EDISON

BUILD RELIABILITY ON THE WAY

EDISON OPTO

AUTOMOTIVE LED CATALOG

2024

Establish	2001
Capital	45 Million
Employee	800 people
Certificated	ISO 9001 / ISO 14001 / IATF 16949

About Us

EDISON OPTO was established by Mr. Jason Wu, the chairman as well as the founder, at New Taipei City of Taiwan in 2001. For its innovated technology strength, EDISON OPTO provides comprehensive LED and solid-state lighting products from LED Component, Light Module, UV / IR LED, LED sensing, Horticulture and Automotive Lighting.

L1	L2	L3	L4	L5	L6
Emitter	PCB	Optical	Heatsink	Circuit	Solution

With a focus on enhancing the R&D processes, EDISON OPTO has developed the TEMO™ (Thermal, Electrical, Mechanical, Optical) vertical platform to ensure superior products and services.
Additionally, we offer LDMS™ (LED Design Manufacturing Service), covering Automotive LED light sources to Automotive Lamp manufacturing, providing customized solutions for our customers.

EDISON OPTO has been recognized for its unwavering commitment to excellence and achieved ISO 9001 and ISO 14001 certifications, validating its adherence to stringent standards in quality management and environmental responsibility. Furthermore, EDISON OPTO has successfully attained the prestigious IATF 16949 automotive supply chain certification, which underscores our capability to meet the rigorous demands of the automotive industry serve customers with a quality experience of customized solutions, and engage its commitment to innovation, quality, and customer satisfaction in the LED lighting and automotive sectors.

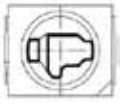
Automotive LED

PLCC Series

Material

1st Tier Supplier

- Automotive Grade Chip.
- 99.99% Pure Au Wire, 1.0-1.2mil Diameter.
- Silicone-base Glue with Better Sulfur Resistance.



Design

Design Features

Extension Wire Bonding Technology

· Type1: chip — Au wire — Single bond + auxiliary line

· Type2: chip — Single bond + cross line

Lead-frame Design

- Optimized Ag Surface and Special Coating Enhance Lead-frame Strength and Reliability

Production

Professional Production Line

- Controlled Environment (25±3°C, 50±10%RH)
- Indep. Production Line for Automotive Products
- ESD Precautions: Air Ionizer, ESD Turnstile Gate

Quality

Manufacturing iMES System

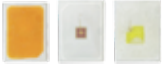
- PTC 1000 cycles passed
- H2S and Mixed gas test passed AEC- Q102 …passed

PLCC Series
Typ. 0.06W-1W (Max.3W)

EMC 3030 Watt: 1W~2W
DRL, Turn Signal, Stop Light, Rear Light
HUD, Ambient Light

NEW !

EMC 3537 Watt: 0.5W~2W
DRL, Turn Signal, Stop Light



NEW !

EMC 2720 Watt: 0.2W~3W
DRL, Turn Signal, Stop Light, Rear Light

NEW !

EMC 4014 Watt: 0.06W~0.5W
Display Backlighting, HUD

NEW !

SIDE VIEW 4043 Watt: 0.2W~0.5W
DRL, Turn Signal, Stop Light, Rear Light

PLCC 3528 Watt: 0.06W~0.5W
Turn Signal, Warning Light, Reading Light
Ambient Light, Display Backlighting

PLCC 3433 Watt: 0.2W~0.5W
DRL, Turn Signal, Ambient Light,
Display Backlighting

PLCC 2214 Watt: 0.06W
Display Backlighting, Ambient Light

NEW !

PLCC 1608 Watt: 0.06W
Display Backlighting, Ambient Light

DongFeng Ceramic Series

DongFeng Ceramic Series
Typ. 2W-15W (Max. 25W)

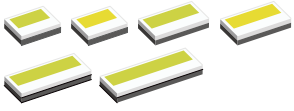
CA2016T
Max. Watt: 2W
DRL, Fog Light, Turn Signal

CA2016L
Max. Watt: 3W-5W
DRL, Fog Light, Turn Signal

CA2016P
Max. Watt: 5W
HUD, Projector lamp,
Display Backlighting

CA2016H
Max. Watt: 10W
DRL, Fog Light, Turn Signal

CA2016S
Max. Watt: 5W
Rear Light



Muti-Chip
Max. Watt: 10W-25W
DRL, Fog Light, Bi-Beam

Dual Color
Max. Watt: 2W-15W
Dual Color Fog Lamp,
Dual Color High/ Low Beam

Material

Worldwide Brand in Taiwan
- LED Chip Supplier of Leading Brands
- Thermoelectric Separation Substrate with Optimized Thermal Performance

