds) 12V / 310A or 24V / 155A (continuous)



## Dual Battery Master Switch

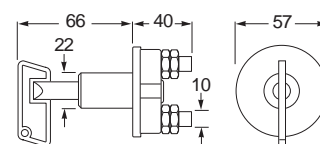
**Part Number**                      **Part Number with Key Lock**  
2767                                      2768

## 2764 Series - 50 Amp Battery Master Switch

Positive or negative cable can be switched as required. Key can be removed in the OFF position, current interrupted.



<b>Housing Description</b>	Impact resistant plastic
<b>Cable Connection</b>	2 screw terminals, M10
<b>Degree of Protection</b>	IP X4
<b>Max. load</b>	12V / max. 1000A (10 seconds) 24V / max. 500A (10 seconds) (compliant with VDA 72750)

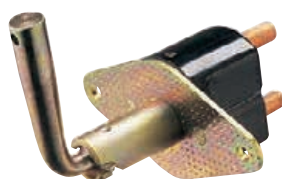


## 50 Amp Battery Master Switch

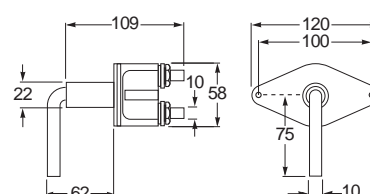
**Part Number**                      **Spare Key Number**  
4650                                      4652

## 1559 Series - 100 Amp Battery Master Switch

Heavy duty switch for high loads.  
Key can be removed in the OFF position, current interrupted.  
Positive or negative cable can be switched as required.



<b>Housing Description</b>	Impact resistant plastic Steel key and mounting plate
<b>Cable Connection</b>	2 screw terminals, M10
<b>Degree of Protection</b>	IP X4
<b>Max. Load</b>	12V / 24V max. 2500A (10 seconds)
<b>Max. Continuous Load</b>	12V / 24V max. 100A 24V / max. 2500A (10 seconds) (compliant with VDA 72750)



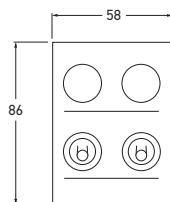
## 100 Amp Battery Master Switch

**Part Number**                      **Spare Key Number**  
4653                                      4654



## Switch Panels

## Micro Switch Panels with LED Backlit Labels



<b>Dimensions</b>	86 x 58 x 28mm (H x W x D)
<b>Housing</b>	Impact resistant plastic
<b>Switches</b>	Toggle, momentary or 3 way ON/OFF/ON
<b>Maximum Load</b>	12V / 20A

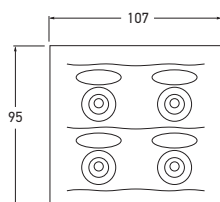


## Micro Switch Panels

Description	Part Number
2 x ON/OFF switches	2687
1 x ON/OFF switch, 1 x ON/OFF/ON switch	2688
1 x ON/OFF switch, 1 x 3 way momentary switch	2689

## 4 Way and 6 Way Compact Switch Panels

Splash proof switch panels protected with neoprene rubber boots.  
Inline fuse holders with fuses behind panel.



<b>Dimensions</b>	95 x 107 x 55mm (H x W x D)
<b>Housing Description</b>	Impact resistant plastic
<b>Switches</b>	4 or 6 ON/OFF toggle switches
<b>Maximum Load</b>	12V / 20A

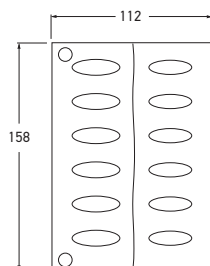


## Compact Switch Panels

Description	Part Number
4 Way Switch Panel	2690
6 Way Switch Panel	2691

## Backlit 6 Way Switch Panels

Attractive splash proof switch panels protected with neoprene rubber boots.  
LED backlit labels. Removable cover plate over switches conceals screws.



<b>Dimensions</b>	158 x 112 x 65mm (H x W x D)
<b>Housing description</b>	Impact resistant plastic
<b>Switches</b>	6 ON/OFF toggle switches
<b>Switch Current Rating</b>	20A DC, 10A AC.
<b>Maximum Load</b>	12V / 20A

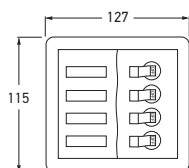


## Backlit Switch Panels

Description	Part Number
6 Way Switch Panel	2692

## Switch Panels with Integrated Circuit Breakers and LED Backlighting

Pre-wired and suitable for 12V or 24V systems. Airpax circuit breakers  
LED backlit labels. Powder coated aluminium base plate.

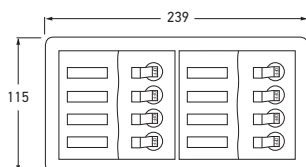


<b>4 Way Configuration</b>	1 x 5A / 2 x 10A / 1 x 15A
<b>Dimensions</b>	115 x 127 x 65mm (H x W x D)



## Switch Panels with Circuit Breakers

Description	Part Number
4 Way Switch Panel	2693

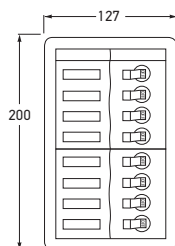


<b>8 Way Configuration</b>	2 x 5A / 2 x 10A / 3 x 15A / 1 x 20A
<b>Dimensions</b>	200 x 127 x 65mm (H x W x D)
	115 x 239 x 65mm (H x W x D)



## Switch Panels with Circuit Breakers

Description	Part Number
8 Way Vertical Panel	2694
8 Way Horizontal Panel	2695



## Compact Rocker Switches



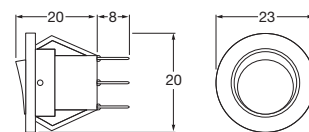
### Rocker Switches

Rocker switches with push-on terminals for interior installations.

