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3.0x3.0mm ICE CUBE LED

Features

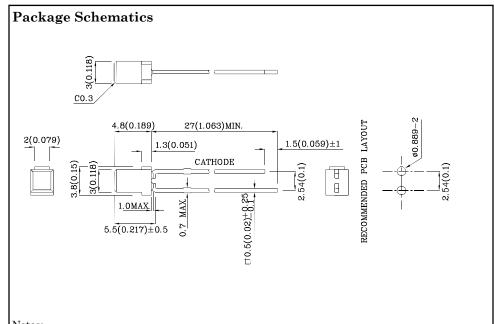
- Radial / Through hole package
- \bullet Reliable & robust
- Low power consumption
- Available on tape and reel
- RoHS Compliant







ATTENTION OBSERVE PRECAUTIONS FOR HANDLING ELECTROSTATIC DISCHARGE SENSITIVE DEVICES



Notes:

- 1. All dimensions are in millimeters (inches).
- 2. Tolerance is $\pm 0.25(0.01")$ unless otherwise noted.
- 3. Specifications are subject to change without notice.

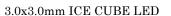
Absolute Maximum Ratings (T _A =25°C)		CWD (InGaN)	Unit	
Reverse Voltage	$V_{\rm R}$	5	V	
Forward Current	I_{F}	30	mA	
Forward Current (Peak) 1/10 Duty Cycle 0.1ms Pulse Width	ifs	150	mA	
Power Dissipation	P_{D}	120	mW	
Operating Temperature	$T_{\rm A}$	-40 ~ +85	°C	
Storage Temperature	Tstg	-40 ~ +85		
Electrostatic Discharge Threshold (HBM)	250	V		
Lead Solder Temperature [2mm Below Package Base]	260°C For 3 Seconds			
Lead Solder Temperature [5mm Below Package Base]	260°C For 5 Seconds			

Operating Characteristics (T _A =25°C)		CWD (InGaN)	Unit
Forward Voltage (Typ.) (I _F =20mA)	V_{F}	3.3	V
Forward Voltage (Max.) (I _F =20mA)	V_{F}	4	V
Reverse Current (Max.) $(V_R=5V)$	${ m I}_{ m R}$	50	uA
Chromaticity Coordinates	x	0.31	
(Тур.)	у	0.31	
Capacitance (Typ.) (V _F =0V, f=1MHz)	C	100	pF

Part Number	Emitting Color	Emitting Material	Lens-color	$\begin{array}{c} \text{Luminous Intensity} \\ \text{CIE127-2007*} \; \text{(I}_{\text{F}}\text{=-}20\text{mA)} \\ \text{mcd} \end{array}$		Viewing Angle 2θ 1/2
				min.	typ.	
XSCWD43MB	White	InGaN	White Triple Diffused	80*	138*	110°

^{*}Luminous intensity value and wavelength are in accordance with CIE127-2007 standards.

Dec 09,2013 XDSB4027 V5-Z Layout: Maggie L.



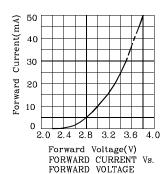


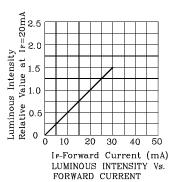


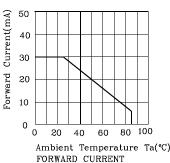
40° 30° 20° 10° 0° Ta=25°C 50° 0.8 60° 0.6 0.4 70° 0.2 80° 90° 100 0.8 0.6 60° 80° 100° 120° 1.0 0.4 0° 20° 40°

SPATIAL DISTRBUTION

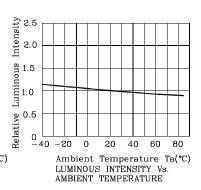
❖ CWD



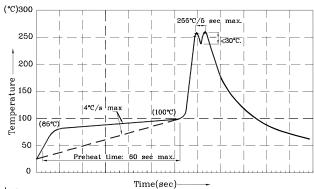




DERATING CURVE



Wave Soldering Profile For Thru-Hole Products (Pb-Free Components)



