Lighting Design Manufacturing Service

www.edison-opto.com.tw

PLCC Series

ET-3528x-131W Datasheet

Features :

- High luminous Intensity and high efficiency
- Based on Blue/Green : InGaN, Red : AlGaInP technology
- Wide viewing angle : 120°
- Excellent performance and visibility
- Suitable for all SMT assembly methods
- IR reflow process compatible
- Environmental friendly; RoHS compliance

Typical Applications

- Signal and Symbol Luminaire
- Indoor and Outdoor Displays
- Backlighting (illuminated advertising, general lighting)
- Interior Automotive Lighting

 version : 1

Lighting Design Manufacturing Service

Table of Contents

Lighting Design Manufacturing Service

General Information

Introduction

Ultra high luminous efficac y, combined with the flexibility in design due to its slim and miniature size, PLCC LED Series are optimized to be used as lighting for signboard.

Product Nomenclature

The following table describes the available color, package size, and chip quantity.

Table 1 . PLCC 3528 series Nomenclature

ET	3528	x	-	1	3	1	W
X1	X2	X3		X4	X5	X6	X7

X1 LED Item		X2 Module		X3 Emitting Color		X4 Chip Quantity		X5~X6 Serial No.	
Code	Type	Code	Type	Code	Type	Code	Type	Code	Type
ET	Edison Top LED	3528	3.5x2.8mm	R	Red	1	1pcs		
				A	Amber(615nm)				
				Y	Yellow(590nm)				

