

ET-3528 0.06W White Datasheet



Features :

- High luminous Intensity and high efficiency
- Based on Blue : InGaN 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 Displays
- Backlighting (illuminated advertising, general lighting)
- Interior Automotive Lighting

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General Information

Introduction

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

Ordering Code Format

<u>2</u> X1	<u>T</u> X2	<u>X X</u> X3-X4	<u>X X</u> X5-X6	<u>X X</u> X7-X8	<u>X X</u> X9-X10	<u>0 0 0</u> X11-X13	<u>X X X</u> X14-X16		
X1		X2		X3-X4		X5-X6		X7-X8	
Type		Component		Series		Wattage		Color	
2	Emitter	T	PLCC	01	3014	01	1W	CW	Cool White
				03	3528	X1	0.1W	NW	Neutral White
				04	5050	X2	0.2W	WW	Warm White
				05	5630	X5	0.5W	RX	Red
						Y6	0.06W	TX	True Green
						BX	Blue		
						AX	Amber		
						YX	Yellow		
				OX	Red Orange				
M1	RGB								

X9-X10		X11-X13		X14-X16	
Internal code		PCB Board		Serial Number	
-	-	000	-	-	-

Absolute Maximum Ratings

Parameter	Symbol	Value	Units
DC Forward Current	I_F	30	mA
Pulse Forward Current ($t_p \leq 100\mu s$, Duty cycle=0.25)	I_{pulse}	100	mA
Reverse Voltage	V_R	5	V
LED Junction Temperature	T_J	125	°C
Operating Temperature	-	-40 ~ +85	°C
Storage Temperature	-	-40 ~ +125	°C
ESD Sensitivity	V_B	2,000	V
Soldering Temperature	T_s	Reflow Soldering : 255~260°C/10~30sec Manual Soldering : 350°C/3sec	

Absolute maximum ratings ($T_a = 25^\circ\text{C}$)

Notes:

1. The values are based on 1-die performance.

2.* I_{pulse} condition: pulse width $\leq 0.1\text{msec}$ and duty $\leq 1/10$.

Characteristics

Parameter	Symbol	Value	Units
Viewing Angle (Typ.)	$2\theta_{1/2}$	120	Degree
Forward voltage (Typ.)	V_F	3.2	V
Thermal resistance	-	180	°C/W
CRI (Typ.)	-	CW-70 NW-75 WW-80	-
CCT/Wavelength (Cool White)	-	5000-10000	K
(Neutral White)	-	3800-5000	
(Warm White)	-	2670-3800	

Note:

$2\theta_{1/2}$ is the off-axis angle where the luminous intensity is half of the axial luminous intensity.

Luminous Flux Characteristic

Luminous Flux Characteristics, $I_F=20\text{mA}$ and $T_J=25^\circ\text{C}$

Color	Group	Min Luminous Flux(lm)	Max Luminous Flux(lm)	Typ. Luminous Intensity (mcd)	Forward Current(mA)	Order Code
Cool White	23	6.4	6.7	2,600	20	2T03Y6CW06000001
	24	6.7	7.0			
	25	7.0	7.3			
	26	7.3	7.5			
	27	7.5	7.8			
	28	7.8	8.1			
	29	8.1	8.7			
Neutral White	22	6.1	6.4	2,500	20	2T03Y6NW01000001
	23	6.4	6.7			
	24	6.7	7.0			
	25	7.0	7.3			
	26	7.3	7.5			
	27	7.5	7.8			
	28	7.8	8.1			
	29	8.1	8.7			
Warm White	19	5.3	5.6	2,100	20	2T03Y6WW01000001
	20	5.6	5.8			
	21	5.8	6.1			
	22	6.1	6.4			
	23	6.4	6.7			
	24	6.7	7.0			
	25	7.0	7.3			

Note:

The luminous flux performance is guaranteed within published operating conditions. Edison Opto maintains a tolerance of $\pm 10\%$ on flux measurements.