<b>Mounting</b>	20mm opening for panels up to 4mm
<b>Maximum Load</b>	10A@12V

#### Rocker Switches

Colour	Voltage	Action	Part Number
Red LED	12V	Off-On	4448
Red Bulb	12V	Off-On	4446
Amber Bulb	12V	Off-On	4445
Black	12/24V	Off-On	4444
Black	12/24V	On-On	4447



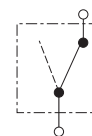
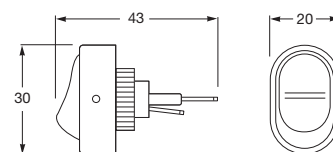
### Rocker Switches

Rocker switches with push-on terminals for interior installations.

<b>Mounting</b>	12mm opening for panels up to 5mm 2 x 6.3mm flat-plug contacts
<b>Maximum Load</b>	16A@12V / 8A@24V

#### Rocker Switches

Voltage	Action	Part Number
12/24V	Off-On	4470
12/24V	On-On	4475



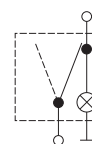
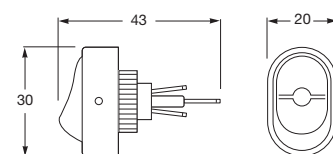
### Illuminated Rocker Switches

Illuminated rocker switches with push-on terminals for interior installations.

<b>Mounting</b>	12mm opening for panels up to 5mm 2 x 6.3mm flat-plug contacts
<b>Maximum Load</b>	16A@12V

#### Illuminated Rocker Switches

Voltage	Action	Lens Colour	Part Number
12V	Off-On	Amber	4471
12V	Off-On	Blue	4472
12V	Off-On	Green	4473
12V	Off-On	Red	4474



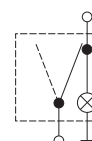
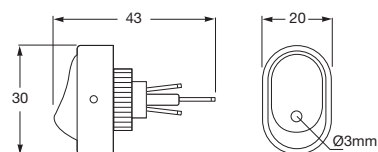
### LED Illuminated Rocker Switches

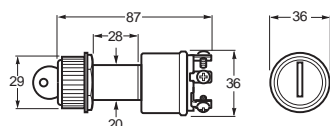
LED Illuminated rocker switches with push-on terminals for interior installations.

<b>Mounting</b>	12mm opening for panels up to 5mm 2 x 6.3mm flat-plug contacts
<b>Maximum Load</b>	16A@12V

#### LED Illuminated Rocker Switches

Voltage	Action	LED Colour	Part Number
12V	Off-On	Amber	4479
12V	Off-On	Green	4480
12V	Off-On	Red	4481



**Heavy Duty Ignition and Starter Switch****Material Description**

Switch with spring loaded return. 4 screw terminals. Weather resistant rubber boot and mounting nut assembly protects against moisture and dirt with or without key engaged. Brass construction.

**Mounting**

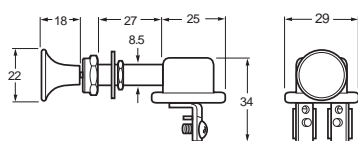
21mm diameter mounting opening for panels up to 25mm thick

**Maximum Load**

Ignition 10A, Start 5A, Accessory 10A at 12V

**Heavy Duty Ignition and Starter Switch****Part Number**

2766

**Push / Pull Switch****Material Description**

Chrome knob and face nut.

Brass construction

**Mounting**

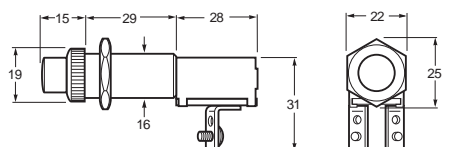
10mm diameter mounting opening for panels up to 25mm thick

**Maximum Load**

20A at 12V

**Push / Pull Switch****Part Number**

2761

**Starter or Horn Push Button Switch****Material Description**

Chrome button and face nut.

Brass construction

**Mounting**

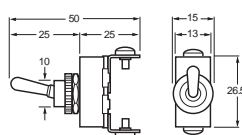
16mm opening for panels up to 25mm thick

**Maximum Load**

20A at 12V

**Starter or Horn Push Button Switch****Part Number**

2763

**Flick Toggle Switch****Material Description**

Chrome toggle and face nut.

Brass construction

**Mounting**

11mm diameter mounting opening for panels up to 6mm thick

**Maximum Load**

20A at 12V

**Flick Toggle Switch****Part Number**

2762



## Relays - Diode Protected

Pin No.	Description
85/2	Earth
86/1	Positive
87/5	Output
87a/4	Alternative output
30/3	Positive supply

*Note - For correct polarity connections of the diode protected relay ensure terminals 85 and 86 are connected as shown.*

## Eliminating Voltage Spikes

Voltage spikes from 300V to 500V can occur momentarily when a relay is switched off.

Sensitive electronic equipment can be damaged or malfunctions can occur if these spikes reach the electrical network without suppression.

A relay with a diode eliminates voltage spikes completely.

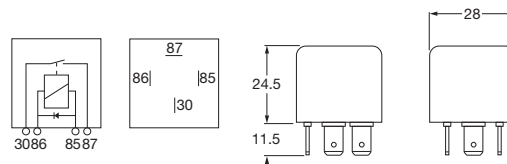


## 4 Pin, Normally Open Relay - 12V

Maximum Load	40A
Protection	Diode
Current Draw	140mA

## Normally Open Relay, 4 Pin

Voltage	Part Number
12V DC	3053

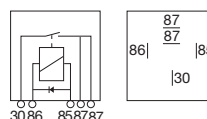


## 5 Pin, Normally Open Relay - 12V

Maximum Load	40A
Protection	Diode
Current Draw	140mA

## Normally Open Relay, 5 Pin

Voltage	Part Number
12V DC	3055

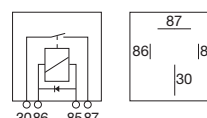


## 4 Pin, Normally Open Relay - 12V

Maximum Load	50A
Protection	Diode
Current Draw	140mA

## Normally Open Relay, 4 Pin

Voltage	Part Number
12V DC	3059



Terminals 30 and 87 are 9.5mm terminals.

