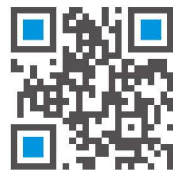


# Automotive LED



[www.edison-opto.com.tw](http://www.edison-opto.com.tw)  
[service@edison-opto.com.tw](mailto:service@edison-opto.com.tw)



## Edison Opto Corporation

4F., No.800, Zhongzheng Rd., Zhonghe  
Dist. 23586, New Taipei City, Taiwan  
T+ 886 2 82276996  
F+ 886 2 82276997

## Edison Opto (Dong Guan) Co., Ltd.

B16, No.9, Xiju Rd., Xi-Cheng Industrial Park, Heng-li,  
DongGuan City 523460, GuangDong Province, China  
T +86-769-8101-2708  
F +86-769-8101-2706

## Edison Opto USA Corporation

1809 Excise Avenue, Suite 201,  
Ontario, California 91761 USA  
T+1 909 284 9710  
F+1 909 460 8130

## Yangzhou Edison Opto Corp.

No.101, Hua-Yang West Rd., Yangzhou City  
225009, Jiangsu Province, China  
T +86-514-8777-7101  
F +86-514-8777-7102



*Edison Opto Lights Up the  
Way to Adventure.....*

# CONTENTS

About Edison Opto

Quality Milestone

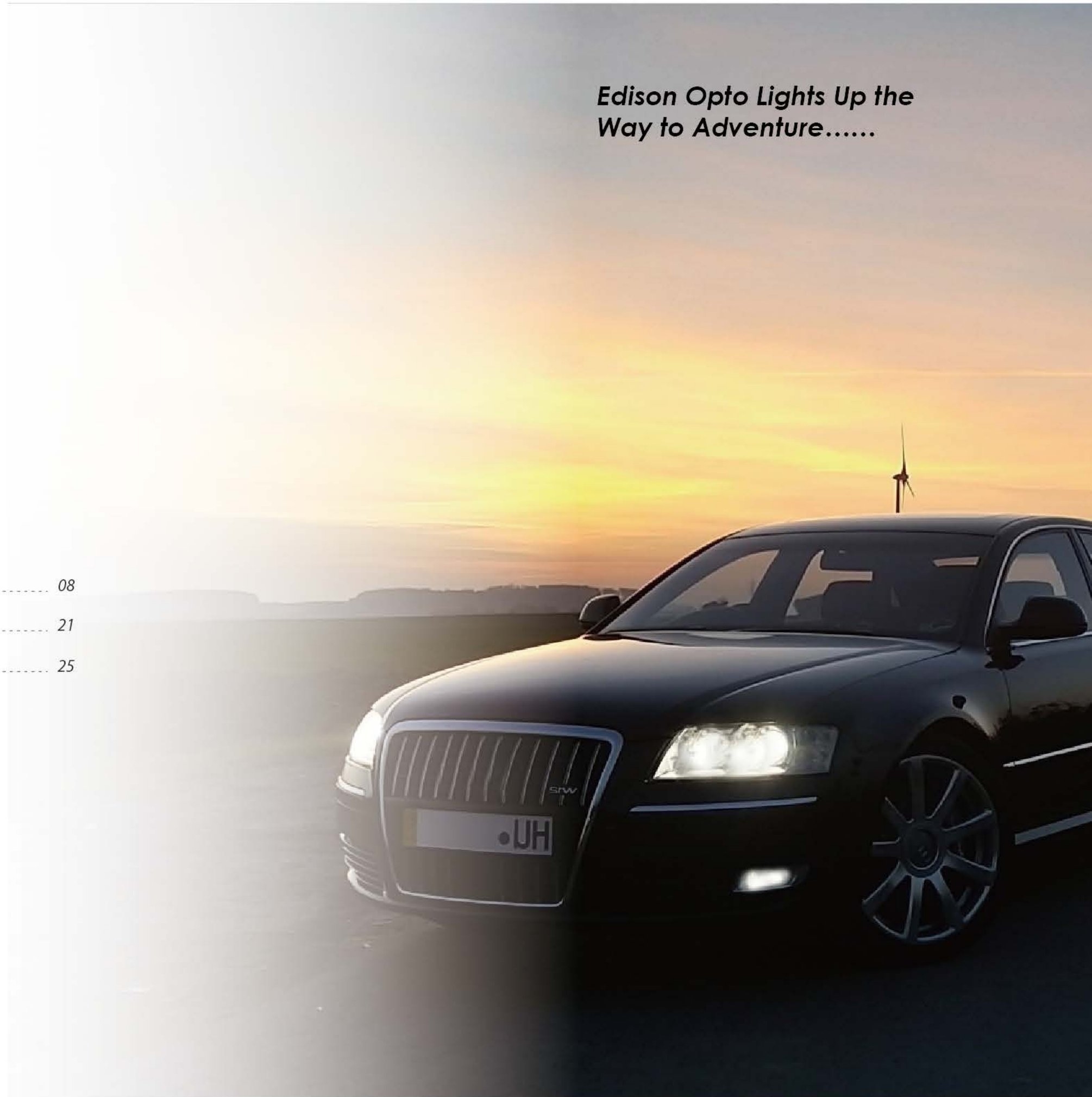
Customized Service

Product Series

Dong Feng ..... 08

Federal ..... 21

PLCC ..... 25



# About Edison Opto

Edison Opto from New Taipei, Taiwan, has established the R&D team with expertise in automotive LED lighting as well as a factory manufacturing automotive lighting products in Yangzhou. Besides, the company has also developed the sales department in Dong Guan and USA to explore the broad automotive LED lighting market.

All the products adopts unique phosphor film and flip chip technique in conformity with requirement to show distributed light pattern. From exteriors to interior applications, Edison Opto offers comprehensive solutions, including front fog light, daytime running light and low/high beam head light. With Edison's automotive LED, journey on the road has been lighten up.



