浙江华耕电子科技有限公司

ZHEJIANG HUAGENG ELECTRONIC TECHNOLOGY CO. LTD

# ELECTRICAL PARTS FOR MARINE RV & CARAVAN

# Company profile

浙江华耕电子科技有限公司成立于2018年，自有现代化独栋厂房，公司坐落于美丽的港口城市宁波，我们是一家具备科技创新能力设计、研发、生产、销售服务为一体专业制造商。

华耕科技立志成为12V&24V行业的领导者，主要为四驱车、露营车、拖车、房车、休闲车、游艇以及户外休闲市场提供完整的电源系统解决方案和应急启动解决方案。公司主要产品有12V&24V智能应急启动电源、整车电源控制系统、船用电源控制系统、12V-48V电源集成控制箱、高压直流继电器12V-48V锂电池组、 电池充电器、车载逆变器、以及12V&24V配件。我们拥有世界先进的研发核心技术，高效优质的供应链配套资源先进的生产设备和检测设备。自主研发产品获得各项产品专利以及产品设计均符合相关认证要求。我们支持OEM和ODM合作方式，我们始终坚持三个第一的经营理念：品质第一、客户第一、服务第一为经营理念。 以质量求生存，以科技创新技术求发展，秉持“科技创新、 持续改进、 质量保证、客户满意的经营方式”，力争发展成为国际专业性最强、规模最大的企业之一。竭诚欢迎各界精英人士，携手共创美好明天。我们将始终坚持为全球创造商业价值和社会价值而努力奋斗终身。

我们的愿景：成为细分领域世界知名品牌，成为实现所有合作伙伴梦想的平台。

我们的核心价值观：创新、诚信、共赢，责任、真诚、感恩、自信、快乐

我们的使命：让车船电路系统安全无忧，让生活更美好。

Zhejiang Huageng Electronic Technology Co., Ltd. was established in 2018 and operates in a modern standalone factory located in the beautiful port city of Ningbo. We are a professional manufacturer that integrates technological innovation, design, R&D, production, and sales services.

Huageng Technology is committed to becoming a leader in the 12V & 24V industry, primarily providing complete power system solutions and emergency start solutions for four-wheel drive vehicles, camping vehicles, trailers, recreational vehicles, leisure vehicles, yachts, and the outdoor leisure market. Our main products include 12V & 24V intelligent emergency start power supplies, vehicle power control systems, marine power control systems, 12-48V power integration control boxes, high-voltage DC relays, 12V-48V lithium battery packs, battery chargers, inverters, and 12V & 24V accessories.

We possess the advanced world-class core R&D technologies, efficient and high-quality supply chain resources, advanced production and testing equipments. Our independently developed products have obtained various patents, and our product designs all meet the relevant certification requirements.We support the OEM and ODM cooperation and consistently adhere to our business philosophy: "Quality first, Customer first and Service first." We insist in "Quality first" as foundation, develop through technological innovation, and uphold a business belief of "Technological innovation, Continuous improvement, Quality assurance, and Customer satisfaction." Our goal is to become one of the strongest and largest international professional enterprises. We sincerely welcome all the elites to join us to create a better tomorrow.

We are committed to creating global commercial and social value for life, and will strive for a lifetime.

Our vision: to become a world-renowned brand in our niche market and a platform for realizing the dreams of all our partners.

Our core values: Innovation, Integrity, Mutual Benefit, Responsibility, Sincerity, Gratitude, Self-confidence, and Happiness.

Our mission is to ensure that vehicle and vessel electrical systems are safe, and to make life better.

77

# LED lights For Boats and RV

- Marine LED Lights for Boats
- WaveLED Marine LED Lights Series
- WaveLED Reading Light Series
- LED Courtesy Lights

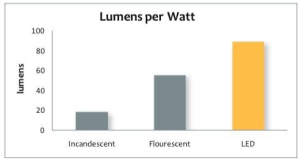
# AMOMD Marine LED Lights for Boats

## 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, AMOMD 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 CE .

### Cost

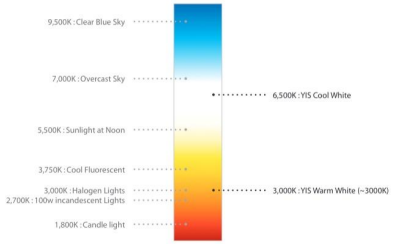
The cost of LED has been dropping consistently each year. This, combing with its steady growth in lighting efficiency, makes LED lights become more and more suitable to replace traditional incandescent lights used on the boat. YIS Marine re-design LED lights on board by removing or modifying parts that 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,

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

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.