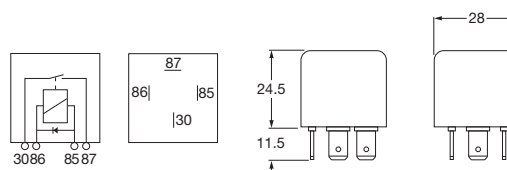


## 4 Pin, Normally Open Relay - 24V

Maximum Load	22A
Protection	Diode
Current Draw	70mA

## Normally Open Relay, 4 Pin

Voltage	Part Number
24V DC	3054

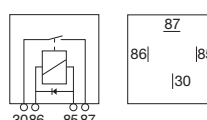


## 5 Pin, Normally Open Relay - 24V

Maximum Load	22A
Protection	Diode
Current Draw	70mA

## Normally Open Relay, 5 Pin

Voltage	Part Number
24V DC	3056

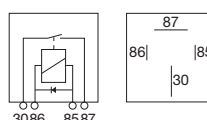


## 4 Pin, Normally Open Relay - 24V

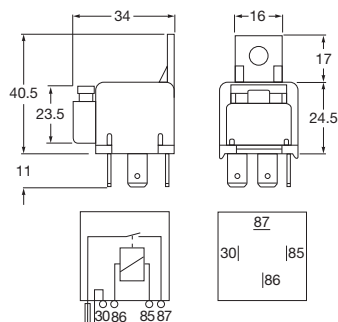
Maximum Load	30A
Protection	Diode
Current Draw	70mA

## Normally Open Relay, 4 Pin

Voltage	Part Number
24V DC	3060



## Relays

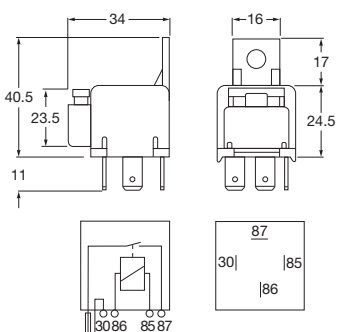
**4 Pin, Normally Open Fused Relay - 12V**

Maximum Load 25A with 25A fuse

Current Draw 140mA

**Normally Open Relay, 4 Pin**

Voltage	Part Number
12V DC	3076

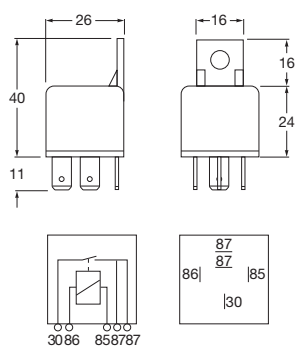
**4 Pin, Normally Open Fused Relay - 24V**

Maximum Load 15A with 15A fuse

Current Draw 80mA

**Normally Open Relay, 4 Pin**

Voltage	Part Number
24V DC	3077

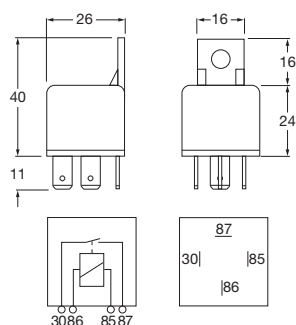
**4 Pin, Normally Open Mini Relay - 12V**

Maximum Load 30A

Current Draw 140mA

**Normally Open Relay, 4 Pin**

Voltage	Part Number
12V DC	3078
12V DC	3078-BULK (Pack of 10)

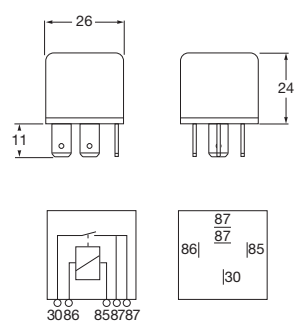
**4 Pin, Normally Open Mini Relay - 24V**

Maximum Load 30A

Current Draw 70mA

**Normally Open Relay, 4 Pin**

Voltage	Part Number
24V DC	3079
24V DC	3079-BULK (Pack of 10)

**5 Pin, Normally Open Mini Relay - 24V**

Maximum Load 30A

Current Draw 70mA

**Normally Open Relay, 5 Pin**

Voltage	Part Number
24V DC	3083
24V DC	3083-BULK (Pack of 10)



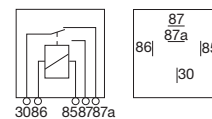
## Relays

**5 Pin, Change-over Relay - 12V**

<b>Maximum Load</b>	30-87, 40A/30-87a, 20A
<b>Current Draw</b>	140mA

**Change-over Relay, 5 Pin**

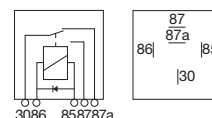
Voltage	Part Number
12V DC	3080
12V DC	3080-BULK (Pack of 10)

**5 Pin, Change-over Relay - 12V**

<b>Maximum Load</b>	30-87, 40A/30-87a, 15A
<b>Protection</b>	Diode
<b>Current Draw</b>	140mA

**Change-over Relay, 5 Pin**

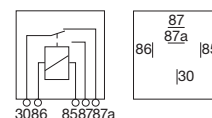
Voltage	Part Number
12V DC	3057

**5 Pin, Change-over Relay - 24V**

<b>Maximum Load</b>	30-87, 30A/30-87a, 15A
<b>Current Draw</b>	70mA

**Change-over Relay, 5 Pin**

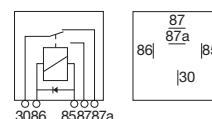
Voltage	Part Number
24V DC	3081
24V DC	3081-BULK (Pack of 10)

**5 Pin, Change-over Relay - 24V**

<b>Maximum Load</b>	30-87, 22A/30-87a, 10A
<b>Protection</b>	Diode
<b>Current Draw</b>	140mA

**Change-over Relay, 5 Pin**

Voltage	Part Number
24V DC	3058

**5 Pin, Time control Unit with Drop-out Delay**

Relay with manually adjustable drop-out delay function, 0 – 900 seconds.

