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5.0x5.0mm ICE CUBE LED

# **Features**

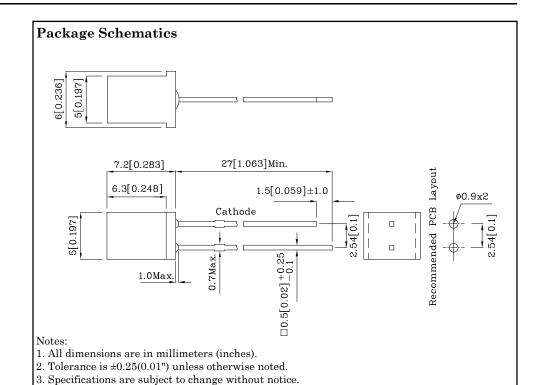
- Radial / Through hole package
- $\bullet$  Reliable & robust
- Low power consumption
- Available on tape and reel
- RoHS Compliant







# ATTENTION OBSERVE PRECAUTIONS FOR HANDLING ELECTROSTATIC DISCHARGE SENSITIVE DEVICES



Absolute Maximum Ratings (T <sub>A</sub> =25°C)		Yellow (AlGaInP)	Unit		
Reverse Voltage	$V_{\mathrm{R}}$	5	V		
Forward Current	$I_{\mathrm{F}}$	30	mA		
Forward Current (Peak) 1/10 Duty Cycle 0.1ms Pulse Width	ifs	175	mA		
Power Dissipation	$P_D$	75	mW		
Operating Temperature	$T_A$ -40 ~ +85		°C		
Storage Temperature	Tstg	-40 ~ +85	O		
Lead Solder Temperature [2mm Below Package Base]	260°C For 3 Seconds				
Lead Solder Temperature [5mm Below Package Base]	260°C For 5 Seconds				

A Relative Humidity between 40% and 60% is recommended in ESD-protected work areas to reduce static build up during assembly process (Reference JEDEC/JESD625-A and JEDEC/J-STD-033)

Operating Characteristics (T <sub>A</sub> =25°C)	Yellow (AlGaInP)	Unit	
Forward Voltage (Typ.) (I <sub>F</sub> =20mA)	$V_{\mathrm{F}}$	2	V
Forward Voltage (Max.) (I <sub>F</sub> =20mA)	$V_{\mathrm{F}}$	2.5	V
Reverse Current (Max.) $(V_R=5V)$	$I_R$	10	uA
Wavelength of Peak Emission CIE127-2007*(Typ.) (I <sub>F</sub> =20mA)	λΡ	590*	nm
Wavelength of Dominant Emission CIE127-2007*(Typ.) $(I_F=20\text{mA})$	λD	590*	nm
Spectral Line Full Width At Half-Maximum (Typ.) (I <sub>F</sub> =20mA)	Δλ	20	nm
Capacitance (Typ.) (V <sub>F</sub> =0V, f=1MHz)	С	20	pF

 Part Number	Emitting Color	Emitting Material	Lens-color	Luminous Intensity CIE127-2007* (I <sub>F</sub> =20mA) mcd		Wavelength CIE127-2007* nm λP	Viewing Angle 2θ 1/2
				min.	typ.		
XSMYK23MB	Yellow	AlGaInP	White Triple Diffused	20*	49*	590*	140°

<sup>\*</sup>Luminous intensity value and wavelength are in accordance with CIE127-2007 standards.

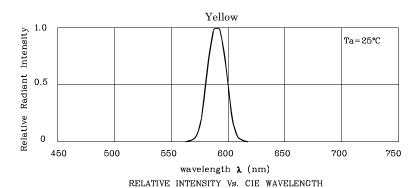
Oct 08,2016 XDSB4181 V5-Z Layout: Maggie L.

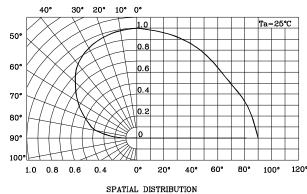


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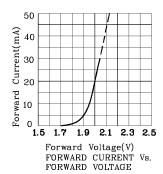


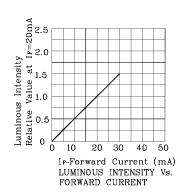


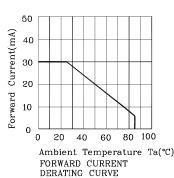


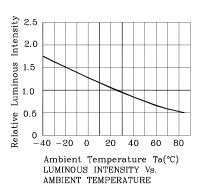


## **❖** Yellow

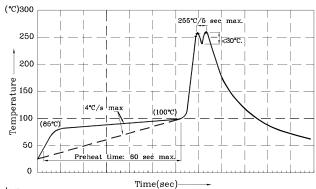








Wave Soldering Profile For Thru-Hole Products (Pb-Free Components)



## 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.Do not apply stress to the epoxy resin while the temperature is above  $85\,^\circ\text{C}.$  4.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 wavelength),

the typical accuracy of the sorting process is as follows:

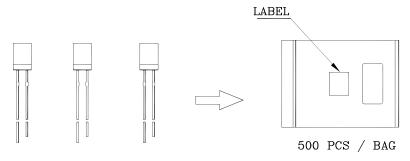
- 1. Wavelength: +/-1nm
- 2. Luminous Intensity / Luminous Flux: +/-15%
- 3. Forward Voltage: +/-0.1V

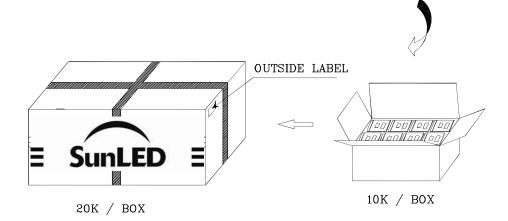
Note: Accuracy may depend on the sorting parameters.

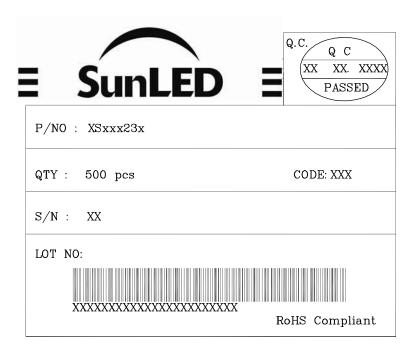


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# PACKING & LABEL SPECIFICATIONS







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