

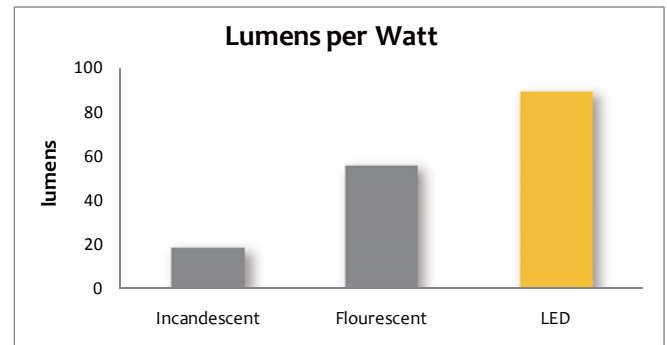
# YIS Marine LED Lights for Boats

## Next Generation of Marine Lighting

LED is the next generation of lighting. With its lower power consumption, vibration-proof and better durability comparing to traditional halogen lights, the LED lights are an ideal solution on the board. The performance of LED lights, however, is based heavily on their electronic circuit design, which is very different from traditional luminaire using incandescent lights. With more than 20 years of expertise in automotive electronics designing and manufacturing, YIS Marine is able to provide high performance LED light products with competitive costs.

### Low Power Consumption

Low power consumption means longer cruising time on the sea. As of 2015, the latest LED technology can generate around 80-100 lumens per watt, while the traditional incandescent lights generate less than 20 lumens per watt. In fact, EU has banned use of incandescent lights since 2012, and planned to ban the halogen lights due to their low lighting efficiency.



### Life & Durability



Typically LED's has a lifespan for about 20,000 – 50,000 hours, more than 20 times of that of an incandescent light. LED also has no filaments to break, and thus are very vibration proof. Most of YIS Marine lights are built in one part without replaceable lamps, and some outdoor models are fully sealed to ensure great durability against moisture and shocks.

### Electronic Circuit Design



Electrical systems on the boats are very complex and sophisticated systems. DC power supply on board can vary from 10 – 15V under different circumstances (for a 12V system). That's why almost all of our LED lights come with Constant-Current technology that keeps the LED output stable despite the input voltage variation. As radio communication is crucial on the boats, all of our LED lights also have EMI suppression design and approved by the EU standards  $\text{CE}$ .

### Cost

The cost of LED has been dropping consistently each year. This, combining with its steady growth in lighting efficiency, makes LED lights become more and more suitable to replace traditional incandescent lights used on the boat. YIS Marine re-design LED lights on board by removing or modifying parts that were necessary for halogen lights but no longer needed for LED lights. By designing lights exclusively for the LED technology, we are able to build cost-effective LED lights with much better performance than traditional halogen lights.

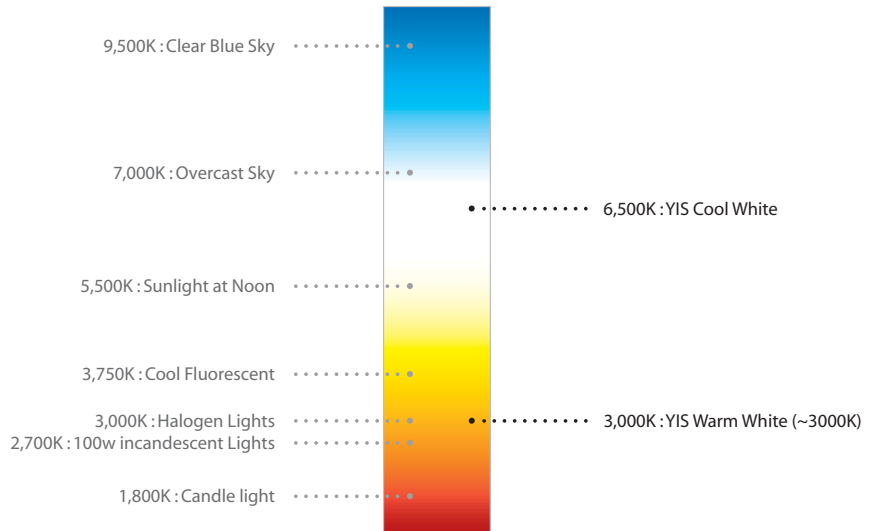
## LED Terminologies

LED is the next generation of lighting. With its lower power consumption, no heat radiation and better durability comparing to traditional halogen lights, the LED lights are an ideal solution on the board. Here is some of the important terminologies of LED lights:

### Color Temperature (Unit: K (Kelvin))

Color temperature is conventionally stated in Kelvin (K), the unit of absolute temperature. The color temperature is the temperature that makes an ideal black body radiator radiate comparable hue as the light source.