**Time Control Drop Out Relay, 5 Pin**

Voltage	Part Number
12V DC	3086
24V DC	3086-24V

S1	S2	T(s)
off	off	110...900
on	on	14...110
on	off	2.5...14
off	on	0...2.5

The delay interval is set by the switches S1 and S2. Adjustment exactly to the second is done using a screwdriver.

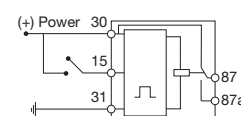
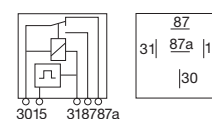
**5 Pin, Time control Unit with Pick-up Delay**

Relay with manually adjustable pick-up delay function, 0 – 900 seconds.

<b>Maximum Load</b>	Contact opened 10A Contact closed 20A/30min
<b>Protection</b>	IP 50 Note : Switching terminal 15 starts timing

**Change-over Relay, 5 Pin**

Voltage	Part Number
12V DC	3087
24V DC	3087-24V





## Relays

## Relay Connector

<b>Description</b>	Single screw mounting. Sturdy plastic casing. Supplied with 5 blade terminals.
<b>Application</b>	Suits 4 and 5 pin relays with 6.3mm flat pin connectors. Hella Part No's. 3076, 3077, 3078, 3079, 3080, 3081.
<b>Mounting</b>	Single screw mounting.

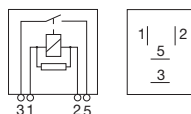


## Relay Connector

<b>Part Number</b>	<b>Bulk Pack of 50</b>
4973	4973-BULK

Note: P/N's 3076-3077 are not suitable for multiple installations using this connector.

## 4 Pin, Normally Open Micro Relay - 12V



<b>Description</b>	Relay 4 pin with bracket and parallel resistor. With two 4.8mm and two 6.3mm blade terminal contacts (terminals 3 and 5)
<b>Maximum Load</b>	20A@12V
<b>Protection</b>	Resistor

## Micro Relay - 4 Pin

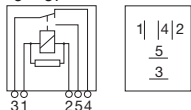
<b>Voltage</b>	<b>Part Number</b>
12V DC	3064



Note

Terminal designations:

- 1 = 86
- 2 = 85
- 3 = 30
- 4 = 87a
- 5 = 87



## 5 Pin, Change-over Relay (Micro Relay) - 12V

<b>Description</b>	Relay 4 pin with bracket and parallel resistor. With two 4.8mm and two 6.3mm blade terminal contacts (terminals 3 and 5)
<b>Maximum Load</b>	3-5 20A/3-4 10A
<b>Protection</b>	Resistor

## Micro Change-over Relay - 5 Pin

<b>Voltage</b>	<b>Part Number</b>
12V DC	3065

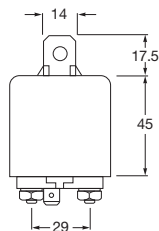
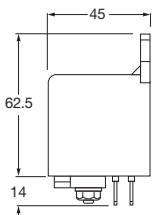
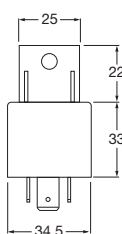
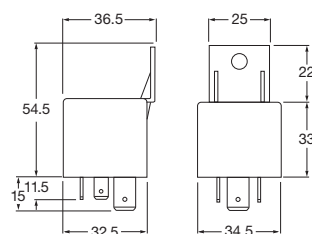


## Micro Relay Connector

<b>Description</b>	For micro-relays with 5 pole SAE terminal layout. For receiving three 4.8mm and two 6.3mm blade terminal connectors.
<b>Socket</b>	5 pole
<b>Application</b>	Suits P/N's 3064 and 3065

## Micro Relay Connector

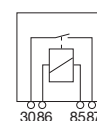
<b>Voltage</b>	<b>Part Number</b>
12V DC	4973-M



## High Capacity Normally Open Relays

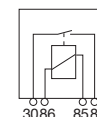
## High Capacity Relays - 4 Pin

Voltage	Max Load	Current Draw	Part Number
12V	70A	140mA	3084
24V	60A	70mA	3085



## High Capacity Relays - 4 Pin

Voltage	Max Load	Current Draw	Part Number
12V	180A (100A Cont.)	380mA	3061
24V	80A (60A Cont.)	180mA	3062



Terminals 30 and 87 are 6mm stud.

## Blade Fuse Boxes

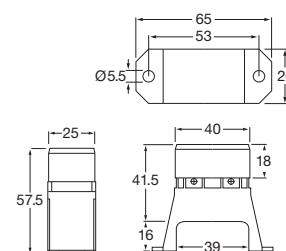
**4 Blade Fuse Box**

Black plastic housing with transparent snap-fit lid.  
Flat plug connections.

<b>Number of Fuses</b>	4
<b>Fuse Type</b>	2 x 10A, 2 x 15A

**4 Blade Fuse Boxes**

Description	Part Number
Top Connector Fuse Box	8720
Side Connector Fuse Box	8720-S

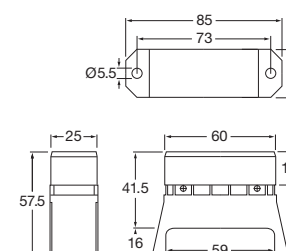
**6 Blade Fuse Box**

Black plastic housing with transparent snap-fit lid.  
Flat plug connections.