## Main Business



Edison Opto has launched various automotive

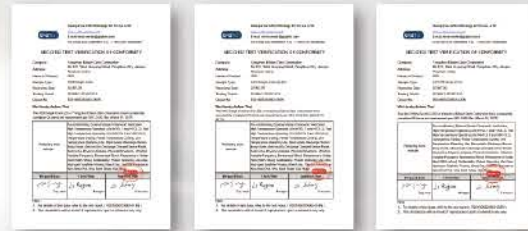
products to more than 100,000 Square Meters

# Quality Milestone

# Special workshop for automobile production

Company  
Founded

2019



AEC-Q102

2018



IATF 16949  
Certificate Approved

Edison Opto obtains IATF 16949 Automotive Quality Management System Certification

2015



LM 80 Laboratory  
Certification

Certified by TAF as a Product safety testing lab by UL

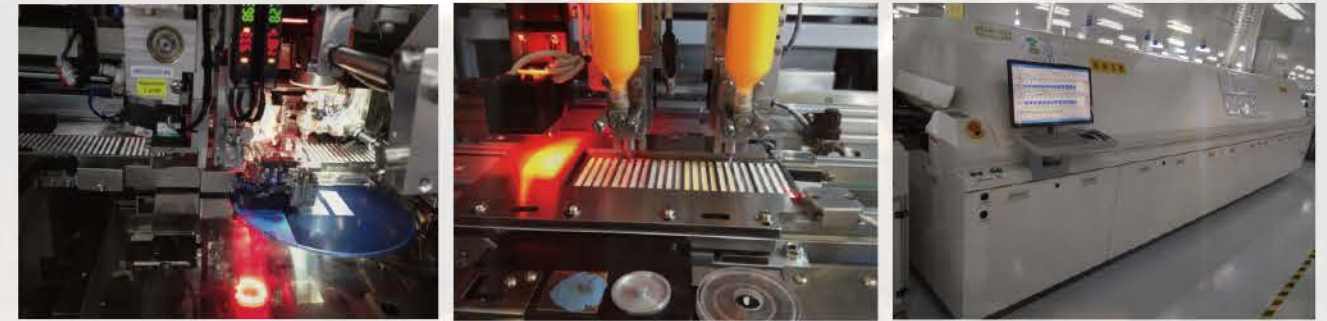
2001-2010



ISO 14001  
Certificate Approved  
Conscious of environmental issues



ISO 9001  
Certificate Approved  
Compliant with specification as well as customers' demand