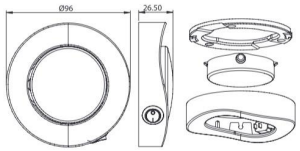
**High Power LEDs**

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 AMOMD

**WaveLED Ceiling Light**
AOD3930W
**WaveLED Ceiling Light - Dual Color**
AOD3930WB / AOD3930WR




## 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

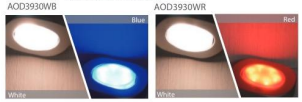
Additional Features for AOD3930WB/AOD3930WR

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

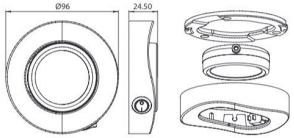
## Specifications

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

**Dual Color LC004WB / LC004WR**




**WaveLED Ceiling Light / Spotlight with High Power LED**
AOD3931



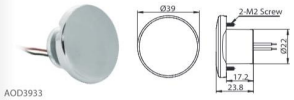

## Features

- 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

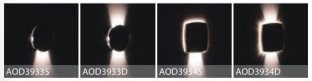
- Lighting Source | High Power LED (1W) x 3
- Color Temperature | 3000-3300K (Warm White)
- Voltage Rating | DC 12-30V
- Power Consumption | 3.24W
- Note | CE

**LED Step Light / Courtesy Light with Single or Double Light Rays**
AOD3933
AOD3934



AOD3933

AOD3934



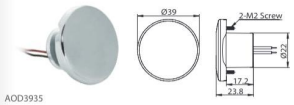

## Features

- 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 CE

**LED Step Light / Courtesy Light with Light Ring**
AOD3935
AOD3936



AOD3935

AOD3936

## Features

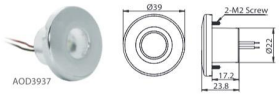
- Polished marine grade stainless steel (SAE 316) faceplate
- Sun eclipse like light ring effects
- Completely sealed – completely waterproof even undertemporary water immersion (IP67)
- Compact size and easy to install
- Available in warm white or cold white color

## Specifications

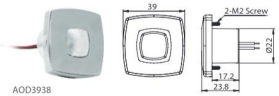
- Lighting Source | SMD LED
- Voltage Rating | DC 12V
- Power Consumption | 0.25W
- Note | IP67 CE

# Marine LED Courtesy Lights

**LED Step Lights / Courtesy Light with Stainless Steel Faceplate**
AOD3937
AOD3938



AOD3937



AOD3938

## 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 CE

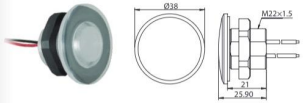
AOD3937W

AOD3937B

AOD3937R

**Economical LED Step Lights / Courtesy Light**
AOD3932

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

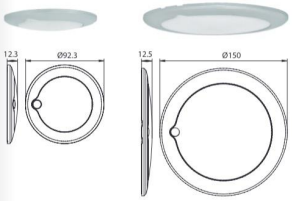
- Lighting Source | SMD LED
- Voltage Rating | DC 12V
- Power Consumption | 0.25W
- Note | IP67 CE

AOD3932w

AOD3932B

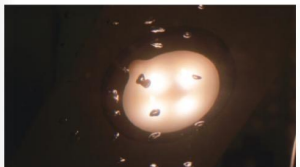
AOD3932R

**DishLED Dimmable Ceiling Light with Touch Button**
AOD3900-95
AOD3900-150



Non-stop linear dimming from 10%to 100%

Cut-off memory feature allows Central control of multipleDishLED lights


IP67–protected even undertemporary water immersion

**AOD3900** 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

AOD3900-95

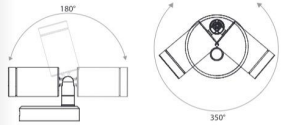
- Light Source | Super Bright SMD LED x 4 (200lm)
- Color Temperature | 3000 – 3300K (Warm White)
- Voltage Rating | DC 9 – 30V (Multi-volt)
- Power Consumption | 2.4W
- Note | IP67 CE