Notes:

- Notes. I. Recommend pre-heat temperature of 105°C or less (as measured with a thermocouple attached to the LED pins) prior to immersion in the solder wave with a maximum solder bath temperature of $260^{\circ}C$ 2. Peak wave soldering temperature between $245^{\circ}C$ \sim $255^{\circ}C$ for 3 sec
- (5 sec max).
- $3.\mathrm{Do}$ not apply stress to the epoxy resin while the temperature is above $85^{\circ}\mathrm{C}$. $4.\mathrm{Fixtures}$ should not incur stress on the component when mounting and
- during soldering process. 5.SAC 305 solder alloy is recommended.
- 6. No more than one wave soldering pass

Remarks:

If special sorting is required (e.g. binning based on forward voltage, luminous intensity/ luminous flux or chromaticity), the typical accuracy of the sorting process is as follows:

- 1. Measurement tolerance of the chromaticity coordinates is ± 0.02 .
- 2. Luminous Intensity/ Luminous Flux: +/-15%
- 3. Forward Voltage: +/-0.1V

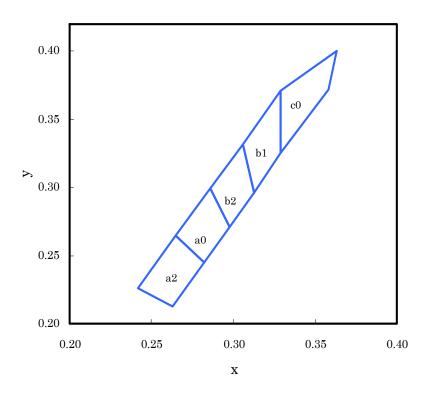
Note: Accuracy may depend on the sorting parameters.





XSCWD43MB

White CIE



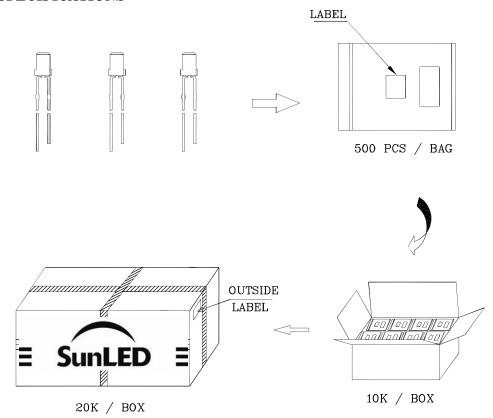
	X	У		x	У		X	у
	0.263	0.213		0.282	0.245	b2	0.298	0.271
a2	0.282	0.245	a0	0.298	0.271		0.313	0.296
az	0.265	0.265	ao	0.286	0.299		0.306	0.332
	0.242	0.226		0.265	0.265		0.286	0.299
b1	0.313	0.296	c0	0.329	0.325			
	0.329	0.325		0.358	0.372			
	0.329	0.371		0.363	0.400			
	0.306	0.332		0.329	0.371			

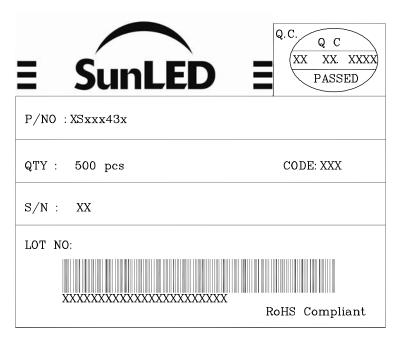
Notes:

Shipment may contain more than one chromaticity regions. Orders for single chromaticity region are generally not accepted. Measurement tolerance of the chromaticity coordinates is ± 0.02 .

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PACKING & LABEL SPECIFICATIONS





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- 3. The product(s) in this document are designed to be operated within the electrical and environmental specifications indicated on the datasheet. User accepts full risk and responsibility when operating the product(s) beyond their intended specifications.
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- 6. Additional technical notes are available at http://www.SunLEDusa.com/TechnicalNotes.asp

Dec 09,2013