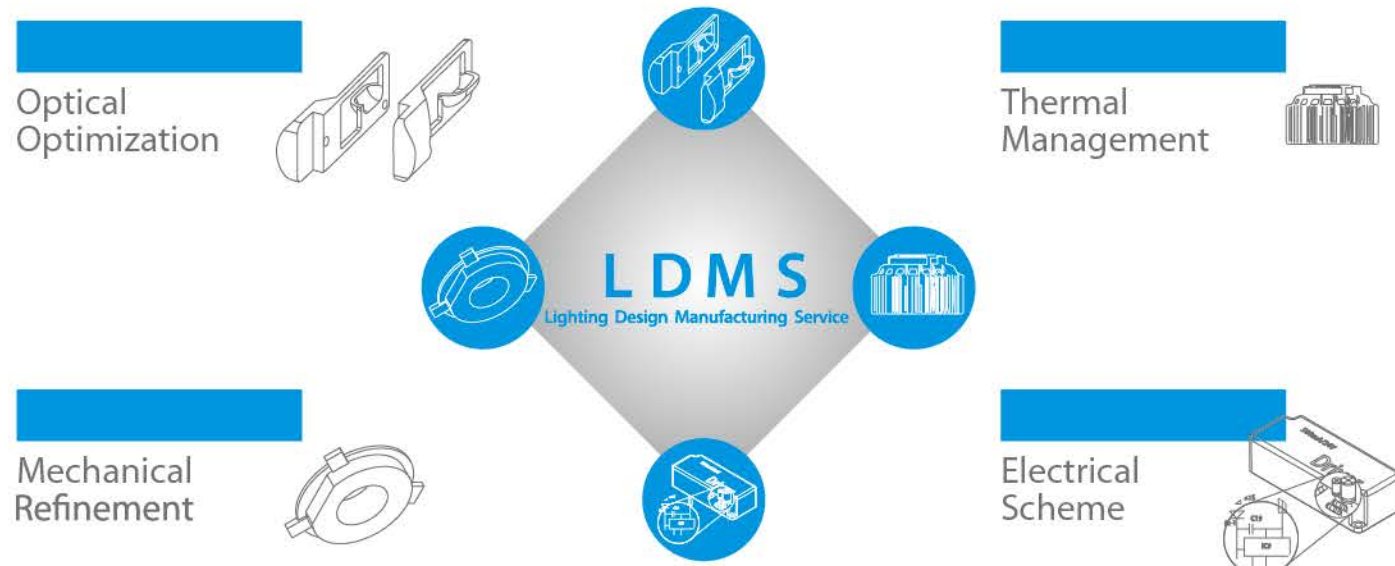
# Testing Equipments



# Customized Service

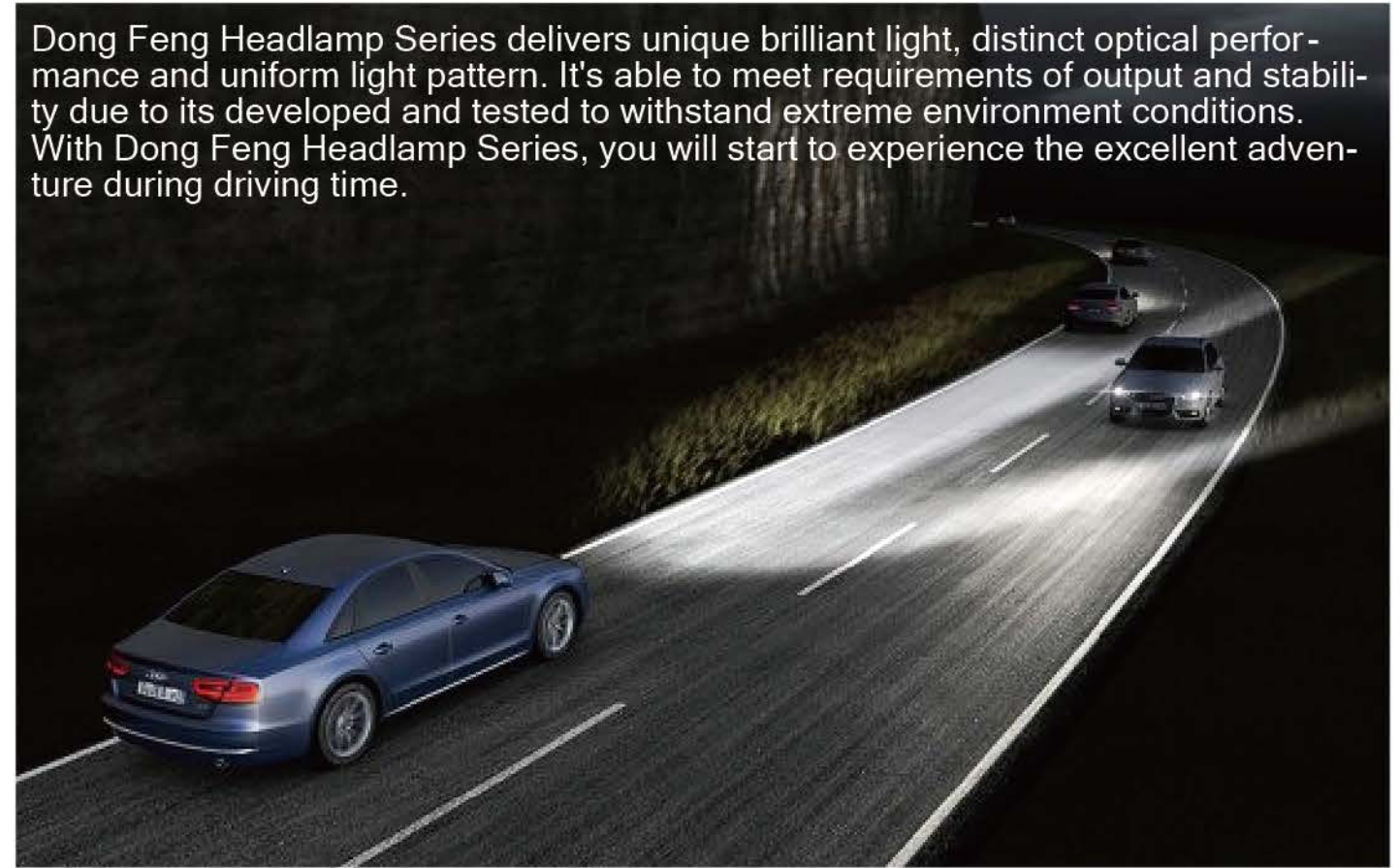
## Our Customization Capability

- LED manufacturing
- Proposal solution
- Design support
- Analysis/ Evaluation
- Experiment Support
- Trial production support

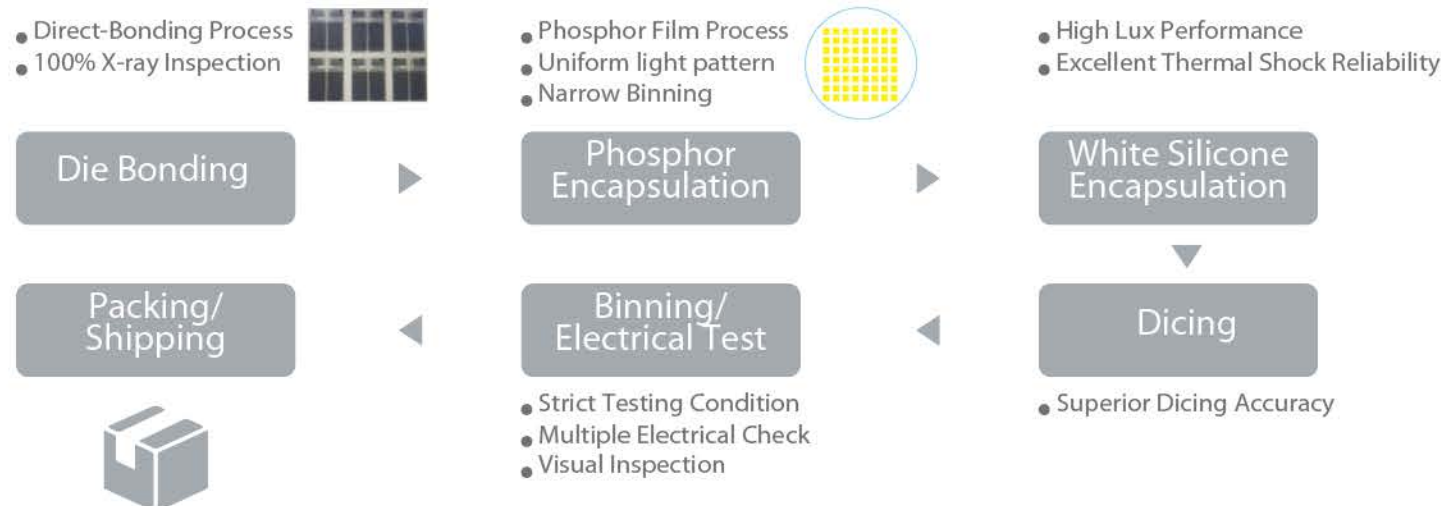


# Dong Feng Series

Dong Feng Headlamp Series delivers unique brilliant light, distinct optical performance and uniform light pattern. It's able to meet requirements of output and stability due to its developed and tested to withstand extreme environment conditions. With Dong Feng Headlamp Series, you will start to experience the excellent adventure during driving time.