Usually, color temperatures over 5,200K are called cool colors, color temperature below 3500K are called warm colors.



### Luminous Flux (Unit: lm(lumens) )

The total amount of light emitted from a lamp. The higher lumen is, the more intense the light output. Luminous Flux does not vary with distances.

### Illuminance (Unit: Lux )

Illuminance is the total luminous flux falling on a surface. It shows the intensity of the incident light. Mathematically,

$$\text{Illuminance (Lux)} = \text{Lumens (lm)} / \text{area(m}^2\text{)}$$

where area is the illuminated area of the light source. The farther the surface are away from the source, the larger the area would be, and hence the smaller illuminance, while the Luminous Flux remains the same.

Example:

If a light fixture with 100 lumens lights up an area of 1 square meter, the Illuminance would be 100 lux. If, however, the same fixture lights up 10 square meters (at a farther place), the illuminance would be reduced to only 10 lux.

## Types of LEDs

### SMD LEDs (Surface Mounted Devices)



SMD LEDs are bright and economical LEDs that are mounted on PC Boards and hence are easy for mass production. With the SMD LED becoming brighter and brighter, they have become mainstream of marine lights.



### High Power LEDs



High power LEDs use from 1 watts to as much as 500 watts in a single package and thus has the ability to provide unparalleled brightness within limited area comparing to SMD LEDs. The heat dissipation issue is an important factor in designing High-Power LED lights. YIS Marine utilizes all-aluminum LED holders/enclosures for our High Power LED product lines.



# WaveLED Marine LED Lights Series

Unique Marine Wave-shaped LED Lights from YIS

## WaveLED Ceiling Light

LC004W

### WaveLED Ceiling Light - Dual Color

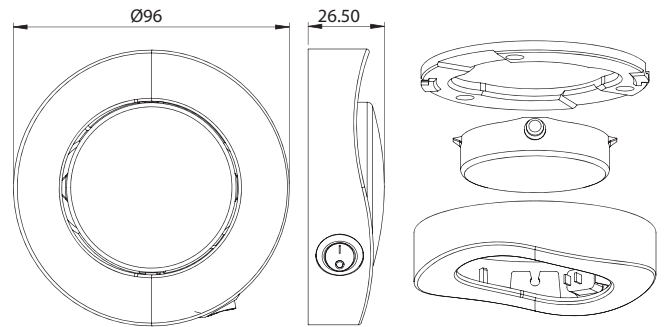
LC004WB / LC004WR



LC004W-W



LC004WB-S / LC004WR-S (Dual Color)



## Features

- Unique wave shape enclosure design
- Easy-to-install bayonet latch design
- Matte surface allows soft and smooth light output
- Completely sealed LED Module
- Built-in ON-OFF switch
- Adjustable light angle
- Constant-Current technology design ideal for marine lighting
- DC 12V-24V dual voltage rating
- 2 different enclosure colors available

### Additional Features for LC004WB/LC004WR

- White/Blue or White/Red dual light color
- Cost-effective built-in ON-OFF-ON switch

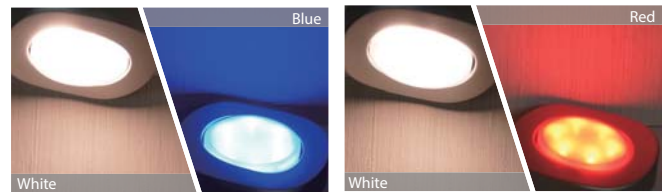
## Specifications

- Lighting Source | SMD LED x 6 (120lm)
- Color Temperature | 2900-3200K (Warm White)
- Voltage Rating | DC 12-30V
- Power Consumption | 1.5W
- Note |

### Dual Color LC004WB / LC004WR

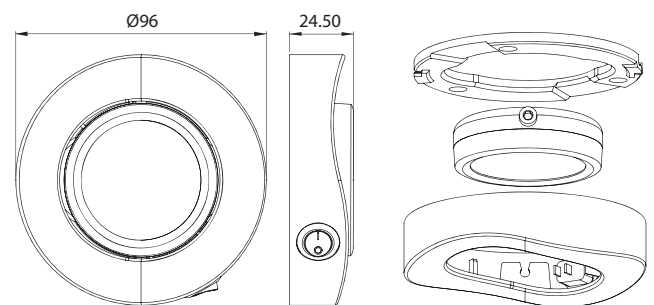
LC004WB

LC004WR



## WaveLED Ceiling Light / Spotlight with High Power LED

LC003-3x1W



## Features

- Unique wave shape enclosure design
- Easy-to-install bayonet latch design
- Specially designed optical lens provide bright and focused spot light
- 3 x 1 Watt super bright High Power LED
- Built-in ON-OFF switch
- Adjustable light angle
- DC 12V-24V dual voltage rating