Design

Design Features
- Flip Chip and Eutectic Process Optimize Thermal Conductivity
- Electrically Isolated Thermal Pad Structure Makes Rth Lower
- One Piece Emitting Area for Uniform Light Pattern

Production

Professional Production Line
- Clean room Classification: Class 100,000
- Eutectic Direct Bonding Technology
- 100% X-ray Inspection for Each Process

Quality

Manufacturing iMES System
- MES System for Traceability
- Complied with IATF16949 Principles

DongFeng Ceramic Series

- Automotive Level Material but Cost Effective
- Professional Chip Bonding Process Contributes Extremely Low Thermal Resistance Performance
- Strict Quality Control Among the Whole Process Flow (X-ray, Inspection, Binning, Tests)
- One Piece Phosphor to Improve the Uniformity of Light Pattern
- Flexible Exterior Automotive Lighting Solution

CA2016 Series

AEC-Q102
Third-party lab certificated

- Compatible with industry-leading brands, ensuring pin-to-pin easy integration.
- Compact size offering high lux output.
- Enables easy design of various LED arrays.
- Electric isolated thermal pad structure significantly reduces thermal resistance.
- Ideal applications for headlamps, DRLs, fog lamps, and more.

DRL / Fog Light / Headlamp

PKG	Emitting Area (mm²)	IF(Typ.)/ IF(Max.)	Color	Binning Current, IF(Typ.)		Maximum Current, IF(Max.)	
				Flux (lm)	Power (W)	Flux (lm)	Power (W)
CA2016T	0.77x0.77	0.7A / 0.7A	CW	-	-	270	2
CA2016L	1.05x1.05	1A / 1.2A		420	3	485	4
CA2016L	1.15x1.15	1A / 1.5A		440	3	570	5
CA2016H	1.05x1.05	1A / 2.5A		420	3	800	10

Fog Light

PKG	Emitting Area (mm²)	IF(Typ.)/ IF(Max.)	Color	Binning Current, IF(Typ.)		Maximum Current, IF(Max.)	
				Flux (lm)	Power (W)	Flux (lm)	Power (W)
CA2016T	0.77x0.77	0.7A / 0.7A	Golden	-	-	255	2
CA2016L	1.15x1.15	1A / 1.5A		420	3	545	5

Turn Signal

PKG	Emitting Area (mm²)	IF(Typ.)/ IF(Max.)	Color	Binning Current, IF(Typ.)		Maximum Current, IF(Max.)	
				Flux (lm)	Power (W)	Flux (lm)	Power (W)
CA2016T	0.77x0.77	0.7A / 0.7A	PC Amber	-	-	145	2
CA2016L	1.15x1.15	1A / 1.5A		280	3	365	5

HUD / Projector lamp / Display Backlighting

PKG	Emitting Area (mm²)	IF(Typ.)/ IF(Max.)	Color	Binning Current, IF(Typ.)		Binning Current, IF(Max.)	
				Flux (lm)	Power (W)	Flux (lm)	Power (W)
CA2016P	1.15x1.15	1A / 1.5A	CW	330	3	430	5

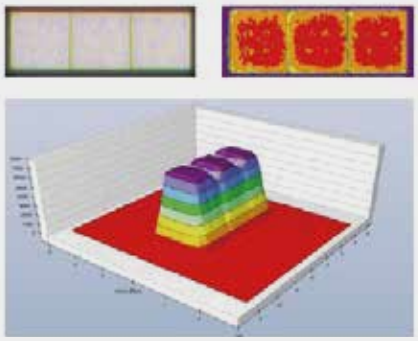
Rear Light

PKG	Emitting Area (mm²)	IF(Typ.)/ IF(Max.)	Color	Binning Current, IF(Typ.)		Binning Current, IF(Max.)	
				Flux (lm)	Power (W)	Flux (lm)	Power (W)
CA2016S	1.05x1.05	1A / 2.5A	Red	170	3	290	5