# Process Flow Characteristics



## Features

- Outstanding and Smooth Light Pattern without Obvious Dark Gap
- Low Thermal Resistance
- High Lumen and Flux Density (lux)
- Color : According to ECE / SAE
- High Lumen Maintenance



# CA2016 Series

Cool White / Neutral White / PC Amber



## Descriptions

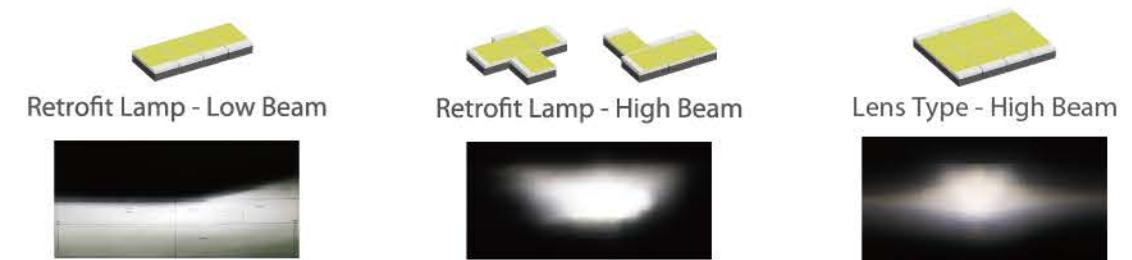
- High Lumen Maintenance
- High Design Flexibility
- Retrofit Lamp Application
- Color : According to ECE / SAE

## Applications



## Features

- Electrically isolated thermal pad design
- Low thermal resistance
- Easy to design your own type of array
- Most cost-effective package
- Pin to pin and compatible to leading brand



### Cool White (Headlamp Application)

PKG	IF(typ.) / IF(Max.)	Layout	Binning Current, 1A		Max. Current, 1.5A / 2A	
			Typ. Flux	Watt	Typ. Flux	Watt
CA2016	1A / 2A	1S1P	415 lm	3 W	725 lm	7 W
CA2016L	1A / 1.5A	1S1P	370 lm	3 W	520 lm	5 W

### Neutral White (Headlamp Application)

PKG	IF(typ.) / IF(Max.)	Layout	Binning Current, 1A		Max. Current, 1.5A / 2A	
			Typ. Flux	Watt	Typ. Flux	Watt
CA2016	1A / 2A	1S1P	390 lm	3 W	675 lm	7 W
CA2016L	1A / 1.5A	1S1P	360 lm	3 W	500 lm	5 W

### PC Amber (Turn Signal Application)

PKG	IF(typ.) / IF(Max.)	Layout	Binning Current, 1A		Max. Current, 1.5A / 2A	
			Typ. Flux	Watt	Typ. Flux	Watt
CA2016	1A / 2A	1S1P	275 lm	3 W	475 lm	7 W
CA2016L	1A / 1.5A	1S1P	250 lm	3 W	325 lm	5 W

# High Lux Series

DF-2C / DF-3C / DF-4C / DF-5C



## Descriptions

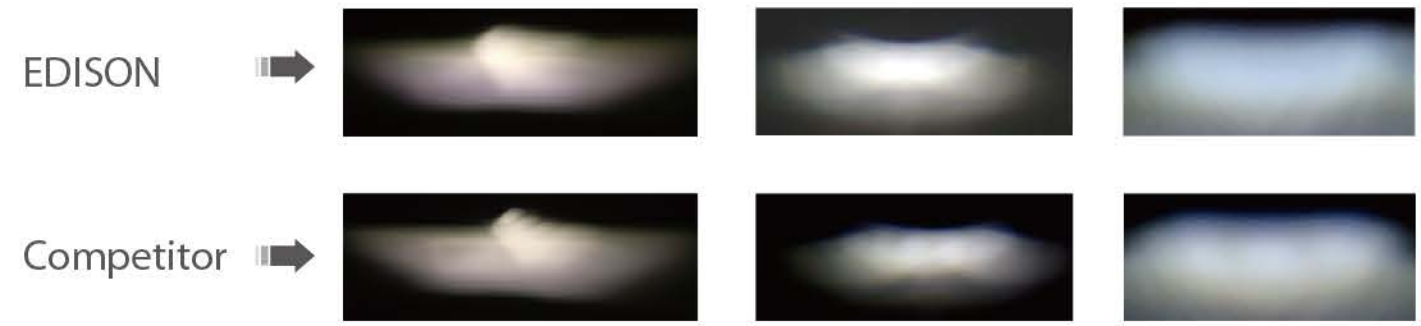
- High Flux Fensity (Lux)
- Color : According to ECE / SAE

## Applications



## Features

- Electrically isolated thermal pad design
- Low thermal resistance
- Built-in ESD protection device
- Outstanding and smooth light pattern without obvious dark gap



Edison's PKG provides uniform and smooth light pattern with high lux performance.

## Cool White

PKG	IF(typ.) / IF(Max.)	Layout	Binning Current, 1A		Max. Current, 1.5A	
			Typ. Flux	Watt	Typ. Flux	Watt
DF-2C (6V)	1A / 1.5A	2S1P	750 lm	6 W	1000 lm	10 W
DF-3C (9V)	1A / 1.5A	3S1P	1150 lm	9 W	1500 lm	15 W
DF-4C (12V)	1A / 1.5A	4S1P	1500 lm	12 W	2000 lm	20 W
DF-5C (15V)	1A / 1.5A	5S1P	1850 lm	15 W	2500 lm	25 W

# High Luminance Series

DF-3E



## Descriptions

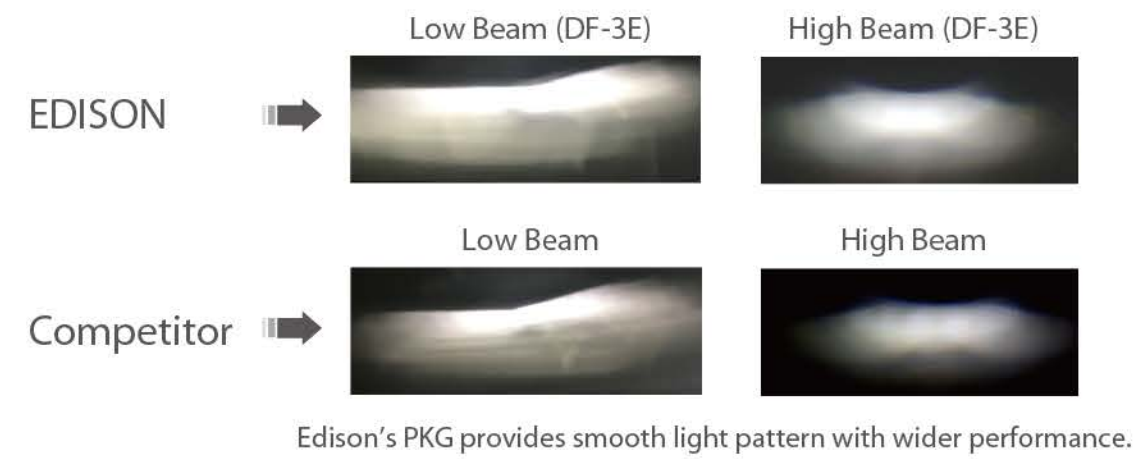
- High Lumen Maintenance
- Color : According to ECE / SAE