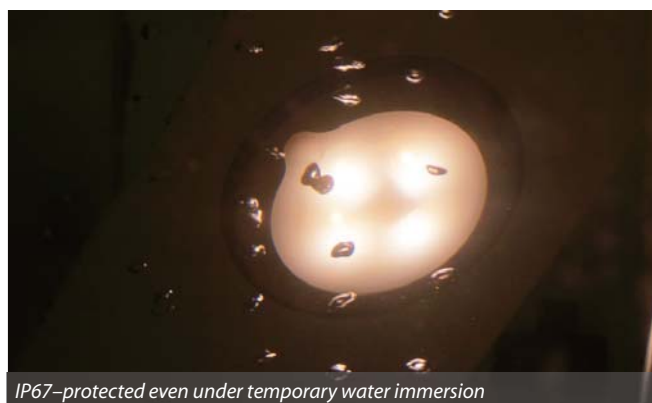
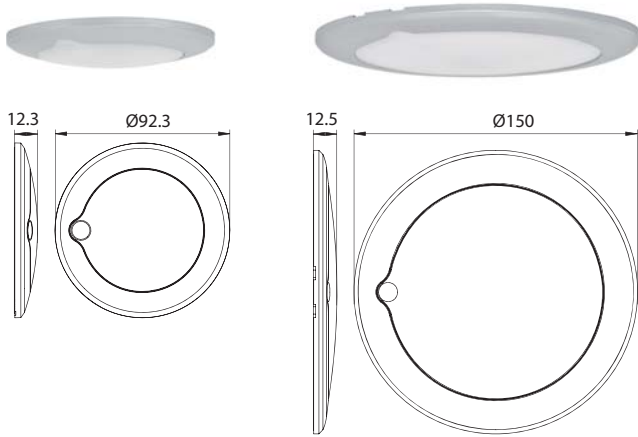
## Specifications

- Lighting Source | High Power LED (1W) x 3
- Color Temperature | 3000-3300K (Warm White)
- Voltage Rating | DC 12-30V
- Power Consumption | 3.24W
- Note |

**DishLED Dimmable Ceiling Light with Touch Button**

LC005-95

LC005-150



**LC005** are ultra-thin ceiling lights with dimmable function and a low profile touch button. They have the same un-intrusive like outlook as the recessed light fixtures yet are also as easy to install as any other surface mount ceiling lights. It can be turned on/off or dimmed linearly with a simple touch, and the memory function allows it to memorize previous brightness level when turned back on. The cut-off memory feature allows multiple DishLEDs to be controlled centrally by a single switch. The completely sealed design made it perfect for use in marine applications (IP67).

**Features**

- Ultra-thin surface mount (only 12mm in thickness)
- Low profile touch button
- Linear (non-step) dimming allowing brightness adjustment to any desirable level (10-100%)
- Memory feature – remembering previous brightness level when turned back on
- Power cut-off memory feature allowing central control of several DishLED lights
- Constant-current technology design ideal for marine lighting
- Completely sealed (IP67) – protected even under temporary water immersion

**Specifications****LC005-95**

- Light Source | Super Bright SMD LED x 4 (200lm)
- Color Temperature | 3000 – 3300K (Warm White)
- Voltage Rating | DC 9 – 30V (Multi-volt)
- Power Consumption | 2.4W
- Note | IP67 **CE**

**LC005-150**

- Light Source | Super Bright SMD LED x 12 (400lm)
- Color Temperature | 3000 – 3300K (Warm White)
- Voltage Rating | DC 9 – 30V (Multi-volt)
- Power Consumption | 4.5W
- Note | IP67 **CE**

# WaveLED Marine Reading Light Series

Cost-effective Reading Lights with Trendy Design



## Description

The WaveLED reading light series are modern design, good performance and cost-effective LED reading lights. While High Power LED version provides unparalleled focused light output, the SMD version can provide wider angle and smoother output with much lower cost. There is also a dimmable SMD LED version with touch button. With economical plastic housing, built-in switches, and its easy-to-install feature, this series is ideal for sale in the aftermarket.

## Features

- Unique wave shaped base design
- New screw-free easy-to-install bayonet catch design
- Built in switch for easy wiring
- Adjustable light angle
- 3 Versions available: high power LED, cost-effective SMD LED, and dimmable touch button version



## 3 Versions of WaveLED reading lights



### High Power LED with Condenser Lens

High power LED provides unparalleled brightness through the ultra clear condenser lens, the high power LED version can light up as far as 5 meters away, suitable for reading or spotlight applications.