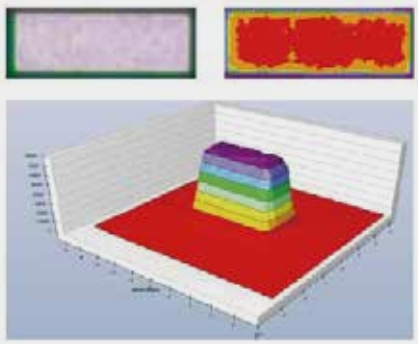
Optimization of light pattern uniformity

Leveraging the integrated glass phosphor sheet and advanced eutectic technology, Edison Opto's Gen2 DongFeng Ceramic Series achieves enhanced LUX performance, facilitating compliance with regulations.
Moreover, the glass phosphor sheet effectively bridges gaps between chips, improving conversion efficiency and notably reducing dark areas to ensure superior light distribution.

Original 3-chip Package Design
3 Individual Phosphor sheets on each chip



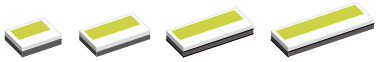
Gen2 3-chip Package Design
One-Piece Phosphor in Glass(PiG) on 3-chip



Uniformity improved and LUX upgraded

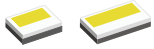
Muti-Chip Series

DRL / Fog Light / Headlamp



PKG	Emitting Area (mm²)	IF(Typ.)/ IF(Max.)	Color	Binning Current, IF(Typ.)		Maximum Current, IF(Max.)	
				Flux (lm)	Power (W)	Flux (lm)	Power (W)
DF-2C (6V)	2.33x1.15	1A / 1.5A	CW	880	6	1145	10
DF-3C (9V)	3.51x1.15			1320	9	1715	15
DF-4C (12V)	4.69x1.15			1760	12	2290	20
DF-5C (15V)	5.87x1.15			2200	15	2860	25

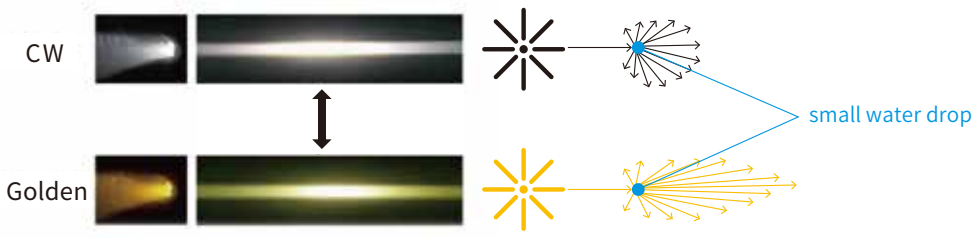
Fog Light



PKG	Emitting Area (mm²)	IF(Typ.)/ IF(Max.)	Color	Binning Current, IF(Typ.)		Maximum Current, IF(Max.)	
				Flux (lm)	Power (W)	Flux (lm)	Power (W)
DF-2C (6V)	2.33x1.15	1A / 1.5A	Golden	840	6	1090	10
DF-3C (9V)	3.51x1.15			1260	9	1640	15

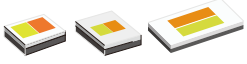
Penetration Advantages of Golden Color

To get greater penetration of light in fog, one should use as longer wavelength as possible. And yellow light undergoes the least scattering in fog and thus has greater penetration so increasing visibility. It is the reason why car drivers prefer yellow fog lights in foggy areas.



Dual Color Series

Fog Light / Bi-Beam



PKG	Emitting Area (mm²)	IF(Typ.)/ IF(Max.)	Color	Binning Current, IF(Typ.)		Maximum Current, IF(Max.)	
				Flux (lm)	Power (W)	Flux (lm)	Power (W)
CA2016D (3V*2 set)	0.77x0.77 (2 set)	0.2A*2 set / 0.7A*2 set	CW+ PC Amber	90+55	0.6+0.6	270+145	2+2
DF-2CD (3V*2 set)	1.15x1.15 (2 set)	1A*2 set / 1.5A*2 set	CW+CW	440+440	3+3	570+570	5+5
			CW+ PC Amber	440+280		570+365	
			CW+GD	440+420		570+550	
DF-6CD (9V*2 set)	3.51x1.15 (2 set)		CW+CW	1320+1320	9+9	1715+1715	15+15
			CW+ PC Amber	1320+840		1715+1095	
			CW+GD	1320+1260		1715+1635	