## Applications



## Features

- Electrically isolated thermal pad design
- Low thermal resistance
- Wider light pattern performance



## Cool White

PKG	IF(typ.) / IF(Max.)	Layout	Binning Current, 1A		Max. Current, 2A	
			Typ. Flux	Watt	Typ. Flux	Watt
DF-3E (9V)	1A / 2A	3S1P	1200 lm	9 W	2100 lm	21 W



# Double Row Series

DF-6C / DF-6E / DF-8C



## Descriptions

- High Flux Density (Lux)
- Designed Especially for Truck or Bi-Beam Module Application
- Color : According to ECE / SAE

## Applications

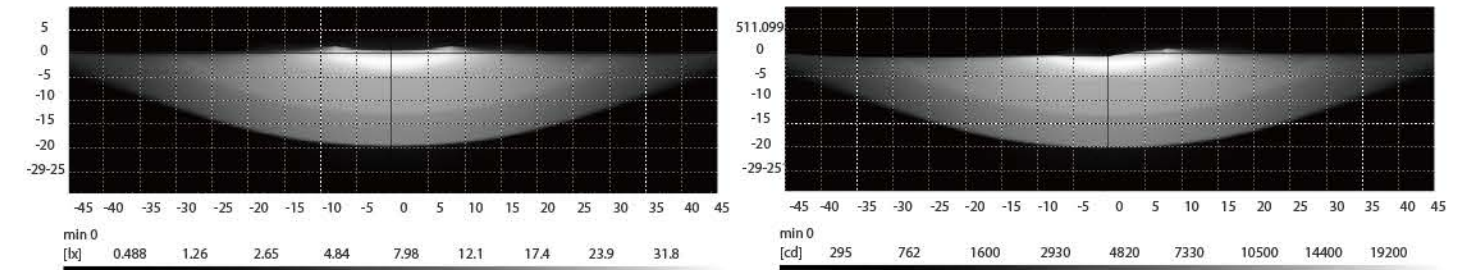


High Beam    Low Beam    Bi-Beam

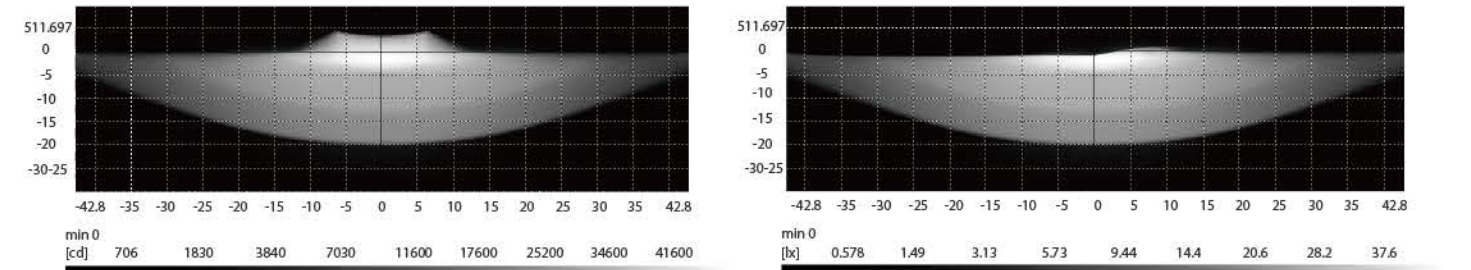
## Features

- Electrically isolated thermal pad design
- Low thermal resistance
- Built-in ESD protection device
- Double row design of emitting area which could be highly utilized in high beam application
- Outstanding and smooth light pattern without obvious dark gap

Simulation of Single Row Array



Simulation of Double Row Array



Once the low beam must reach the min. lux of regulation, double row array provides designers sufficient emitting area for high beam zone and show a significant performance on thicker light pattern compared to single row PKG.

## Cool White

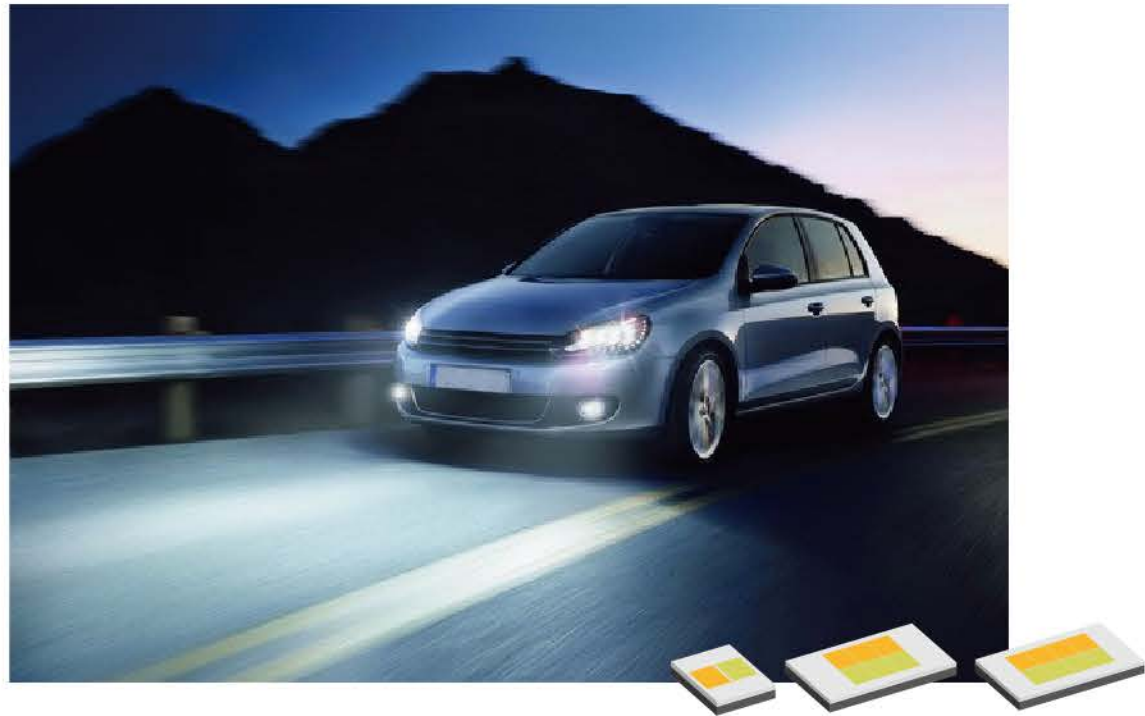
PKG	IF(typ.) / IF(Max.)	Layout	Binning Current, 1A		Max. Current, 1.5A / 2A	
			Typ. Flux	Watt	Typ. Flux	Watt
DF-6E (18V)	1A / 2A	6S1P	2500 lm	18 W	4100 lm	42 W
DF-8C (24V)	1A / 1.5A	8S1P	3050 lm	24 W	3900 lm	40 W
DF-6C (18V)	1A / 1.5A	6S1P	2280 lm	18 W	3100 lm	30 W