### SMD LEDs with matte lens

SMD LED version is a wide angle, lower cost alternative. This version is also more suitable for reading at a closer range.



### Dimmable SMD LED version with TOUCH button

SMD LED version with additional dimming feature and water-resistant touch button design.



**WaveLED Reading Light**

LR001-1W

**WaveLED Reading Light (SMD Version)**

LR001-SMD

**WaveLED Dimmable Reading Light with Touch Button**

LR001-TOUCH



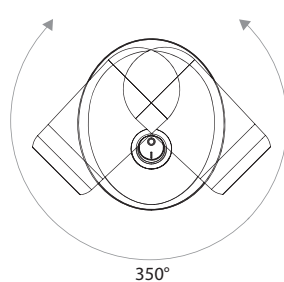
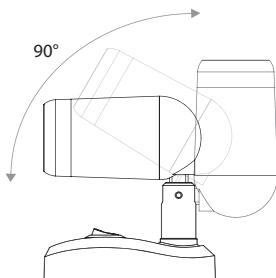
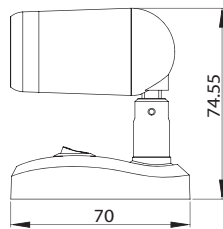
LR001-1W



LR001-SMD



LR001-TOUCH

**Features**

- Compact size with powerful output
- New screw-free bayonet catch wave base design
- 350° rotatable horizontally and 90° vertically leaving no blind spot
- Constant-Current technology design ideal for marine lighting
- Dual Voltage rating for both 12V & 24V systems

*Additional Feature for LR001-TOUCH*

- Linear (non-step) dimming allowing brightness adjustment to any desirable level
- Memory feature - remembering previous brightness level when turned back on
- Low profile touch button design

**Specifications***LR001-1W(High Power LED)*

- Lighting Source | High Power LED (1W) x 1 with condenser lens
- Color Temperature | 3000-3300K (Warm White)
- Voltage Rating | DC 9-30V
- Power Consumption | 1.32W
- Note | **CE**

*LR001-SMD / LR001-TOUCH*

- Lighting Source | 8 super bright SMD LED (160lm)
- Color Temperature | 2900-3200K (Warm White)
- Voltage Rating | DC 10-30V
- Power Consumption | 1.68W
- Note | **CE**

**WaveLED Gooseneck Reading Light**

LR011-1W-130 / LR011-1W-330

**WaveLED Gooseneck Reading Light (SMD Version)**

LR011-SMD-130 / LR011-SMD-330

**WaveLED Dimmable Gooseneck Reading Light with Touch Button**

LR011-TOUCH-130 / LR011-TOUCH-330



LR011-1W-130



LR011-1W-330



LR011-SMD-130



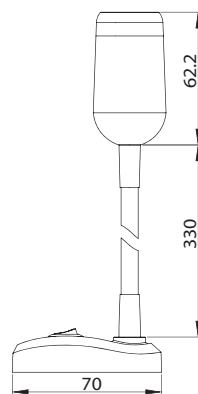
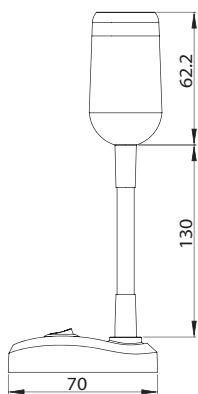
LR011-SMD-330



LR011-TOUCH-130



LR011-TOUCH-330

**Features**

- Compact size with powerful output
- New screw-free bayonet catch wave base design
- Bendable gooseneck allows more freedom of light positions
- Constant-Current technology design ideal for marine lighting
- Dual Voltage rating for both 12V & 24V systems

*Additional Features for LR011-TOUCH*

- Linear (non-step) dimming allowing brightness adjustment to any desirable level
- Memory feature – remembering previous brightness level when turned back on
- Low profile touch button design

**Specifications***LR011-1W(High Power LED)*

- Lighting Source | High Power LED (1W) x with condenser lens
- Color Temperature | 3000-3300K (Warm White)
- Voltage Rating | DC 9-30V
- Power Consumption | 1.32W
- Note |  $\text{CE}$

*LR011-SMD / LR011-TOUCH*

- Lighting Source | 8 super bright SMD LED (160lm)
- Color Temperature | 2900-3200K (Warm White)
- Voltage Rating | DC 10-30V
- Power Consumption | 1.68W
- Note |  $\text{CE}$