<b>Number of Fuses</b>	6
<b>Fuse Type</b>	3 x 10A, 3 x 15A

**6 Blade Fuse Boxes**

Description	Part Number
Top Connector Fuse Box	8721
Side Connector Fuse Box	8721-S

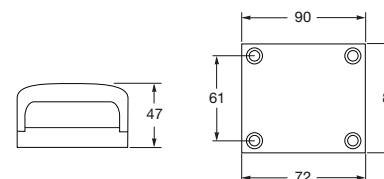
**6 Blade Fuse Box**

Black plastic housing with transparent snap-fit lid and 6.3mm male blade terminals. 6mm diameter stud input.  
Complete with 2 spare fuse holders and label set.

<b>Number of Fuses</b>	6
<b>Fuse Type</b>	3 x 10A, 3 x 15A

**6 Blade Fuse Box**

<b>Part Number</b>	8725
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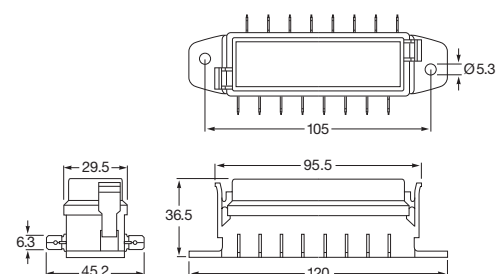
**8 Blade Fuse Box**

Black plastic housing with transparent snap-fit lid.  
Flat plug connections.

<b>Number of Fuses</b>	8
<b>Fuse Type</b>	4 x 10A, 4 x 15A

**8 Blade Fuse Boxes**

Description	Part Number
Top Connector Fuse Box	8722
Side Connector Fuse Box	8722-S

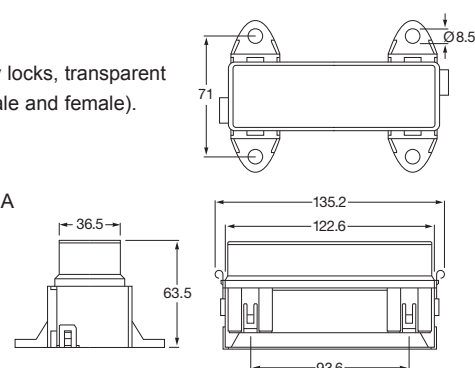
**16 Blade Fuse Box**

16-way fuse box featuring black plastic housing with secondary locks, transparent cover and sealing gasket. Supplied with mounting brackets (male and female).

<b>Number of Fuses</b>	16
<b>Fuse Type</b>	6 x 10A, 6 x 15A, 2 x 20A, 2 x 25A

**16 Blade Fuse Box**

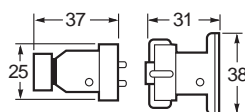
<b>Part Number</b>	8724
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## Plugs and Sockets

## Water Resistant Plugs and Sockets

Chrome brass plugs and sockets for exterior or interior installations.  
 Socket includes plastic cap.  
 Plug suitable for cable up to 6.5mm diameter.



<b>Material Description</b>	Chrome brass housings. Brass contacts
<b>Maximum Load</b>	22A at 12V
<b>Installation</b>	Screw terminals

## Water Resistant Plugs and Sockets

Description	Part Number
2 Pin Socket	2741
2 Pin Plug	2742
4 Pin Socket	2744
4 Pin Plug	2745

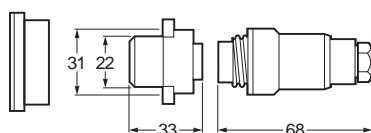
## Chrome Brass Deck Glands - Ensures waterproof cable entry.

Cable Diameter	Gland dimensions	Part Number
Cables up to 8mm dia.	18mm high x 32mm base diameter	2746
Cables up to 12mm dia.	18mm high x 38mm base diameter	2747



## Waterproof Plugs and Sockets

Watertight plastic plugs and sockets for exterior or interior installations.  
 Socket includes plastic cap. Plug suitable for cable up to 8.0mm diameter.



<b>Material Description</b>	Impact resistant plastic housing Silver contacts.
<b>Degree of Protection</b>	IP 67
<b>Maximum Load</b>	2 to 4 pin; 16A at 12V, 7 pin; 10A at 12V
<b>Installation</b>	2 to 4 pin; Screw terminals 7 pin; Solder terminals
<b>Mounting</b>	2 to 4 pin; Recess mounting 7 pin; Surface mounting



## Waterproof Plugs and Sockets

Description	Part Number
2 Pin Plug and Socket	2782
3 Pin Plug and Socket	2783
4 Pin Plug and Socket	2784
7 Pin Plug and Socket	2785



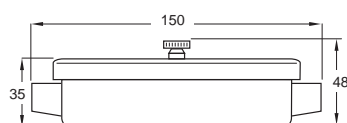
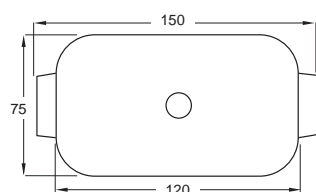
## Mounting Ring

For surface mounting of the socket.  
 Includes stainless screws and rubber gasket

Part Number
2786

## Waterproof Cable Connectors

Heavy duty and completely sealed cable connectors  
 with screw down lids and brass contacts.