## Neutral White

PKG	IF(typ.) / IF(Max.)	Layout	Binning Current, 1A		Max. Current, 1.5A / 2A	
			Typ. Flux	Watt	Typ. Flux	Watt
DF-6C (18V)	1A / 1.5A	6S1P	2200 lm	18 W	3000 lm	30 W

# Dual Color Series

DF-2CD / DF-6CD / DF-8CD



## Descriptions

- High Flux Density (Lux) and Low Thermal Resistance
- Designed Especially for Bi - Beam Module and Dual Color fog lamp application
- Dual Color Switchable and Individually Controllable
- Color : According to ECE / SAE

## Applications



## Features

- Dual Color PKG can easily provide cool white for low beam which meet end user's expectations for LED and give warmer color and better penetration for high beam at the same time
- Dual color package enables drivers to switch the color which depends on the environment and road condition
- Outstanding and smooth light pattern without obvious dark gap



PKG	Color	IF(typ.) IF(Max.)	Layout	Binning Current, 1A		Max. Current, 1.5A	
				Typ. Flux	Watt	Typ. Flux	Watt
DF-2CD (3V*2Set)	CW + CW	1A / 1.5A * 2Set	1S1P * 2 Set	370lm + 370lm	3W + 3W	510lm + 510lm	5W+5W
	CW + NW			370lm + 370lm	3W + 3W	510lm + 500lm	5W+5W
	CW + GD			370lm + 350lm	3W + 3W	510lm + 510lm	5W+5W
DF-6CD (9V*2Set)	CW + CW	1A / 1.5A * 2Set	3S1P * 2 Set	1150lm + 1150lm	9W + 9W	1550lm + 1550lm	15W+15W
	CW + NW			1150lm + 1100lm	9W + 9W	1550lm + 1485lm	15W+15W
	CW + GD			1150lm + 1100lm	9W + 9W	1550lm + 1485lm	15W+15W
DF-8CD (12V*2Set)	CW + CW	1A / 1.5A * 2Set	4S1P * 2 Set	1500lm + 1500lm	12W + 12W	2000lm + 2000lm	20W+20W
	CW + NW			1500lm + 1450lm	12W + 12W	2000lm + 1850lm	20W+20W
	CW + GD			1500lm + 1450lm	12W + 12W	2000lm + 1850lm	20W+20W

# Golden Color Series

## Single-Chip / Multi-Chip



### Descriptions

- High Lumen Maintenance
- Color : According to ECE

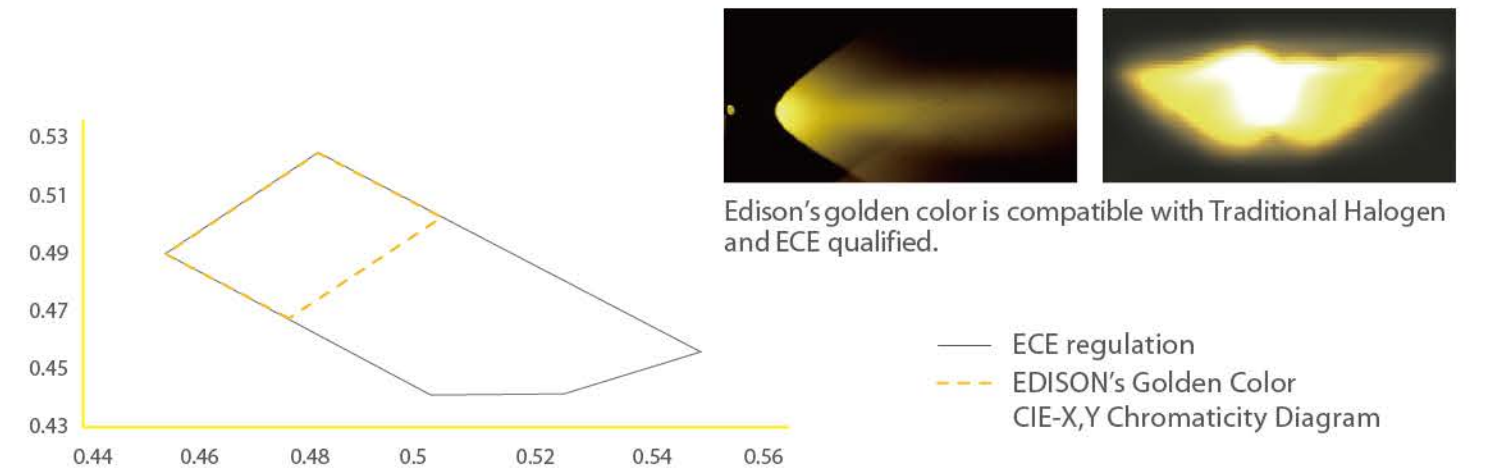
### Applications



Fog Lamp

### Features

- Low thermal resistance
- Pin to pin and compatible to leading brand
- Color is compatible and similar to halogen
- Better penetration through foggy environment
- Designed especially for fog lamp application