**WaveLED Dual Color Chart Reading Light**  
LR012-330



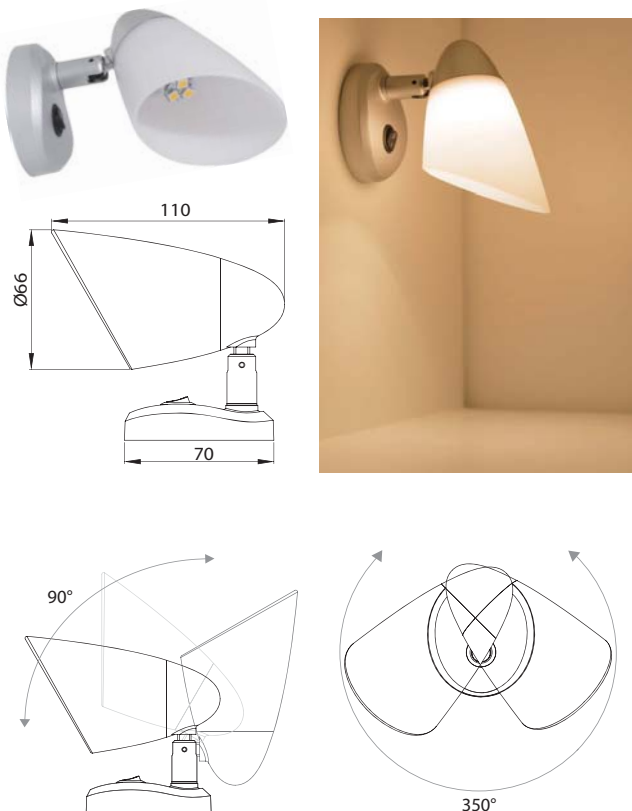
**Features**

- New screw-free bayonet catch wave base design
- Dual Light Colors: Bright white light for daytime; Red LED light for night vision
- Built-in ON-OFF-ON switch
- Bendable gooseneck allows more freedom of light positions
- Constant-Current technology design ideal for marine lighting
- Dual Voltage rating for both 12V & 24V systems

**Specifications**

- Lighting Source | White: 8 super bright SMD LED (160lm) / 1 Red 5050 SMD LED
- Color Temperature | 6500K (White)
- Voltage Rating | DC 12V-30V
- Power Consumption | 1.56W
- Note | **CE**

**WaveLED Cabin / Reading Light**  
LR002



**Features**

- New screw-free bayonet catch wave base design
- Economical, light weight PolyCarbonate shielding
- Replaceable G4 LED bulbs
- Built-in ON-OFF switch
- 350° rotatable horizontally and 90° vertically leaving no blind spot

**Specifications**

- Lighting Source | G4 LED Bulbs 2W (200-230lm)
- Color Temperature | 2800-3200K (Warm White)
- Voltage Rating | DC 10 - 30V
- Current Consumption | 2W
- Note | **CE**

**Replaceable G4 LED Bulbs for LR002**  
LR-G4-2W





**LED Reading Light with USB Charging Socket**

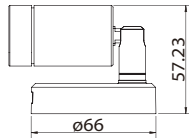
LR003

LR013-130

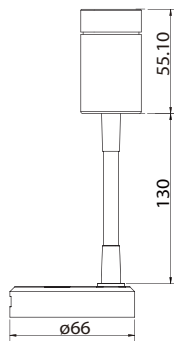
LR013-330

New  
Product

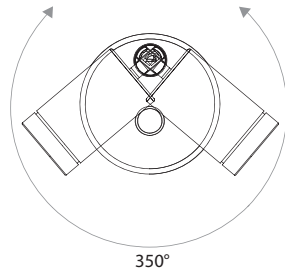
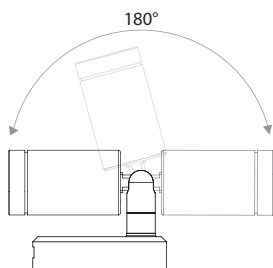
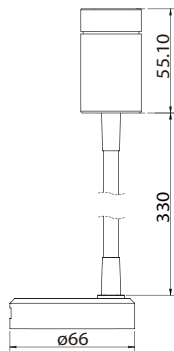
LR003



LR013-130



LR013-330

**Features**

- Chrome plated plastic housing for premium feeling with low cost
- Compact size with powerful output
- Convenient 1 port 2.4A USB Charge socket on base (Compatible with latest iPad)
- Screw-free bayonet catch base design
- Low profile touch button design
- Constant-Current technology design ideal for marine lighting
- Dual voltage rating for both 12V & 24V system

**Specifications**

- Lighting Source | 4 x super bright SMD LED (160lm)
- Color Temperature | 3000 - 3300K (Warm White)
- Voltage Range | DC 10V - 30V
- Power Consumption | 1.68W (USB not charging) 15.5W Max (USB Charging)
- Note | **CE**



Convenient USB Charging Port on Light Base

\* This product is under development, all specifications and features are subject to change. Contact sales for final specs.