PLCC Series

Passed AEC-Q102 certification through third-party LAB

- Complete Product Series Pin to Pin to Leading Brands
- Wire Bonding Technology with Patent and Extension wire
- Single Bond with Auxiliary Wire (Patented) & Extension Wire Bonding
- Laser Marks for Traceability
- Wide range applications for both Vehicle Interior and Exterior Lamps

EMC 3030

Series/PKG	Watt	Color		Wavelength (nm)	Flux (lm)		If (mA) Typ.	Max. Cur. (mA)	VF (V)
					lm	Cd			
EMC 3030	1W	CW (CRI 70)		-	130-170	42.9-56.1	350	700	3.10
		PC Amber		-	100-130	33.0-42.9	350	700	3.10
		Blue		463-480	30-45	11.2-14.6	350	700	3.10
		Red		612-624	typ. 50	-	350	700	2.25
	0.7W	Red		612-624	30-45	-	200	250	2.25
	0.5W	CW (CRI 70)		-	60-75	-	140	200	2.90
		PC Amber		-	45-55	-	140	200	2.90
		Red		612-624	24-32	9.5-10.9	140	200	2.25
	1~3W	Back light		-	120-160	120-160	350	700	2.90
EMC 3030 RGB	1.5W	RGB 3in1	Red	612-624	-	7.1-11.2	140	180	2.25
			Green	520-530	-	11.2-18	140	180	3.10
			Blue	459-471	-	2.24-3.55	140	180	3.10

EMC 3537

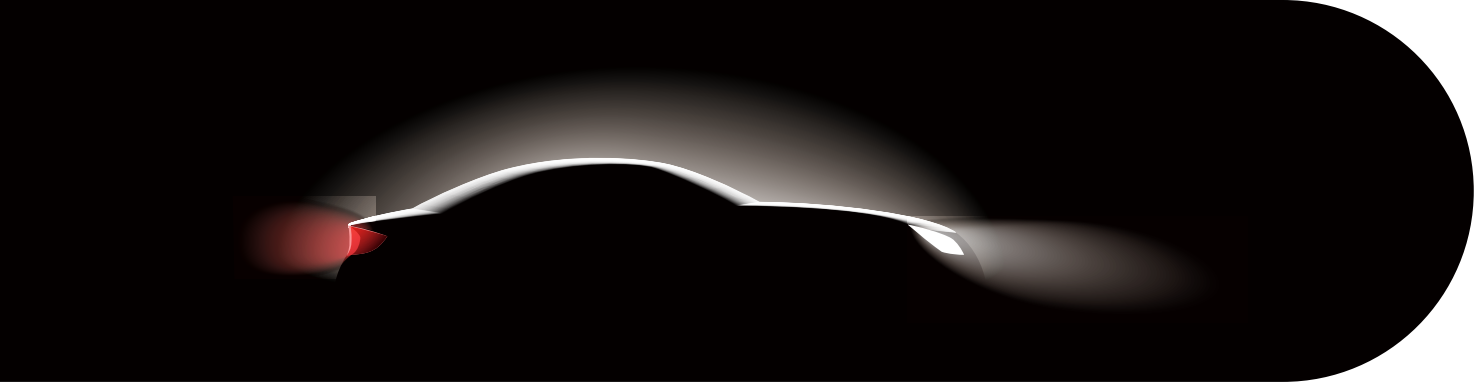
NEW !

Series/PKG	Watt	Color		Wavelength (nm)	Flux (lm)		If (mA) Typ.	Max. Cur. (mA)	VF (V)
					lm	Cd			
EMC 3537 Dual Color	2W	2in1	CW	-	80-100	-	250	350	3.30
			PC Amber	-	50-65	-	250	350	3.30
		2in1	Red	612-624	35-50	-	200	250	2.80
			PC Amber	-	45-60	-	200	350	3.30
	2W	2in1	Red	612-624	35-50	-	200	250	2.80
			Yellow	585-595	30-45	-	200	250	2.80
	1W	2in1	CW	-	50-70	-	140	200	2.90
			PC Amber	-	30-55	-	140	200	2.90

EMC 2720

NEW !