## Waterproof Cable Connectors

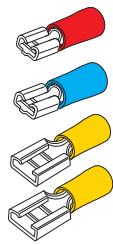
Part Number	Number of cables	Cable Size
2757	8 Screw Connections	up to 6mm <sup>2</sup>
2758	8 pole 8 double flat plug connections	up to 6mm <sup>2</sup>
2759	8 pole 8 double flat plug connections	up to 10mm <sup>2</sup>





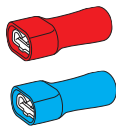
## Crimp Terminals

## Push-on Female Terminals



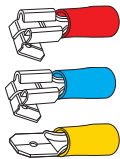
Blister Part No.	Quantity	Bulk Part No.	Quantity	Size	Cable
<b>8200</b>	20	<b>8500</b>	100	6.3mm	2.5 to 3mm cable 0.75 to 1.13mm <sup>2</sup> cable
<b>8201</b>	20	<b>8501</b>	100	6.3mm	4mm cable 1.84mm <sup>2</sup> cable
<b>8202</b>	15	<b>8502</b>	100	6.3mm	5 to 6mm cable 2.9 to 4.59mm <sup>2</sup> cable
<b>8203</b>	12	<b>8503</b>	100	9.5mm	

## Fully Insulated Female Terminals



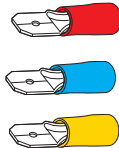
Blister Part No.	Quantity	Bulk Part No.	Quantity	Size	Cable
<b>8204</b>	12	<b>8504</b>	100	6.3mm	2.5 to 3mm cable 0.75 to 1.13mm <sup>2</sup> cable
<b>8205</b>	12	<b>8505</b>	100	6.3mm	4mm cable 1.84mm <sup>2</sup> cable

## Push-on 2-Way Male and Female Terminals



Blister Part No.	Quantity	Bulk Part No.	Quantity	Size	Cable
<b>8210</b>	15	<b>8510</b>	100	6.3mm	2.5 to 3mm cable 0.75 to 1.13mm <sup>2</sup> cable
<b>8211</b>	12	<b>8511</b>	100	6.3mm	4mm cable 1.84mm <sup>2</sup> cable
<b>8212</b>	15	<b>8512</b>	100	6.3mm	

## Blade Male Terminals



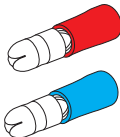
Blister Part No.	Quantity	Bulk Part No.	Quantity	Size	Cable
<b>8213</b>	15	<b>8513</b>	100	6.3mm	2.5 to 3mm cable 0.75 to 1.13mm <sup>2</sup> cable
<b>8214</b>	12	<b>8514</b>	100	6.3mm	4mm cable 1.84mm <sup>2</sup> cable
<b>8215</b>	10	<b>8515</b>	100	6.3mm	5 to 6mm cable 2.9 to 4.59mm <sup>2</sup> cable

## Double Blade Male Connector



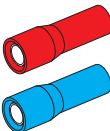
Blister Part No.	Quantity	Bulk Part No.	Quantity	Size
<b>8216</b>	12	<b>8516</b>	50	6.3mm

## Bullet Single Male Connectors



Blister Part No.	Quantity	Bulk Part No.	Quantity	Size	Cable
<b>8220</b>	12	<b>8520</b>	100	ford type	2.5 to 3mm cable 0.75 to 1.13mm <sup>2</sup> cable
<b>8221</b>	14	<b>8521</b>	100	GMH type	4mm cable 1.84mm <sup>2</sup> cable

## Bullet Single Female Connectors



Blister Part No.	Quantity	Bulk Part No.	Quantity	Size	Cable
<b>8222</b>	12	<b>8522</b>	100	ford type	2.5 to 3mm cable 0.75 to 1.13mm <sup>2</sup> cable
<b>8223</b>	14	<b>8523</b>	100	GMH type	4mm cable 1.84mm <sup>2</sup> cable

## Crimp Terminals

**New!**

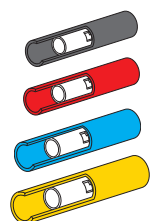
## Heat Shrink Glue Joiner Cable Connectors



Blister Part No.	Quantity	Cable
<b>8230S</b>	10	0.5 to 1.5mm <sup>2</sup> cable
<b>8231S</b>	10	1.5 to 2.5mm <sup>2</sup> cable
<b>8232S</b>	10	2.5 to 3.5mm <sup>2</sup> cable



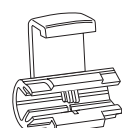
## Cable Connectors



Blister Part No.	Quantity	Bulk Part No.	Quantity	Cable
<b>8224</b>	13	<b>8524</b>	100	Suited for brass bullet terminals.
<b>8230</b>	15	<b>8530</b>	100	2.5 to 3mm cable
<b>8231</b>	15	<b>8531</b>	100	0.75 to 1.13mm <sup>2</sup> cable
<b>8232</b>	10	<b>8532</b>	100	4mm cable
				1.84mm <sup>2</sup> cable
				5 to 6mm cable
				2.9 to 4.59mm <sup>2</sup> cable

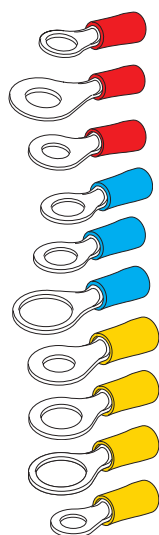


## Quick Connect Cable Connectors



Blister Part No.	Quantity	Bulk Part No.	Quantity	Features
<b>8235</b>	9	<b>8535</b>	50	With the use of pliers, connects splices and insulates 0.75 to 1.13 mm <sup>2</sup> (2.5 to 3 mm) cable. Manufactured by 3M Company U.S.A.

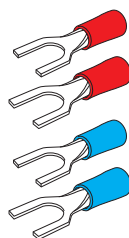
## Eye Terminals



Blister Part No.	Quantity	Bulk Part No.	Quantity	Size	Cable
<b>8240</b>	25	<b>8540</b>	100	4.3mm	
<b>8241</b>	20	<b>8541</b>	100	5.0mm	2.5 to 3mm cable
<b>8242</b>	15	<b>8542</b>	100	6.3mm	0.75 to 1.13mm <sup>2</sup> cable
<b>8243</b>	20	<b>8543</b>	100	5.0mm	
<b>8244</b>	20	<b>8544</b>	100	6.3mm	4mm cable
<b>8245</b>	15	<b>8545</b>	100	8.4mm	1.84mm <sup>2</sup> cable
<b>8246</b>	12	<b>8546</b>	100	6.3mm	
<b>8247</b>	12	<b>8547</b>	100	8.4mm	5 to 6mm cable
<b>8248</b>	10	<b>8548</b>	100	9.5mm	2.9 to 4.59mm <sup>2</sup> cable
<b>8249</b>	10	<b>8549</b>	100	5.0mm	