AOD3900-150

- 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

**LED Reading Light with USB Charging Socket**
AOD3939A
AOD3939B
AOD3939C

New Product




## 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 LightBase

**RV Awning LED Spotlight**
D4238
D4238B

## Specifications

- Rated voltage | 12V
- Power | 2.6 W
- Working environment temperature | - 40-65 ℃
- Color temperature | White light 6000K
- LED light beads | 5 pcs
- Material | Rubber base, ABS plastic shell
- Product color | Black / White
- Product size | 205 × 40 × 40mm
- Line length | 20 cm
- Waterproof grade | IP67

**Long strip with touch switch car interior lights**
AOD3944-B
AOD3944-W

## Specifications

- Rated voltage | 12V to 28 V
- Product power | 4.5W single lamp bead is 0.5W
- Material | PC shell, PC lens
- Color temperature | 5000-6000K
- LED light beads | 9 pcs
- Lumen output | 550 Lumen
- Product color | Black / White
- Product size | 256 × 35 × 28mm
- Waterproof grade | IP67
- Description | With switch control

**Long strip with touch switch car interior lights**
AOD3945-B
AOD3945-W

## Specifications

- Rated voltage | 12V to 28 V
- Product power | 9W single lamp bead is 0.5W
- Material | PC shell, PC lens
- Color temperature | 5000-6000K
- LED light beads | 18 pcs
- Lumen output | 1000Lumen
- Product color | Black / White
- Product size | 506 × 35 × 28mm
- Waterproof grade | IP67
- Description | With switch control

**20 pcs LED bead Awning Light**
D4395S
D4395W

## Specifications

- Rated voltage | 12V
- Power | 6W
- Working environment temperature | -20℃~+
- Lumens | 700LM+-20LM
- Color temperature | 6500K
- LED light beads | 20 pcs
- Material | UV ASA
- Product color | Silver / White
- Product size | 550 × 52 × 44mm
- Line length | 20 cm
- Waterproof grade | IP56

**RV Conversion 180° Rotatable Indoor Light with Switch**
D9410

## Specifications

- Function | Interior light
- Rated Voltage | 12V / 24V
- LED qty | 21 pcs SMD LED
- Color temperature | 4000K
- Draw | 12V 0.131A / 24V 0.066A
- Luminous | 150 LM
- Product size | 226 × 33 × 35mm

**Long strip with touch switch car interior lights**
D9411

## Specifications

- Function | Interior light
- Rated Voltage | 12V / 24V
- LED qty | 60 pcs SMD LED
- Color temperature | 4000K
- Draw | 12V 0.35A 24V 0.171A
- Luminous | 500 LM
- Product size | 475 × 33 × 35mm

**Infinitely Touch Dimmable Interior Reading Lights DC11-18V**
D4376S
D4376D

## Specifications

D4376S
- color temperatur | 6000-6500K
- LED light source | 5050 SMD
- LED number | 24 pcs
- Voltage | DC 11-18V
- Power | 3.6w
- Protection level | IP50
- Product size | 180 × 120 × 38mm

D4376D
- color temperatur | 6000-6500K
- LED light source | 5050 SMD
- LED number | 48 pcs
- Voltage | DC 11-18V
- Power | 6w
- Protection level | IP50
- Product size | 300 × 130 × 44mm

**Infinitely Touch Dimmable Interior Reading Lights DC11-18V**
D4347
D4348

## Specifications

D4347
- color temperatur | 4000-4500K
- LED number | 48 pcs
- Voltage | DC 10-24V
- Power | 6-7w
- Lumen | 560 LM
- Product size | 280 × 110 × 33mm

D4348
- color temperatur | 4000-4500K
- LED number | 24 pcs
- Voltage | DC 10-24V
- Power | 3-3.5w
- Lumen | 280 LM
- Product size | 180 × 110 × 33mm

**LED Stainless Steel 304 Navigation Lights 12VDC Red and Green Pair**
D2944

## Specifications

- Housing Material | Made of SUS304
- LED | 3 PCS Red+3 PCS Green
- Working Voltage | DC 12V
- Wattage | 1 W (RD)/1 W (GN)
- Effective Lumen | Green : 61.5Lumen; Red: 19Lumen
- water-proofing and dust- proofing | IP67
- Operation Temperature | - 20 ~+45
- Vertical mount navigation li ghts, Green starboard, 112.5°, Red port, 112.5°, visibility=2NM