Series/PKG	Watt	Color	Wavelength (nm)	Flux (lm)		If (mA) Typ.	Max. Cur. (mA)	VF (V)
				lm	Cd			
EMC 2720	0.5W	CW (CRI 70)	-	50-70	-	140	350	3.10
		PC Amber	-	30-40	-	140	350	3.10
		Red	612-624	-	7.1-11.2	140	200	2.25
		Super Red	627-639	-	5.2-9.0	140	200	2.25
		Yellow	589-595	-	7.1-11.2	140	200	2.25
	0.7W	CW (CRI 70)	-	55-100	-	200	350	3.10
		PC Amber	-	50-75	-	200	350	3.10
		Red	616-624	30-50	-	200	350	2.25
		Super Red	627-639	18-30	-	200	200	2.25
		Yellow	589-595	24-35	-	200	200	2.25
	1W	CW (CRI 70)	-	90-160	-	350	500	3.10
		PC Amber	-	45-110	-	350	500	3.10
		Red	616-624	45-65	-	350	500	2.25
		Super Red	627-639	35-50	-	350	500	2.25
	3W	CW (CRI 70)	-	110-140	-	350	700	3.10
		PC Amber	-	50-80	-	350	700	3.10
		Red	616-624	40-60	-	350	700	2.30



EMC 4014

NEW !

Series/PKG	Watt	Color	Wavelength (nm)	Flux (lm)		If (mA) Typ.	Max. Cur. (mA)	VF (V)
				lm	Cd			
EMC 4014	0.06~0.8W	Back light	-	7-11	-	20	240	2.90

PLCC 3528

Series/PKG	Watt	Color		Wavelength (nm)	Flux (lm)		If (mA) Typ.	Max. Cur. (mA)	VF (V)
					lm	Cd			
PLCC 3528 2PIN 0.8H	0.2W	CW (CRI 70)		-	15-20	4.5-7.1	50	70	3.05
		PC Amber		-	15-20	4.5-7.1	50	70	3.05
		Red		612-620	7-13	2.24-4.5	50	70	2.25
		Super Red		627-639	5-7	1.40-2.24	50	70	2.25
		Yellow		589-595	8-13	2.24-4.5	50	70	2.25
	0.1W	Blue		463-471	1.5-2	0.45-0.71	30	50	3.10
		Green		520-535	7-10	2.24-3.5	30	50	3.10
	0.5W	CW (CRI 70)		-	50-65	16.4-19.6	140	200	3.05
		PC Amber		-	30-45	10-14	140	200	3.05
		Red		612-620	19-32	5.6-11.5	140	200	2.15
		Super Red		627-639	13-17	4.5-9.0	140	200	2.15
		Yellow		589-595	19.8-31.5	5.6-11.2	140	200	2.15
PLCC 3528 0.7H Dual Color	1W	2in1	CW	-	40-55	13.6-16.8	120	150	3.20
			PC Amber	-	30-45	10.4-13.6	120	150	3.20
		2in1	Red	612-624	15-20	5-6	120	150	2.40
			PC Amber	-	30-45	10.4-13.6	120	150	3.20

PLCC 3528

Series/PKG	Watt	Color	Wavelength (nm)	Flux (lm)		If (mA) Typ.	Max. Cur. (mA)	VF (V)
				lm	Cd			
PLCC 3528 2PIN 1.85H	0.06W	CW (CRI70)	-	6-10	1.80-4.00	20	30	2.90
		Ice-Blue	-	5-8	1.80-2.24	20	30	2.90
		Blue	463-475	1-2	0.28-0.56	20	30	3.10
		Red	616-624	2.5-4.0	0.71-1.40	20	30	2.15
		Super Red	627-639	1.5-3.0	0.45-0.90	20	30	2.15
		Yellow	589-595	3.15-5.0	0.90-1.40	20	30	2.20
		Green	520-535	5-8	1.40-2.24	20	30	2.70
PLCC 3528 4PIN 1.8H	0.2W	CW (CRI70)	-	15-20	4.50-7.10	50	70	3.05
		PC Amber	-	15-20	4.50-7.10	50	70	3.05
		Red	612-620	7.0-12.6	2.24-4.50	50	70	2.25
		Super Red	627-639	5.0-6.5	1.40-2.24	50	70	2.25
		Yellow	585-595	7.0-12.5	2.24-4.50	50	70	2.25

Side View 4043

NEW !