# Marine LED Courtesy Lights

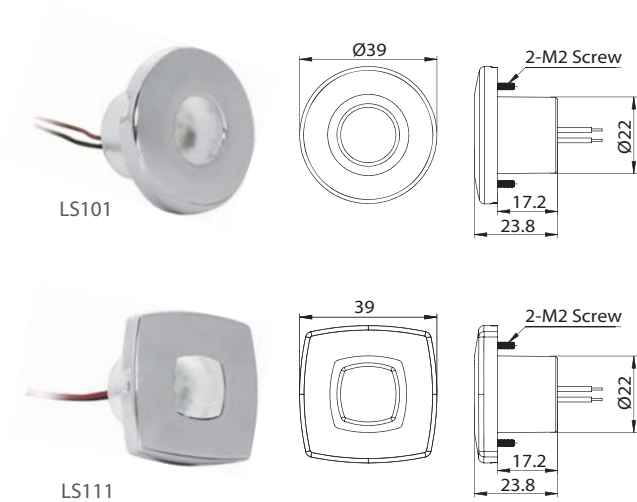
YTK CO.,LTD.

[Http://www.ytk-group.co.jp](http://www.ytk-group.co.jp)

## LED Step Lights / Courtesy Light with Stainless Steel Faceplate

LS101(Round)

LS111(Square)

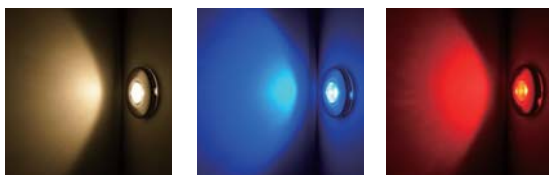


## Features

- Polished marine grade stainless steel (SAE 316) faceplate
- Completely sealed – completely waterproof even undertemporary water immersion (IP67)
- Compact size and easy to install
- Matte Surface allowing soft and smooth light output
- LED Colors available in Warm White, Blue, Red

## Specifications

- Lighting Source | SMD LED
- Voltage Rating | DC 12V
- Power Consumption | 0.25W
- Note | IP67  $\text{CE}$



LS101W

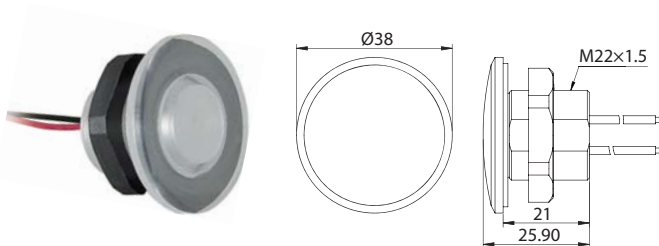
LS101B

LS101R

## Economical LED Step Lights / Courtesy Light

LS102

Best Seller



## Features

- Completely sealed – completely waterproof even undertemporary water immersion (IP67)
- Compact size and easy to install
- Matte Surface allowing soft and smooth light output
- LED Colors available in Warm White, Blue, Red
- Also applicable as live well bait tank light

## Specifications

- Lighting Source | SMD LED
- Voltage Rating | DC 12V
- Power Consumption | 0.25W
- Note | IP67  $\text{CE}$



LS102W

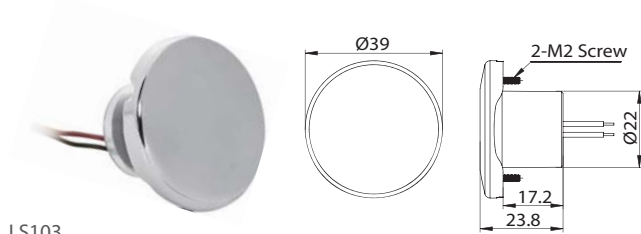
LS102B

LS102R

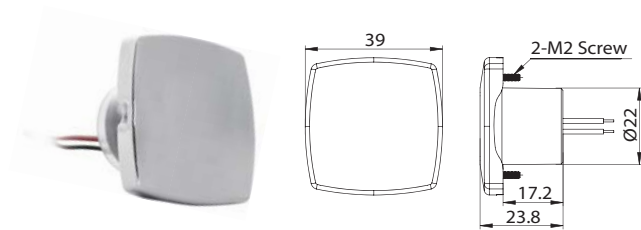
**LED Step Light / Courtesy Light with Single or Double Light Rays**