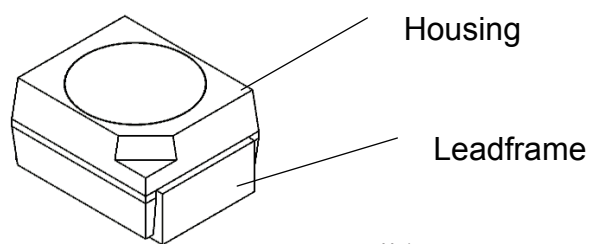
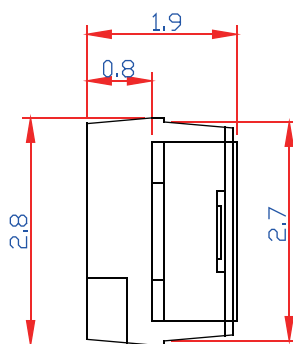
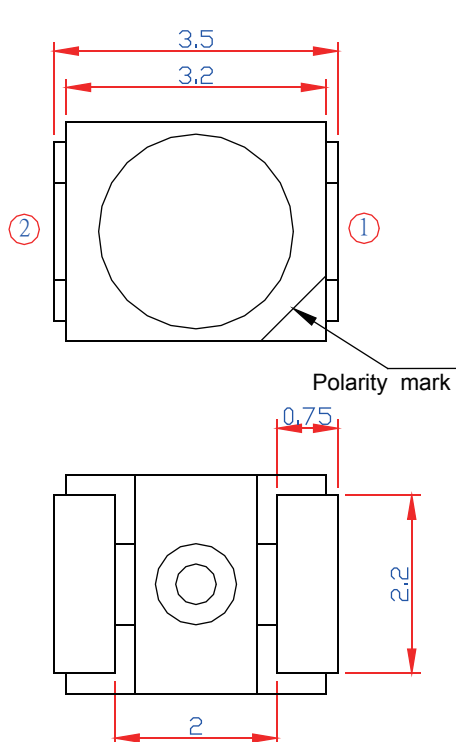
Voltage Bin Structure

Group	Min Voltage (V)	Max Voltage (V)
VA1	2.8	2.9
VB1	2.9	3.0
VC1	3.0	3.1
VA2	3.1	3.2
VB2	3.2	3.3
VC2	3.3	3.4
VA3	3.4	3.5
VB3	3.5	3.6

Note: Forward voltage measurement allowance is $\pm 0.1\text{V}$.

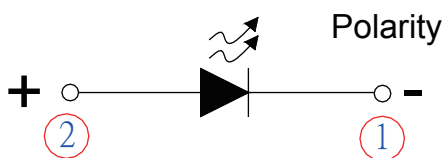
Mechanical Dimensions

Emitter Type Dimension

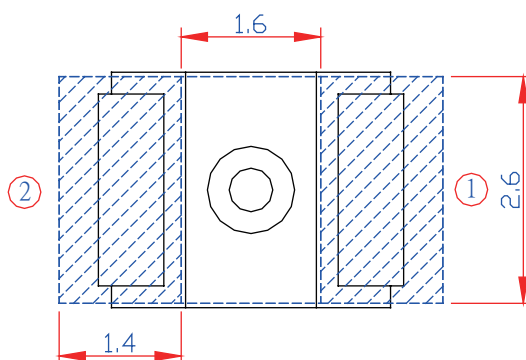


Unit: mm
Tolerance: $\pm 0.2\text{mm}$

Circuit



Solder Pad

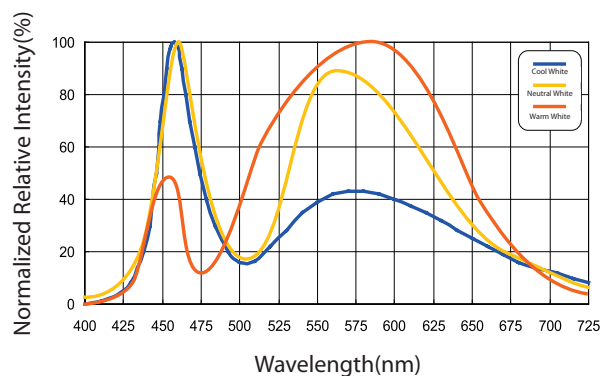


Notes:

1. All dimensions are measured in mm.
2. Tolerance : $\pm 0.2\text{ mm}$

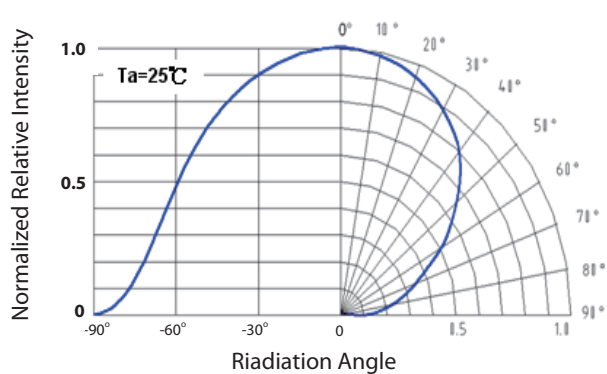
Characteristic Curves

Spectrum



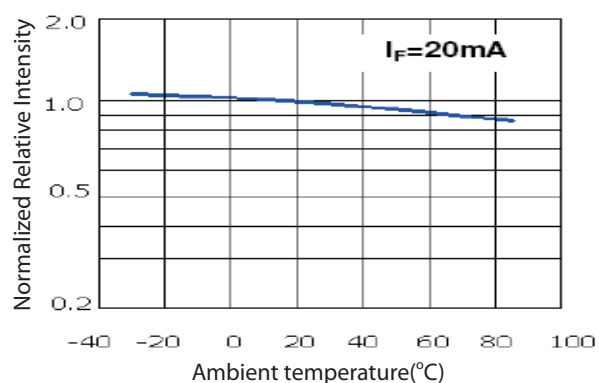
Color Spectrum at typical CCT for PLCC 3528series

Radiation Diagram



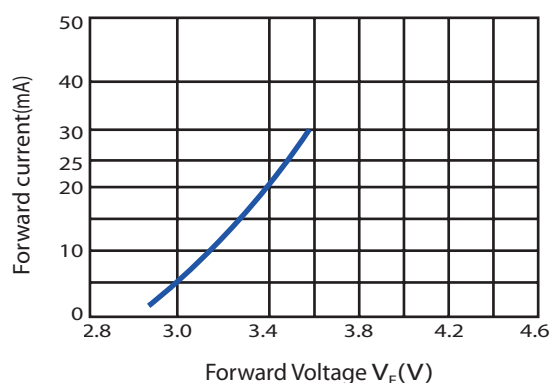
Beam pattern diagram for PLCC 3528 series

Luminous Flux vs. Temperature



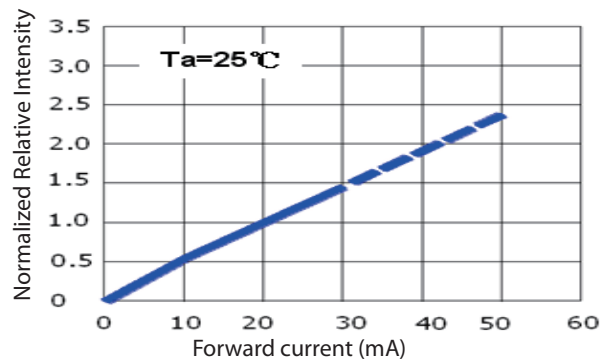
Ambient temperature vs. Relative intensity for PLCC 3528 series

Forward Voltage vs. Forward Current



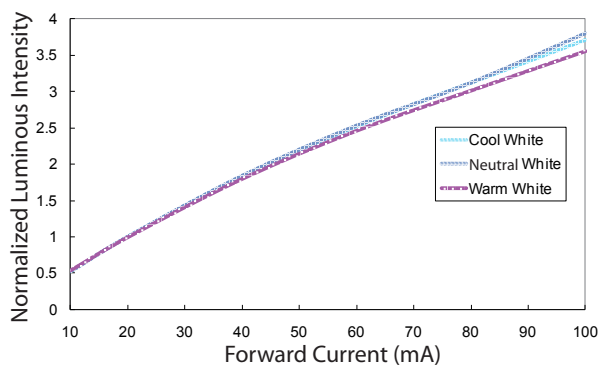
Forward current vs. forward voltage for PLCC 3528 series