Series/PKG	Watt	Color	Wavelength (nm)	Flux (lm)		If (mA) Typ.	Max. Cur. (mA)	VF (V)
				lm	Cd			
SIDE VIEW 4043	0.2W	CW (CRI 70)	-	15-20	4.50-7.10	50	70	3.05
		PC Amber	-	15-20	4.50-7.10	50	70	3.05
		Red	612-624	7-13	2.24-4.50	50	70	2.25
		Super Red	627-639	5-7	1.40-2.24	50	70	2.25
		Yellow	585-595	8-13	2.24-4.50	50	70	2.25
		CW (CRI 70)	-	50-65	16.4-19.6	140	200	3.05
		PC Amber	-	30-45	10-14	140	200	3.05
	0.5W	Red	612-624	19-32	5.60-11.5	140	200	2.25
		Super Red	627-639	13-19	2.24-5.60	140	200	2.25
		Yellow	585-595	19-31	5.6-11.2	140	200	2.25

PLCC 3433

Series/PKG	Watt	Color		Wavelength (nm)	Flux (lm)		If (mA) Typ.	Max. Cur. (mA)	VF (V)
					lm	Cd			
PLCC 3433 RGB	0.5W	CW (CRI 70)		-	45-60	14.8-18.0	140	200	3.05
		PC Amber		-	35-50	11.7-14.8	140	200	3.05
		Red		612-620	19.8-31.5	5.6-11.2	140	200	2.15
		Super Red		627-639	15.7-25.1	4.5-9.0	140	200	2.15
		Yellow		589-595	19.8-31.5	5.6-11.2	140	200	2.25
	0.2W	RGB 3in1	R	616-624	-	0.71-11.20	20	30	2.05
			G	520-525	-	1.80-2.80	20	30	3.00
			B	460-470	-	0.35-0.56	20	30	3.00
	0.2W	RGB +IC	R	616-624	-	0.45-0.71	-	12	5V
			G	520-525	-	1.12-1.8	-	12	
			B	459-471	-	0.22-0.35	-	12	

PLCC 2214

Series/PKG	Watt	Color	Wavelength (nm)	Flux (lm)		If (mA) Typ.	Max. Cur. (mA)	VF (V)
				lm	Cd			
PLCC 2214	0.06W	CW (CRI 70)	-	-	1.20-2.60	20	30	2.90
		Blue	453-477	-	0.30-0.39	20	30	3.10
		Chartreuse	565-574	-	0.056-0.112	20	30	2.20
		Red	613-628	-	0.63-1.10	20	30	2.15
		Super Red	628-639	-	0.50-0.70	20	30	2.15
		Yellow	588-593	-	0.70-0.90	20	30	2.10
		Green	524-534	-	1.00-1.66	20	30	2.80
		Orange	602-607	-	0.92-1.10	20	30	2.20

PLCC 1608

NEW !

