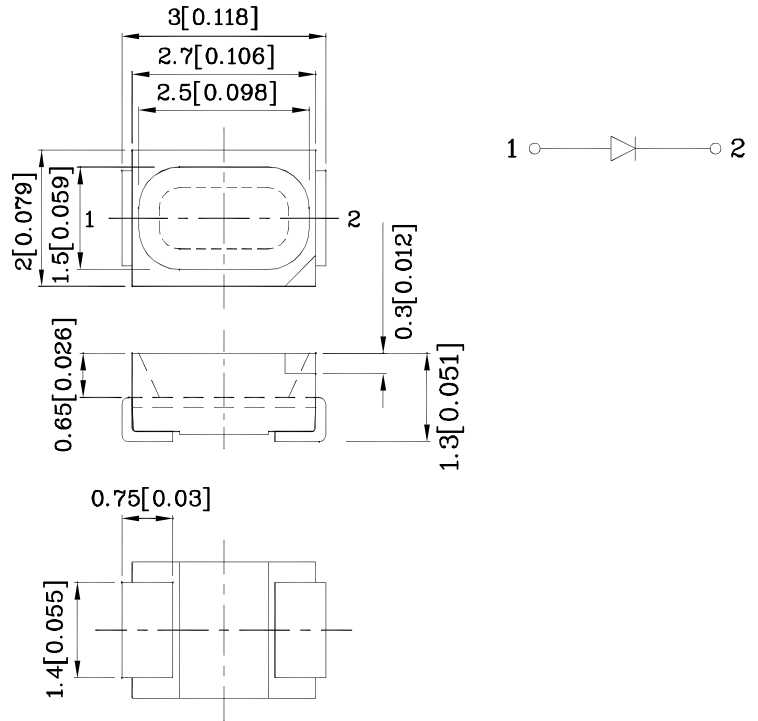


### Features

- 3.0mm x 2.0mm, 1.3mm high, only minimum space required.
- Suitable for compact optoelectronic applications.
- Low power consumption.
- Package : 2000pcs / reel.
- Moisture sensitivity level : level 3.
- RoHS compliant.



### Notes:

1. All dimensions are in millimeters (inches).
2. Tolerance is  $\pm 0.2(0.008)$ " unless otherwise noted.
3. Specifications are subject to change without notice.

Absolute Maximum Ratings (TA=25°C)		CGS (InGaN)	Unit
Reverse Voltage	V <sub>R</sub>	5	V
Forward Current	I <sub>F</sub>	25	mA
Forward Current (Peak) 1/10 Duty Cycle 0.1ms Pulse Width	i <sub>FS</sub>	150	mA
Power Dissipation	P <sub>D</sub>	95	mW
Operating Temperature	T <sub>A</sub>	-40 ~ +85	°C
Storage Temperature	T <sub>stg</sub>	-40 ~ +85	

Operating Characteristics (TA=25°C)		CGS (InGaN)	Unit
Forward Voltage (Typ.) (I <sub>F</sub> =20mA)	V <sub>F</sub>	3.2	V
Forward Voltage (Max.) (I <sub>F</sub> =20mA)	V <sub>F</sub>	3.8	V
Reverse Current (Max.) (V <sub>R</sub> =5V)	I <sub>R</sub>	10	μA
Wavelength of Peak Emission (Typ.) (I <sub>F</sub> =20mA)	λ <sub>P</sub>	500	nm
Wavelength of Dominant Emission (Typ.) (I <sub>F</sub> =20mA)	λ <sub>D</sub>	505	nm
Spectral Line Full Width At Half-Maximum (Typ.) (I <sub>F</sub> =20mA)	Δλ	28	nm
Capacitance (Typ.) (V <sub>F</sub> =0V, f=1MHz)	C	45	pF

Part Number	Emitting Color	Emitting Material	Lens-color	Luminous Intensity (I <sub>F</sub> =20mA) mcd		Wavelength nm λ <sub>P</sub>	Viewing Angle 2θ 1/2
				min.	typ.		
XZCGS105S	Green	InGaN	Water Clear	400	647	500	125°

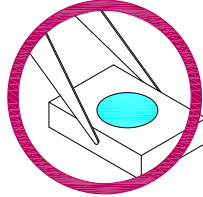


## Handling Precautions

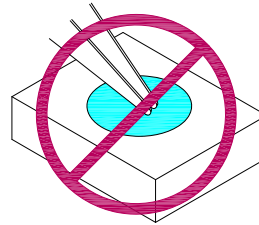
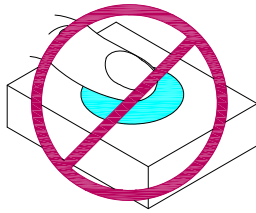
Compare to epoxy encapsulant that is hard and brittle, silicone is softer and flexible. Although its characteristic significantly reduces thermal stress, it is more susceptible to damage by external mechanical force.