LS103 (Round)

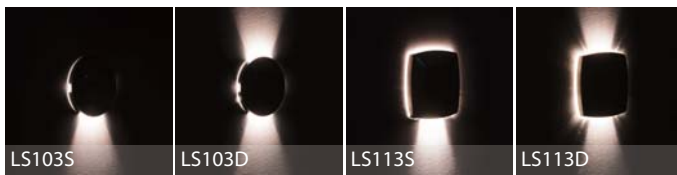
LS113(Square)



LS103



LS113



LS103S

LS103D

LS113S

LS113D

**Features**

- Polished marine grade stainless steel (SAE 316) faceplate
- Single or Double light rays provides elegant illumination
- Completely sealed – completely waterproof even undertemporary water immersion (IP67)
- Compact size and easy to install
- Available in warm white or cold white color
- Dual voltage rating for both 12V & 24V systems

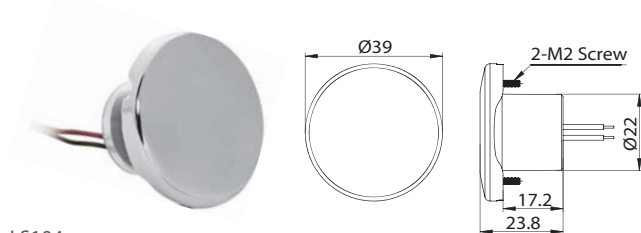
**Specifications**

- Lighting Source | SMD LED
- Color Temperature | 2900-3200K(Warm White) / 6500K (Cold White)
- Voltage Rating | DC 10-30V
- Power Consumption | 0.24W(Single Ray) / 0.36W (Double Ray)
- Note | IP67

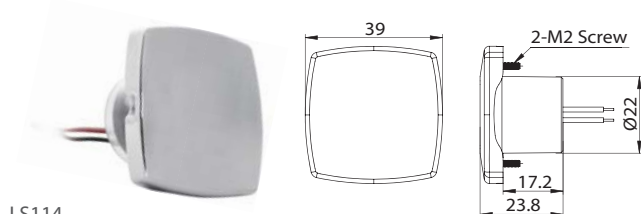
**LED Step Light / Courtesy Light with Light Ring**

LS104 (Round)

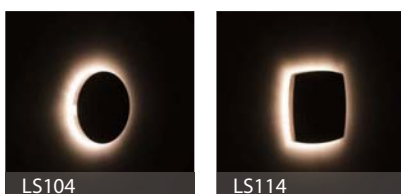
LS114 (Square)



LS104



LS114



LS104

LS114

**Features**

- Polished marine grade stainless steel (SAE 316) faceplate
- Sun eclipse like light ring effects
- Completely sealed – completely waterproof even undertemporary water immersion (IP67)
- Compact size and easy to install
- Available in warm white or cold white color

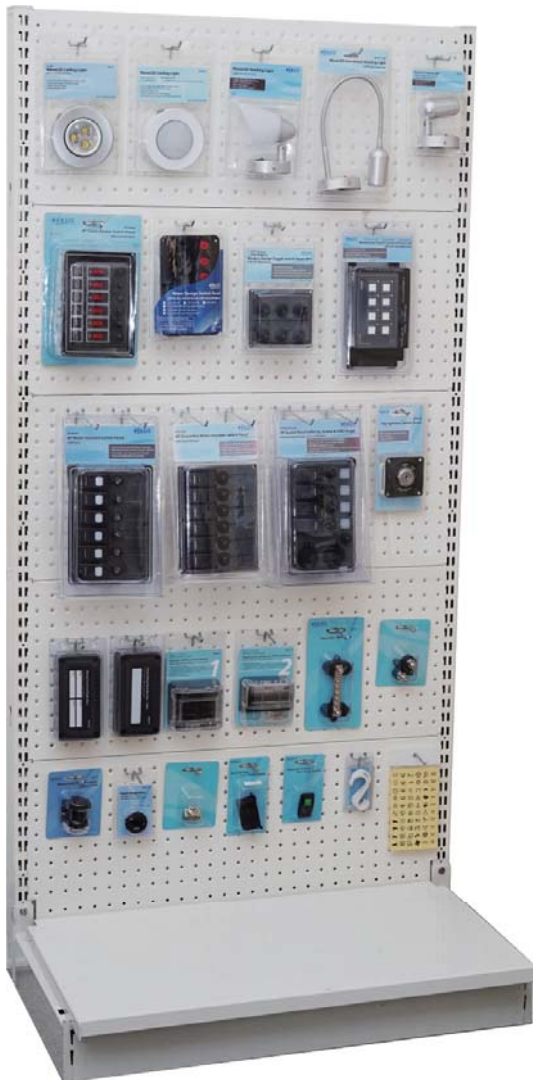
**Specifications**

- Lighting Source | SMD LED
- Voltage Rating | DC 12V
- Power Consumption | 0.25W
- Note | IP67

# Blister Package for Retail Display

YTK CO.,LTD.