Luminous Flux vs. Forward Current



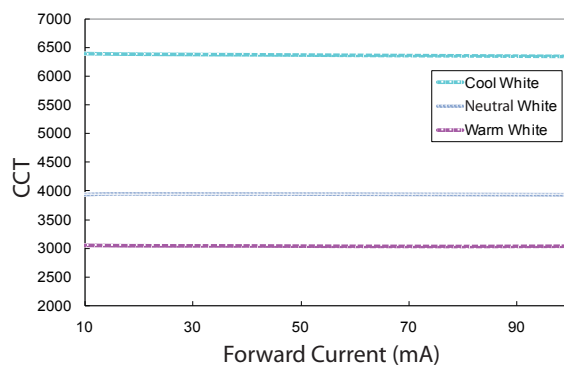
Forward current vs. relative intensity for PLCC 3528 series

Luminous Intensity vs. Forward Current



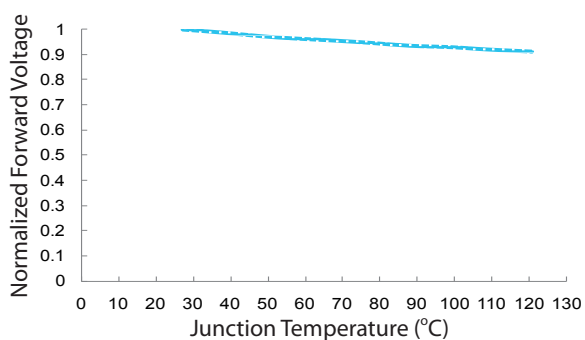
Luminous Intensity vs. Forward Current for PLCC 3528 series

CCT vs. Forward Current



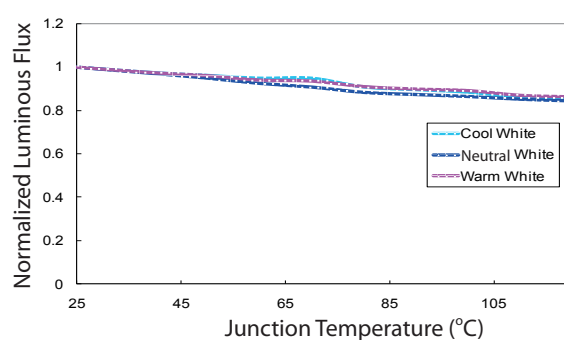
CCT vs. Forward Current for PLCC 3528 series

Forward voltage vs. Junction temperature



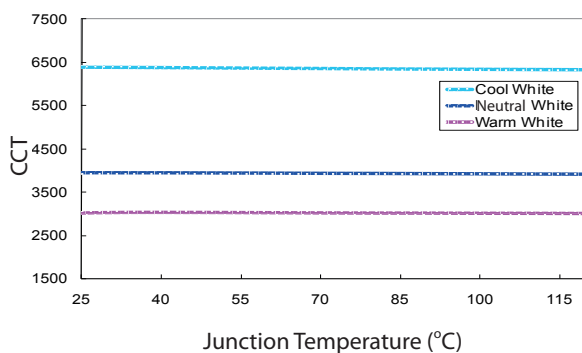
Forward voltage vs. Junction temperature for PLCC 3528 series

Luminous Flux vs. Junction temperature



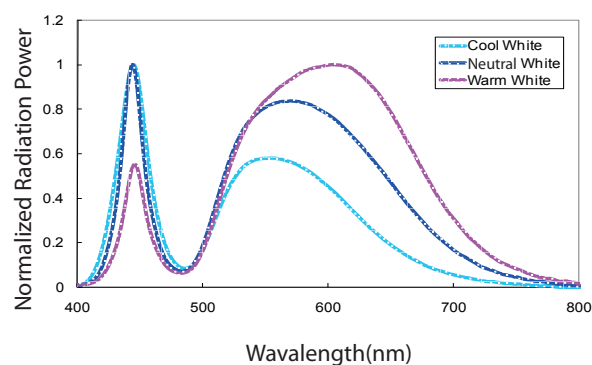
Luminous Flux vs. Junction temperature for PLCC 3528 series