X7 Feature	
Code	Type
W	White surface
B	Black surface
D	Black housing

LED Package Dimension and Polarity

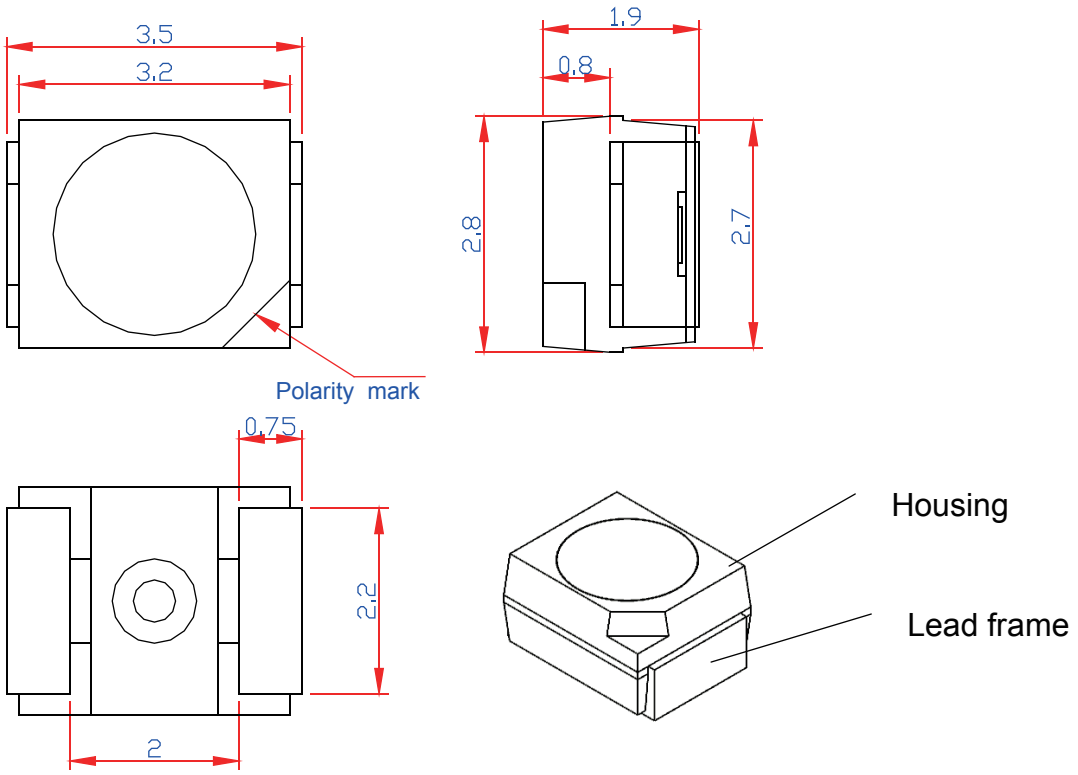

Figure 1. PLCC 3528 series Dimension

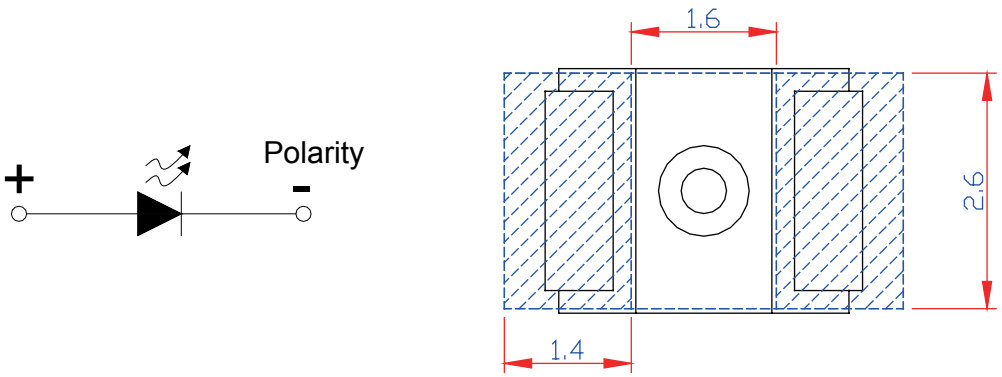

Figure 2. PLCC 3528 series circuit diagram and recommended soldering pad

Notes:
1. All dimensions are measured in mm.
2. Tolerance : ± 0.20 mm

Absolute Maximum Ratings

The following table describe absolute maximum ratings of PLCC 3528 series.

Table 2 . Absolute maximum ratings for PLCC 3528 series

Parameter	Rating	Units	Symbol
Forward Current	35	mA	I_F
Pulse Forward Current (tp<=100μs, Duty cycle=0.25)	80	mA	
Reverse Current	10	uA	I_R
Reverse Voltage	5	V	V_R
Forward Voltage	2.8	V	V_F
Power Dissipation	100	mW	
LED Junction Temperature	115	°C	T_J
Operating Temperature	-30 ~ +85	°C	
Storage Temperature	-40 ~ +100	°C	
Soldering Temperature	255~260	°C	
Manual Soldering at 350°C (Max.)	3	Sec	

Notes:
1. Proper current derating must be observed to maintain junction temperature below the maximum at all time.
2. LEDs are not designed to be driven in reverse bias.
3. tp: Pulse width time

Luminous Intensity Characteristic

The following table describes luminous intensity of PLCC 3528 series.

Table 3 . Luminous intensity characteristic at I_F=20mA and Ta=25°C for PLCC 3528 series

Part Name	Color	Luminous intensity(mcd)		Luminous Flux Typ.(lm)
		Group	Min	
ET-3528R-131W	Red	I	400	1.3
ET-3528A-131W	Amber	J	500	1.6
ET-3528Y-131W	Yellow	K	600	1.9

Note:
Luminous intensity is measured with an accuracy of ± 10%

Characteristic

Optical Characteristics

The following table describes forward voltage of PLCC 3528 series.

Table 4 . Optical characteristics at I_F=20mA/chip and Ta=25°C for PLCC 3528

Part Name	Color	λd(nm)			Viewing Angle (Degree)
		Min.	Typ.	Max.	
ET-3528R-131W	Red	620	625	630	120
ET-3528A-131W	Amber	610	615	620	120
ET-3528Y-131W	Yellow	585	590	595	120

Note:
Wavelength is measured with an accuracy of ± 1nm

Electrical Characteristics

Table 5. Electrical characteristics characteristics at T_J=25°C for PLCC 3528 series

Part Name	Color	V_F (V)	
		Min.	Max.
ET-3528R-131W	Red	1.8	2.8
ET-3528A-131W	Amber	1.8	2.8
ET-3528Y-131W	Yellow	1.8	2.8