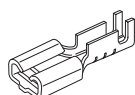
## Spade Terminals



Blister Part No.	Quantity	Bulk Part No.	Quantity	Size	Cable
<b>8260</b>	20	<b>8560</b>	100	4.3mm	2.5 to 3mm cable
<b>8261</b>	15	<b>8561</b>	100	5.0mm	0.75 to 1.13mm <sup>2</sup> cable
<b>8262</b>	20	<b>8562</b>	100	4.3mm	4mm cable
<b>8263</b>	12	<b>8563</b>	100	5.0mm	1.84mm <sup>2</sup> cable

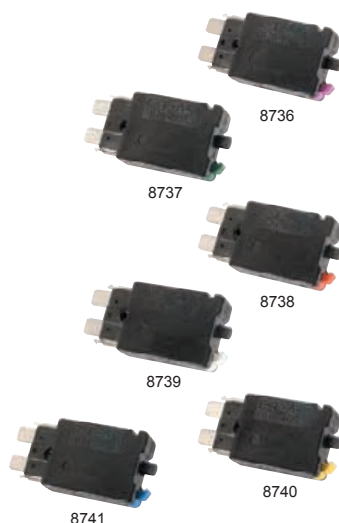


## Non-Insulated Brass Lucar Terminal - to suit 4973



Bulk Part No.	Quantity	Size	Cable
<b>8573</b>	100	6.3mm	1.84mm <sup>2</sup>

## Circuit breakers and Fuses



### Circuit Breakers

Compact single pole, heavy duty thermal circuit breakers with push-to-reset mechanism and separate (colour coded) manual release for extra low voltage wiring systems on all types of craft. Ideal replacement for blade fuses in heavy duty applications.

**Voltage** Max 28V (Min. 10V)

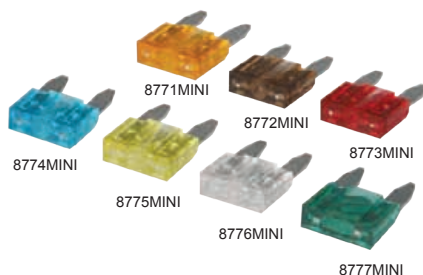
#### Heavy Duty Circuit Breakers

Amps	Colour	Part Number
3A	Purple	8736
6A	Green	8737
10A	Red	8738
15A	White	8739
20A	Yellow	8740
25A	Blue	8741



#### Blade Fuses - 10 per pack

Colour	Amps	Part Number
Tan	5 Amps	8771
Brown	7.5 Amps	8772
Red	10 Amps	8773
Blue	15 Amps	8774
Yellow	20 Amps	8775
White	25 Amps	8776
Green	30 Amps	8777



#### Mini Blade Fuses - 10 per pack

Colour	Amps	Part Number
Tan	5 Amps	8771MINI
Brown	7.5 Amps	8772MINI
Red	10 Amps	8773MINI
Blue	15 Amps	8774MINI
Yellow	20 Amps	8775MINI
White	25 Amps	8776MINI
Green	30 Amps	8777MINI



### Blade Fuse Box Holder - 1 Fuse

30A maximum. May be interlocked face to face or end to end. Complete with transparent dust cover lid and snap-in terminals. Suitable for cable up to 5mm (Conductor cross sectional area up to 2.90mm<sup>2</sup>).

#### Blade Fuse Box Holder - 1 Fuse

**Part Number**  
8718



### In-Line Blade Fuse Holder - 1 Fuse

20A maximum. Complete with 15A blade fuse. Quick connect type, manufactured by 3M USA. Suitable for cable up to 4mm (Conductor cross sectional area up to 1.84mm<sup>2</sup>).

#### In-Line Blade Fuse Holder - 1 Fuse

**Part Number**  
8719



## Cable Ties and Crimp Tools

- Description** 100% 6/6 Nylon cable ties.
- Features** Very flexible locking latch. Bell-mouthed-head allows easier threading compared to regular ties. Strongest possible locking power without damaging the serrations of the tie. Quick fastening and simple locking mechanism. Black ties are UV resistant.

## Clear Cable Ties

Part Number (100 pack)	Length mm	Width mm
<b>8341</b>	78	2.5
<b>8342</b>	103	2.5
<b>8343</b>	143	3.2
<b>8344</b>	191	4.5
<b>8345</b>	368	4.8
<b>8346</b>	378	7.6

## Black UV Resistant Cable Ties

Part Number (10 pack)	Part Number (100 pack)	Length mm	Width mm
	<b>8341UV</b>	78	2.5
	<b>8342UV</b>	100	2.5
<b>8333UV</b>	<b>8343UV</b>	153	3.2
<b>8334UV</b>	<b>8344UV</b>	202	4.5
<b>8335UV</b>	<b>8345UV</b>	382	4.8
<b>8336UV</b>	<b>8346UV</b>	382	7.6