CCT vs. Junction temperature



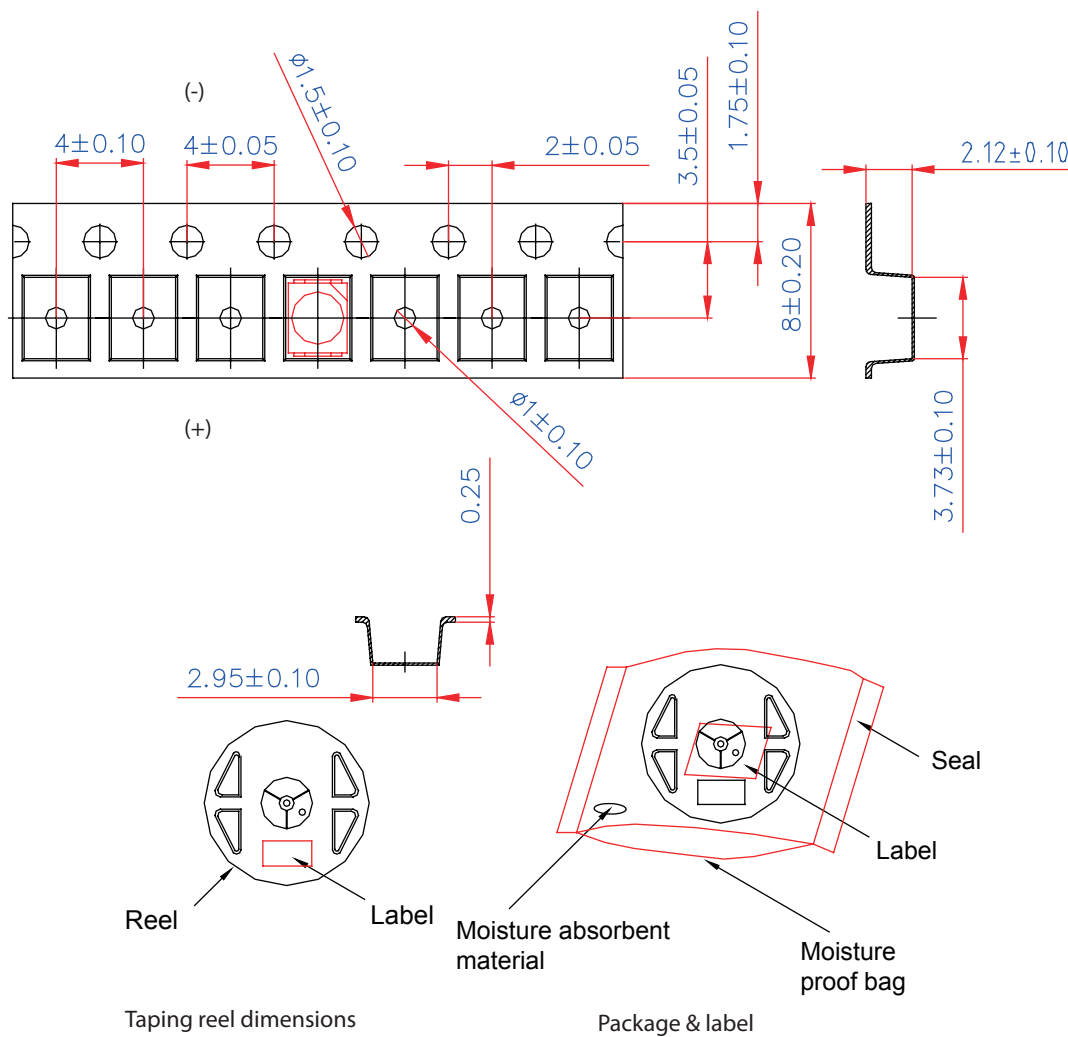
CCT vs. Junction temperature for PLCC 3528 series

Radiation Power vs. Wavelength



Radiation power vs. Wavelength for PLCC 3528 series

Product Packaging Information



Item	Quantity	Total	Dimensions(mm)
Reel	2,000pcs	2,000pcs	R=178
Box	5 Reels	10,000pcs	240*235*67
Carton	5 boxes	50,000pcs	353*254*256
Starting with 50pcs empty, and 50pcs empty at the last			

Revision History

Versions	Description	Release Date
1	Establish order code information	2012/11/28
2	Add the Characteristic Curve	2013/03/12

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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