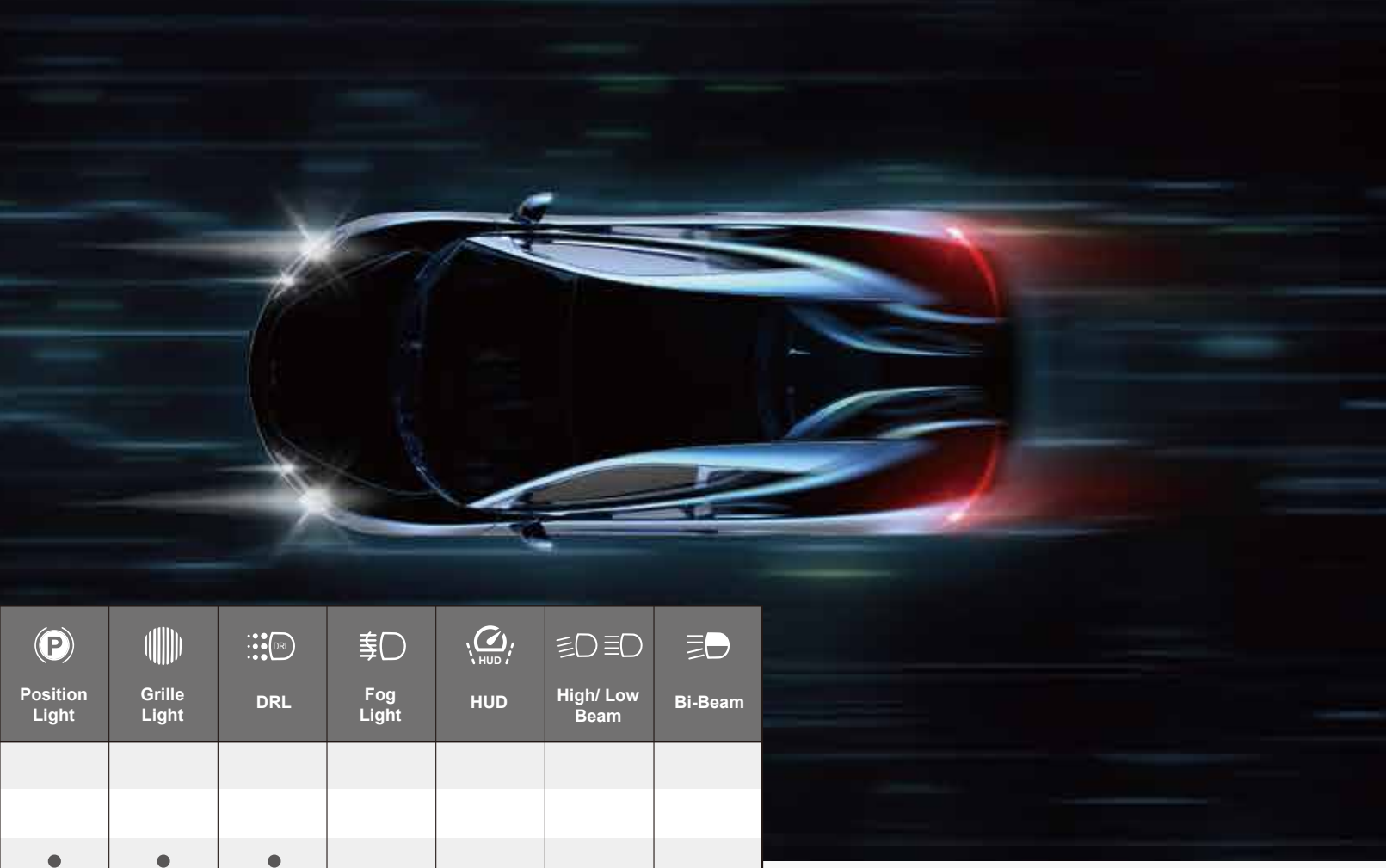
Series/PKG	Watt	Color	Wavelength (nm)	Flux (lm)		If (mA) Typ.	Max. Cur. (mA)	VF (V)
				lm	Cd			
PLCC 1608	0.06W	CW (CRI 70)	-	4.8-9.6	1.40-3.50	20	30	3.05
		Blue	459-475	0.7-1.2	0.22-0.45	20	30	3.05
		Red	612-624	1.0-3.0	0.28-1.12	20	30	2.10
		Super Red	627-639	0.4-1.5	0.11-0.56	20	30	2.10
		Yellow	586-595	1.0-1.9	0.28-0.71	20	30	2.10
		Green	520-530	1.7-6.1	0.45-2.24	20	30	2.90

IATF 16949 ISO 9001 ISO 14001

Build Reliability On The Way

From exterior to interior applications, EDISON OPTO offers a comprehensive solution, including front fog light, daytime running light, and high/low beam headlight.
With EDISON OPTO's automotive LED, the journey on the road has been lightened up.

		Display Backlighting	Indication Light	Ambient Light	Back up Light	Stop Light	Turn Signal
PLCC Series	1608 Series	●	●	●			
	2214 Series	●	●	●			
	3528 Series (0.8H 2PIN)				●	●	●
	3528 Dual Color Series					●	●
	3528 Series (1.85H 2PIN)	●	●	●			
	3528 Series (1.80H 4PIN)				●	●	●
	EMC 2720 Series				●	●	●
	EMC 3030 Series				●	●	●
	EMC 3030 RGB		●	●			
	EMC 4014 Series	●					
	3433 Series (1.90H 6PIN)				●	●	●
	3433 RGB Series (1.90H 6PIN)			●			
	3537 Dual Color Series					●	●
	Side View 4043 Series					●	●
DongFeng Ceramic Series	CA2016T 2W Series				●		●
	CA2016L 3W Series				●		●
	CA2016L 5W Series				●		●
	CA2016P 5W Series	●					
	CA2016H 10W Series						
	CA2016S 10W Series					●	
	Muti-Chip Series						
	Dual Color Series						●



Position Light	Grille Light	DRL	Fog Light	HUD	High/ Low Beam	Bi-Beam
●	●	●				
●		●				
●	●	●				
●	●	●				
●	●	●		●		
				●		
●	●	●				
		●				
●	●	●				
		●	●			
		●	●		●	
		●	●		●	
				●		
		●	●		●	
	●					●
		●	●		●	●
		●	●		●	

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