

1.0x0.5x0.2mm (0402) SMD CHIP LED LAMP

Features

- Ideal for indication light on hand held products
- Long life and robust package
- Standard Package: 4,000pcs/ Reel
- MSL (Moisture Sensitivity Level): 3
- Low current IF=5mA operating.
- RoHS compliant



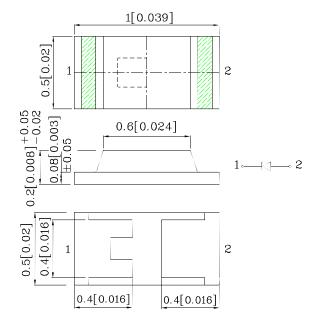




ATTENTION FOR HANDLING ELECTROSTATIC

OBSERVE PRECAUTIONS DISCHARGE SENSITIVE DEVICES

Package Schematics



- 1. All dimensions are in millimeters (inches).
- 2. Tolerance is $\pm 0.1(0.004")$ unless otherwise noted.
- 3. Specifications are subject to change without notice.

Absolute Maximum Ratings (T _A =25°C)	Green (InGaN)	Unit			
Reverse Voltage	V_{R}	5	V		
Forward Current	10	mA			
Forward Current (Peak) 1/10 Duty Cycle 0.1ms Pulse Width	ifs	50	mA		
Electrostatic Discharge Threshold (HBM)	1000	V			
Power Dissipation	P_D	34	mW		
Operating Temperature	T_{A}	-40 ~ +85	°C		
Storage Temperature	Tstg	-40 ~ +85			

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 _A =25°C)	Green (InGaN)	Unit	
Forward Voltage (Typ.) (I _F =5mA)	V_{F}	3	V
Forward Voltage (Max.) (I _F =5mA)	V_{F}	3.2	V
Reverse Current (Max.) $(V_R=5V)$	I_R	50	uA
Wavelength of Peak Emission CIE127-2007* (Typ.) (I _F =5mA)	λΡ	518*	nm
Wavelength of Dominant Emission CIE127-2007* (Typ.) (I _F =5mA)	λD	527*	nm
Spectral Line Full Width At Half-Maximum (Typ.) (I _F =5mA)	$\triangle \lambda$	35	nm

Part Number	Emitting Color	Emitting Material	Lens-color	Luminous CIE127 (I _F =5 m	7-2007* 5mA)	Wavelength CIE127-2007* nm λΡ	Viewing Angle 20 1/2
				min.	typ.		
XZBGR68W5MAV-3	Green	InGaN	Water Clear	30*	69*	518*	140°

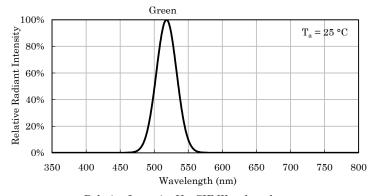
^{*}Luminous intensity value and wavelength are in accordance with CIE127-2007 standards.

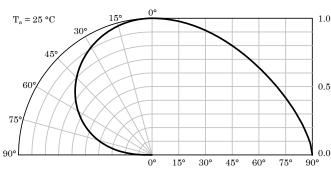
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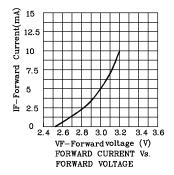


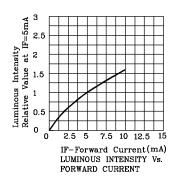


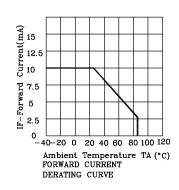
Relative Intensity Vs. CIE Wavelength

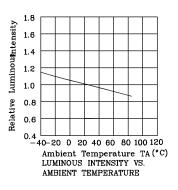
Spatial Distribution

Green



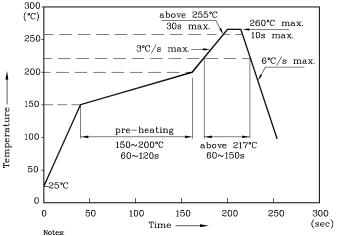






LED is recommended for reflow soldering and soldering profile is shown below.

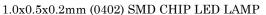
Reflow Soldering Profile for SMD Products (Pb-Free Components)



- 1. All temperatures refer to the center of the package,
- measured on the package body surface facing up during reflow.
- 2. Do not apply any stress to the LED during high temperature conditions.

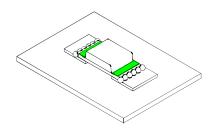
 3. Maximum number of soldering passes: 2

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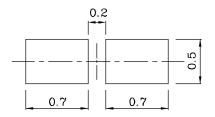




♦ The device has a single mounting surface. The device must be mounted according to

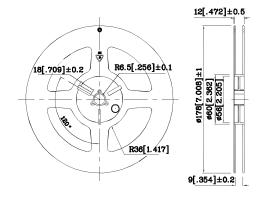


❖ Recommended Soldering Pattern (Units:mm; Tolerance: ± 0.1)

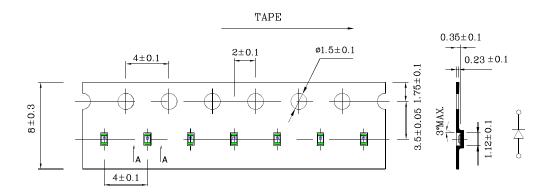


Mask open area ratio:80% Mask thickness:80~100um

* Reel Dimension



❖ Tape Specification (Units:mm)



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

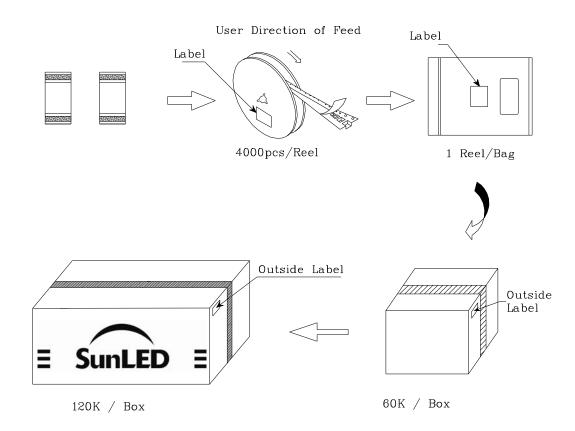
Note: Accuracy may depend on the sorting parameters.

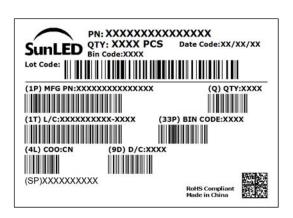
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PACKING & LABEL SPECIFICATIONS





TERMS OF USE

- 1. Data presented in this document reflect statistical figures and should be treated as technical reference only.
- 2. Contents within this document are subject to improvement and enhancement changes without notice.
- 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.
- 4. The product(s) described in this document are intended for electronic applications in which a person's life is not reliant upon the LED. Please consult with a SunLED representative for special applications where the LED may have a direct impact on a person's life.
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- 6. Additional technical notes are available at https://www.SunLEDusa.com/TechnicalNotes.asp

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