### Single - Chip

PKG	IF(typ.) / IF(Max.)	Layout	Binning Current, 1A		Max. Current, 1.5A / 2A	
			Typ. Flux	Watt	Typ. Flux	Watt
CA2016(GD)	1A / 2A	1S1P	400 lm	3 W	650 lm	7 W
CA2016L(GD)	1A / 1.5A	1S1P	375 lm	3 W	500 lm	5 W

### Mult - Chip

PKG	IF(typ.) / IF(Max.)	Layout	Binning Current, 1A		Max. Current, 2A	
			Typ. Flux	Watt	Typ. Flux	Watt
DF-3E(GD)	1A / 2A	3S1P	1100 lm	9 W	1900 lm	21 W
DF-3C(GD)	1A / 1.5A	3S1P	1100 lm	9 W	1500 lm	15 W

## Federal

Federal 3535 is a surface mount and high brightness LED that is also built for various automotive lighting demands. The reflow-solderable technique also helps Federal 3535 to provide the supreme thermal management to achieve the best reliability.

### 3535 Series



### Main Applications

- DRL
- Fog Lamp
- Position Lamp
- Turn Signal
- Tail Lamp
- Domo Lamp



# 3535 Series



## Descriptions

- High Lumen Performance
- Promising Lumen Maintenance Characteristics
- RoHS Compliant

## Applications



High Beam Low Beam Warning Light

## Features

- Built-in ESD protection device
- Level 1 on JEDEC moisture sensitivity analysis
- Thermolectric separation design
- Low thermal resistance

Order Code	Color	Wavelength (nm / CCT )	Power	IF (mA)	Typ. Flux
2FX003CW06F02008	Cool White	5000 ~ 7000K	1	350	140 lm
			3	700	230 lm
2FX003NW68F02008	Neutral White	3800 ~ 5000K	1	350	125 lm
			3	700	215 lm
2FX003WW73F02008	Warm White	2700 ~ 3800K	1	350	110 lm
			3	700	190 lm
2FX001BX00F02001	Blue	460 nm ~ 470 nm	1	350	30 lm
			3	700	50 lm
2FX003BX00F02008	Blue	470 nm ~ 480 nm	1	350	35 lm
			3	700	60 lm
2FX003BX71F02001	PC Blue	460 nm ~ 480 nm	1	350	65 lm
			3	700	120 lm
2FX003TX00F02008	Green	525 nm ~ 535 nm	1	350	135 lm
			3	700	210 lm
2FX001AX00F02001	Amber	585 nm ~ 595 nm	1	350	65 lm
			3	700	110 lm
2FX003AX70F02008	PC Amber	589 nm ~ 591 nm	1	350	115 lm
			3	700	210 lm
2FX003RX00F02008	Red	620 nm ~ 627 nm	1	350	60lm
			3	700	115lm

## PLCC

The miniature size of PLCC Series is suitable for more luminaire design. By upgrading heat - resistant design, PLCC Series is suitable for high power application, so it can ensure customers' driving safety.

### 3030 Series

2PIN 0.6H — 

### 3528 Series

2PIN 0.8H — 

2PIN 1.85H — 

4PIN 1.80H — 

Dual Color 0.7H — 

### 3433 Series

6PIN 1.9H — 

6PIN RGB — 

### Main Applications

- Side lights / Turn signal / Brake lamp / DRL lamp
- Exterior lights / Interior lights



## 3030 Series

2PIN 0.6H



### Descriptions





- Package Size : 3.0x3.0x0.6mm
- Exterior Automotive Lighting
- Signal and Symbol Luminaire
- Best Luminous and Color Uniformity
- Substitution of Traditional light for Automotive use

### Applications



### Features

- Package : white SMT package, colorless clear silicone resin
- Wide Viewing angle 120°
- ESD-withstand voltage : 2 kV acc. to ANSI / ESDA / JEDEC JS-001 (HB)
- Color : Cool White / PC Amber / Red / Blue
- Qualifications : According to AEC-Q102

Color	VF (V)	Binning current	Max Current	CCT / WD	Typ. Flux
 Cool White	3.2	350 mA	700 mA	5000 K ~ 7000 K	110 lm
 PC Amber	3.2			585 nm ~ 595 nm	90 lm
 Red	2.4			612 nm ~ 624 nm	50 lm
 Blue	3.2			463 nm ~ 475 nm	30 lm

# 3528 Series

2PIN 0.8H



## Descriptions

- Package Size : 3.5x2.8x0.8mm
- Best Luminous and Color Uniformity
- Substitution of Traditional light for Automotive use
- Interior and Exterior Automotive Lighting
- Signal and Symbol Luminaire

## Applications



## Features

- Package : white PLCC-2 package, colorless clear resin
- Wide Viewing angle 120°
- ESD-withstand voltage : 2 kV acc. to ANSI / ESDA / JEDEC JS-001 (HBM)
- Color : Cool White / PC Amber / Red / Super Red / Yellow / Blue / Green
- Qualifications : According to AEC-Q102

Color	Typ.Vf	Binning current	CCT / WD	Typ.Intensity / Typ.Flux
Cool White	3.2		5000 K ~ 7000 K	5400 mcd / 19200 mcd / 120 lm
PC Amber	3.2	50 mA / 140 mA / 350 mA	585 nm ~ 595 nm	5120 mcd / 16000 mcd / 90 lm
Red	2.4		612 nm ~ 624 nm	3200 mcd / 7680 mcd / 48 lm
Super Red	2.4	50 mA / 140 mA	627 nm ~ 639 nm	1950 mcd / 4350 mcd
Yellow	2.4		586 nm ~ 595 nm	2500 mcd / 6400 mcd
Blue	3.0	30 mA	463 nm ~ 475 nm	540 mcd
Green	3.0		520 nm ~ 535 nm	2250 mcd



# 3528 Series

2PIN 1.85H



## Descriptions

- Package Size : 3.5x2.8x1.85mm
- Best Luminous and Color Uniformity
- Substitution of Traditional light for Automotive use
- Interior Automotive Lighting
- Signal and Symbol Luminaire