Note:
Forward Voltage is measured with an accuracy of ± 0.1V

Characteristic Curve

Spectrum

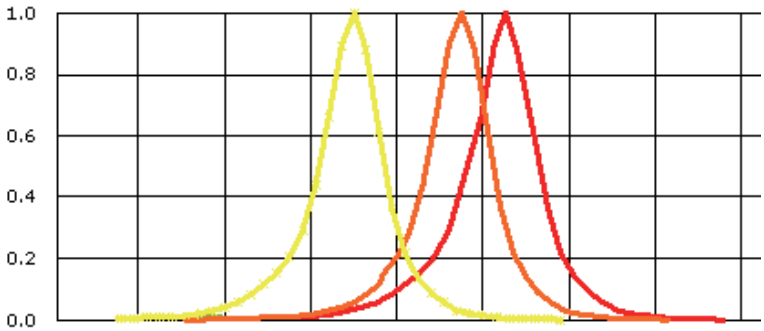

Figure 3. Wavelength & relative intensity for PLCC 3528 series

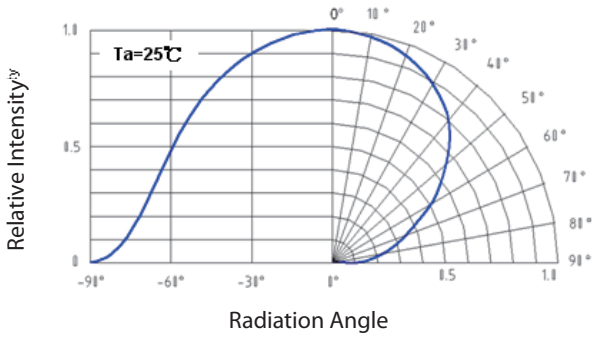

Figure 4. Beam pattern diagram for PLCC 3528 series

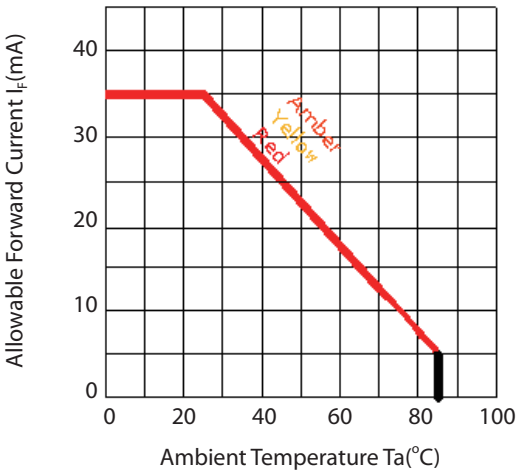

Figure 5. Ambient temperature & forward current for PLCC 3528 series

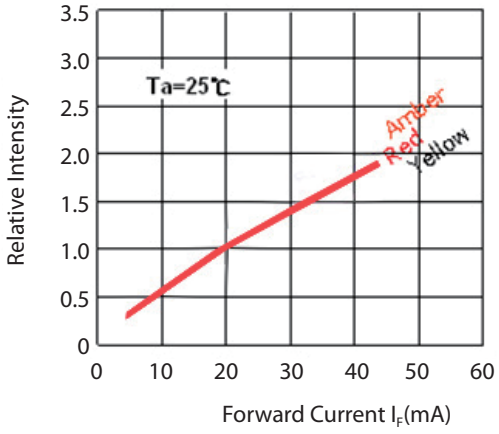

Figure 6. Forward current & relative intensity for PLCC 3528 series

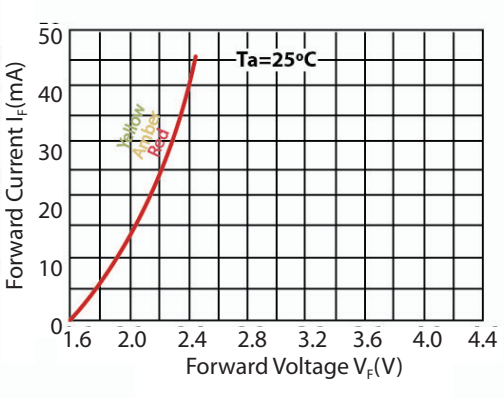

Figure 7. Forward voltage & forward current for PLCC 3528 series

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Revision History

Table 6. Revision history of PLCC 3528 series datashhet

Versions	DESCRIPTION	RELEASE DATE
1	Establish a datasheet	2011/11/25

About Edison Opto

Edison Opto is a leading manufacturer of high power LED and a solution provider experienced in LDMS. LDMS is an integrated program derived from the four essential technologies in LED lighting applications- Thermal Management, Electrical Scheme, Mechanical Refinement, Optical Optimization, to provide customer with various LED components and modules. More Information about the company and our products can be found at www.edison-opto.com

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