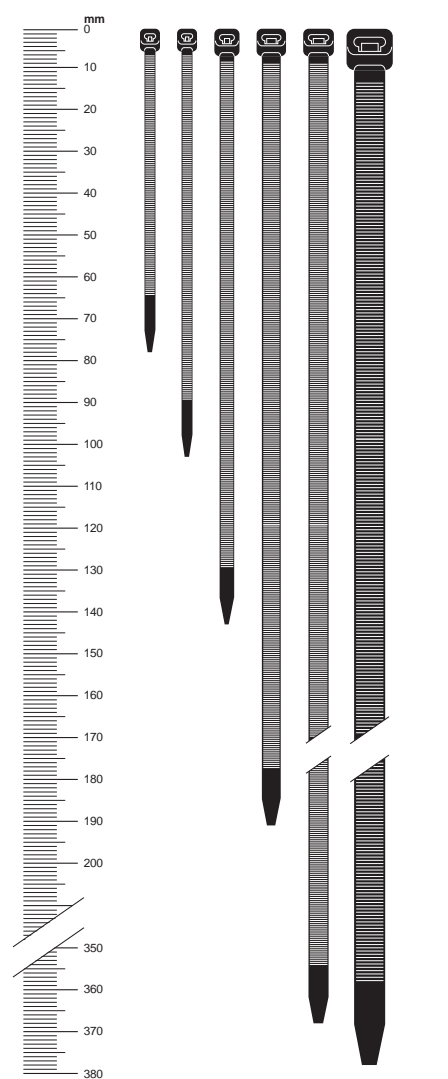


Diagram not to scale

## Crimping Tool

Spring return hand grips. Cuts cable. Strips insulation from cable measuring 2.5 to 6mm (0.75-6mm<sup>2</sup>) in diameter. Crimps all popular insulated and non-insulated terminals.



## Crimping Tool

**Part Number**  
8272

## Crimping Tool

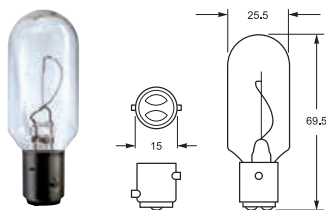
Adjustable ratchet mechanism and spring release ensure a perfect crimp every time for insulated terminals



## Crimping Tool

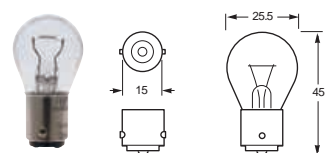
**Part Number**  
8273

## Replacement Bulbs



## Navigation Lamp Bulbs. BAY15d Base

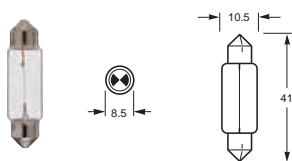
Voltage	Wattage	Base	Part Number
12V	>10/12V	BAY15d	EA 1210
12V	25/30	BAY15d	EA 1225
24V	>10/12V	BAY15d	EA 2410
24V	25/30	BAY15d	EA 2425



## Interior Lamp Bulbs. BAY15s Base

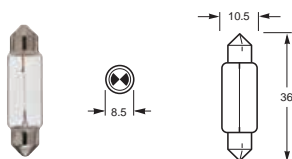
Voltage	Wattage	Base	ECE Category	Part Number
12V	5	BA15s	R5W	G125
24V	5	BA15s	R5W	G245
12V	10	BA15s	R10W	G1210
24V	10	BA15s	R10W	G2410
12V	21/5	BA15d	P21/5W	S1221/5V

Voltage	Wattage	Base		Part Number
12V	18	BA15s		R1218
24V	18	BA15s		R2418
12V	21	BA15s	P21W	R1221
24V	21	BA15s	P21W	R2421

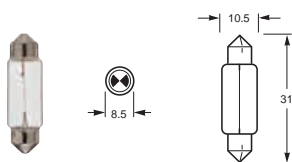


## Navigation Lamp Bulbs. SV8.5 Base

Voltage	Wattage	Base	Part Number
12V	10	SV8.5	K1210
24V	10	SV8.5	K2410



Voltage	Wattage	Base	ECE Category	Part Number
12V	5	SV8.5	C5W	L125
24V	5	SV8.5	C5W	L245

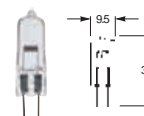


Voltage	Wattage	Base	Part Number
12V	10	SV8.5	N1210

## Replacement Bulbs

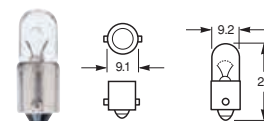
## Halogen Interior Lamp Bulbs. G4 Base

Voltage	Wattage	Base	Part Number
12V	5	G4	YM125
12V	10	G4	YM1210
12V	20	G4	YM1220
24V	20	G4	YM2420
24V	10	G4	YM2410



## Halogen Interior Lamp Bulbs. BA9s Base

Voltage	Wattage	Base	ECE Category	Part Number
12V	2	BA9s		H122
12V	6	BA9s		HL126X
12V	4	BA9s	T4W	HL124
24V	4	BA9s	T4W	HL244
12V	5	BA9s		YL125



## Deck Floodlight Bulb. GX5.3 Base

Voltage	Wattage	Base	Category	Part Number
12V	20	GX5.3	MR16	8GH 998 529-001
28V	20	GX5.3	MR16	8GH 998 529-011



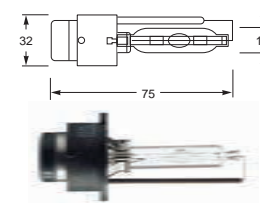
## Deck Floodlight and Search Light Bulbs. PK22s Base. H3

Voltage	Wattage	Base	Category	Part Number
12V	55	PK22s	H3	YC1255
24V	70	PK22s	H3	YC2470
12V	100	PK22s	H3	YC12100



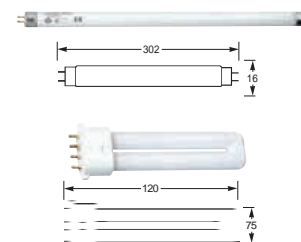
## Deck Floodlight Gas Discharge (HID) Bulbs. D2S

Colour Temp	Voltage	Wattage	Base	ECE Category	Part Number
6000K	12/24V	35	P32d-2	D2S	D2S



## Compact Fluorescent Tubes. TL8 and 2G7 Base

Colour	Voltage	Wattage	Base	Lumens	Part Number
Cool White	12/24V	8	TL8W	400 lm	TL8W/336J
Cool White	12/24V	7	2G7	400 lm	9.2642.02
Cool White	12/24V	11	2G7	900 lm	9.2643.02





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