## Applications



## Features

- Package : white PLCC-2 package, colorless clear resin
- Wide Viewing angle 120°
- ESD-withstand voltage : 2 kV acc. to ANSI / ESDA / JEDEC JS-001 (HBM)
- Color : Cool White / Red / Super Red / Yellow / Blue / Green / ICE Blue
- Qualifications : According to AEC-Q102

Color	Typ.Vf	IF (mA)	CCT / WD / CIE x,y	Typ.Intensity
Cool White	3.0	20mA	5000 K ~ 7000 K	2400 mcd
Red	2.15		612 nm ~ 624 nm	1000 mcd
Super Red	2.15		627 nm ~ 639 nm	650 mcd
Yellow	2.15		586 nm ~ 595 nm	900 mcd
Blue	3.0		463 nm ~ 475 nm	400 mcd
Green	3.0		520 nm ~ 535 nm	1800 mcd
ICE Blue	3.0		x : 0.1902 / y : 0.2505	1900 mcd

## 3528 Series

4PIN 1.80H



### Features

- Package : white PLCC-4 package, colorless clear resin
- Wide Viewing angle 120°
- ESD-withstand voltage : 2 kV acc. to ANSI / ESDA / JEDEC JS-001 (HBM)
- Color : Cool White / PC Amber / Red / Super Red / Yellow
- Qualifications : According to AEC-Q102

Color	Typ.Vf	Binning current	CCT / WD	Typ.Intensity
 Cool White	3.2	50 mA	5000 K ~ 7000 K	6800 mcd
 PC Amber	3.2		585 nm ~ 595 nm	4950 mcd
 Red	2.4		612 nm ~ 624 nm	3520 mcd
 Super Red	2.4		627 nm ~ 639 nm	1888 mcd
 Yellow	2.4		586 nm ~ 595 nm	3430 mcd

### Descriptions

- Package Size : 3.5x2.8x1.80mm
- Best Luminous and Color Uniformity
- Substitution of Traditional light for Automotive use
- Interior and Exterior Automotive Lighting
- Signal and Symbol Luminaire

### Applications



Automotive  
Lighting

Signal  
Lighting

## 3528 Series

Dual Color 4PIN 0.7H



### Features

- Package : white PLCC-4 package, colorless clear resin
- Wide Viewing angle 120°
- ESD-withstand voltage : 2 kV acc. to ANSI / ESDA / JEDEC JS-001 (HBM)
- Color : Cool White+PC Amber / Red+PC Amber
- Qualifications : According to AEC-Q102

Color	Typ.Vf	Binning current	CCT / WD	Typ. Flux
<span style="color: yellow;">■</span> Cool White + <span style="color: orange;">■</span> PC Amber	3.2 / 3.2	120mA	5000K~7000K / 585nm~595nm	48 lm / 35 lm
<span style="color: red;">■</span> Red + <span style="color: orange;">■</span> PC Amber	2.4 / 3.2	120mA	612nm~624nm / 585nm~595nm	16 lm / 35 lm

### Descriptions

- Package Size : 3.5x2.8x0.7mm
- Dual Color Combination
- Substitution of traditional light for Automotive use
- Exterior Automotive Lighting
- Suitable for DRL+Turn light and Taillight+Turn light Applications

### Applications



Automotive  
Lighting

Signal  
Lighting

## 3433 Series

6PIN 1.9H



### Descriptions

- Package Size : 3.4x3.3x1.9mm
- Best Luminous and Color Uniformity
- Substitution of traditional light for Automotive use
- Interior and Exterior Automotive Lighting
- Signal and Symbol Luminaire

### Applications



Automotive  
Lighting

Signal  
Lighting

### Features

- Package : white PLCC-6 package, colorless clear resin
- Wide Viewing angle 120°
- ESD-withstand voltage : 2 kV acc. to ANSI / ESDA / JEDEC JS-001 (HBM)
- Color : RGB 3in1 / Cool White / PC Amber / Red / Super Red / Yellow
- Qualifications : According to AEC-Q102

Color	Typ.Vf	Binning current	CCT / WD	Typ. Intensity Typ. Flux
Red Green Blue	R 2.15 G 2.8 B 2.8	20 mA	R 612 nm ~ 624 nm G 520 nm ~ 530 nm B 463 nm ~ 475 nm	R 900 mcd G 1800 mcd B 400 mcd
Cool White	3.2		5000 K ~ 7000 K	55 lm
PC Amber	3.2		585 nm ~ 595 nm	40 lm
Red	2.4	140 mA	612 nm ~ 624 nm	9500 mcd
Super Red	2.4		627 nm ~ 639 nm	6500 mcd
Yellow	2.4		586 nm ~ 595 nm	9000 mcd



[www.edison-opto.com.tw](http://www.edison-opto.com.tw)  
[service@edison-opto.com.tw](mailto:service@edison-opto.com.tw)



**Edison Opto Corporation  
Taipei (Headquarter)**

4F, No.800, Chung-Cheng Rd., Chung-Ho  
Dist, New Taipei City, Taiwan  
Tel: +886 2 8227 6996  
Fax: +886 2 8227 6997  
[service@edison-opto.com.tw](mailto:service@edison-opto.com.tw)

**Edison Opto (Dong Guan) Co., Ltd**

B16, Xi-Cheng Industrial Park, Heng-Li,  
Dongguan City, Guangdong Province, China 523460  
Tel: +86 769 8101 1898  
Fax: +86 769 8101 1899  
[chinaservice@edison-opto.com.cn](mailto:chinaservice@edison-opto.com.cn)

**Yangzhou Edison Opto Corporation**

No.101, West Hua-Yang Road, Yangzhou City,  
Jiangsu Province, China 225009  
Tel:+86 514 8777 7101 +86 514 8582 3888  
Fax: +86 514 8777 7102  
[chinaservice@edison-opto.com.cn](mailto:chinaservice@edison-opto.com.cn)

**Edison Opto USA Corporation**

1809 Excise Avenue, Suite 201,Ontario,  
California 91761 USA  
Tel: +1 909 284 9710  
Fax: +1 909 460 8130  
[service@edisonopto-usa.com](mailto:service@edisonopto-usa.com)