<http://www.ytk-group.co.jp>



Almost all of YIS Marine's quality products come with blister package ready for retail display. Designed for the aftermarket, our blister package typically includes customizable label stickers, instruction manual and installation accessories, everything consumers need to install the products themselves. All blisters packages are made in Taiwan with good quality that matches the products within them.

In addition to supplying our quality products, we also provide marketing support like blister card design, instruction manual or even support for customer's catalogue design. Customer's logo or blister cards are also possible.

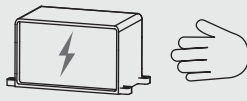
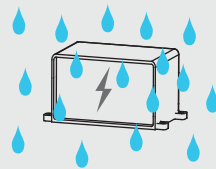
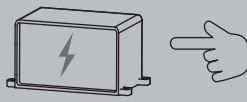
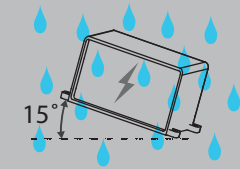
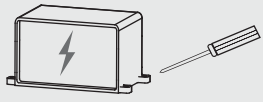
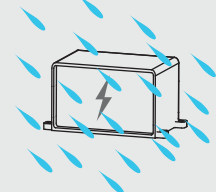
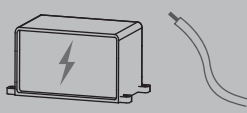
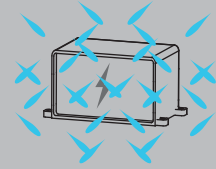
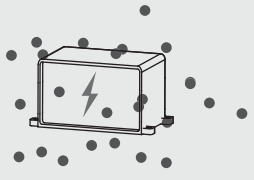
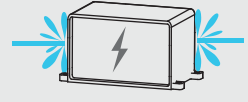
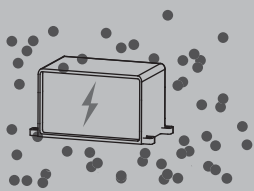
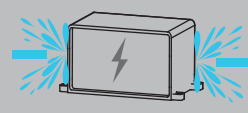
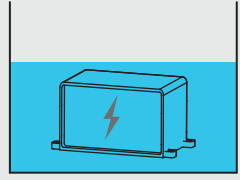
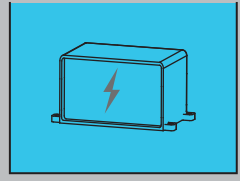


Typical contents of products in YIS Marine switch panel package

# Appendix: IP Rating Guide

The IP (Ingress Protection) Rating refers to the different levels of protection a product provides against foreign objects (such as fingers, tools, wires and dust) and water ingress.

**IP**    
 (1) (2)

(1) Protection Against Solids		(2) Protection Against Water	
<b>1</b>	 <p>Protected against solid objects greater than 50mm, such as a hand.</p>	<b>1</b>	 <p>Protected against vertically falling drops of water. Limited ingress permitted.</p>
<b>2</b>	 <p>Protected against solid objects greater than 12.5mm, such as a finger.</p>	<b>2</b>	 <p>Protected against vertically falling drops of water with enclosure tilted up to 15 degrees from the vertical. Limited ingress permitted.</p>
<b>3</b>	 <p>Protected against solid objects greater than 2.5mm, such as a screwdriver.</p>	<b>3</b>	 <p>Protected against sprays of water up to 60 degrees from the vertical. Limited ingress permitted.</p>
<b>4</b>	 <p>Protected against solid objects greater than 1.0mm, such as a wire.</p>	<b>4</b>	 <p>Protected from water splashed from any direction. Limited ingress permitted.</p>
<b>5</b>	 <p>Dust Protected: Limited ingress of dust permitted. Dust ingress should not affect the function of the equipment.</p>	<b>5</b>	 <p>Protected against jets of water. Limited ingress permitted.</p>
<b>6</b>	 <p>Dust Tight: No ingress of dust.</p>	<b>6</b>	 <p>Protected from powerful water jets from any direction. Limited water ingress permitted.</p>
		<b>7</b>	 <p>Protected against the effects of temporary immersion (30 mins) in water between 15cm to 1m.</p>
		<b>8</b>	 <p>Protected against the effects of long period immersion in water under pressure.</p>