As a result, special handling precautions need to be observed during assembly using silicone encapsulated LED products. Failure to comply might lead to damage and premature failure of the LED.

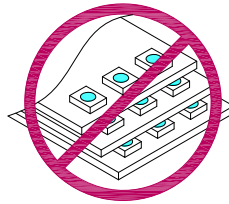
1. Handle the component along the side surfaces by using forceps or appropriate tools.



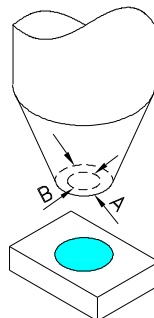
2. Do not directly touch or handle the silicone lens surface. It may damage the internal circuitry.

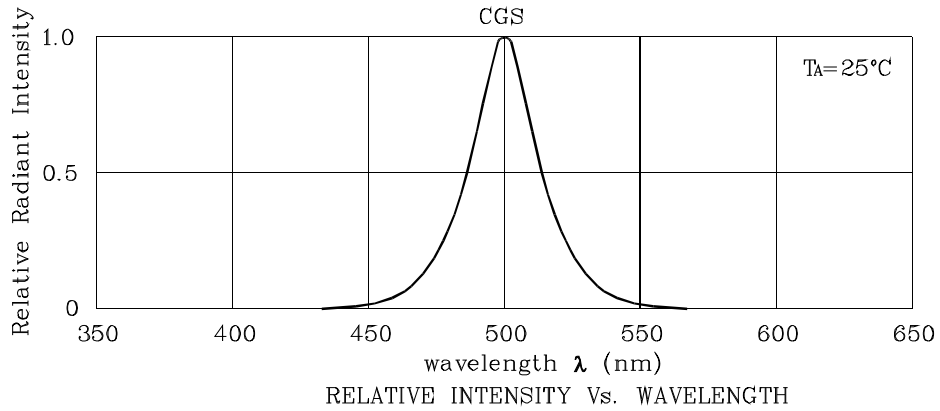


3. Do not stack together assembled PCBs containing exposed LEDs. Impact may scratch the silicone lens or damage the internal circuitry.

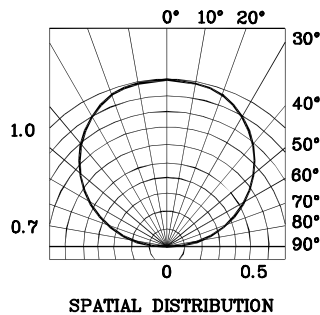
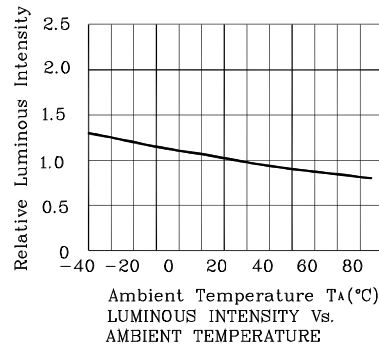
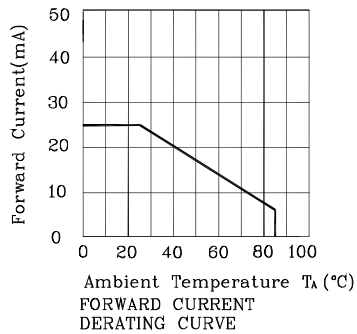
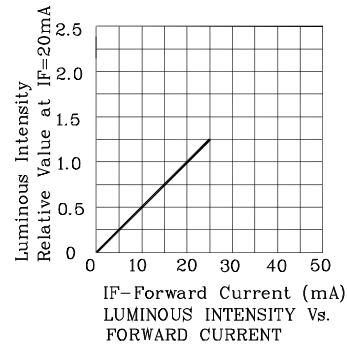
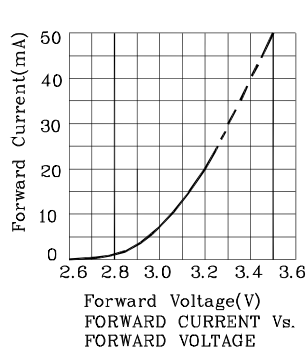


4. The outer diameter of the SMD pickup nozzle should not exceed the size of the LED to prevent air leaks. The inner diameter of the nozzle should be as large as possible.
5. A pliable material is suggested for the nozzle tip to avoid scratching or damaging the LED surface during pickup.
6. The dimensions of the component must be accurately programmed in the pick-and-place machine to insure precise pickup and avoid damage during production.



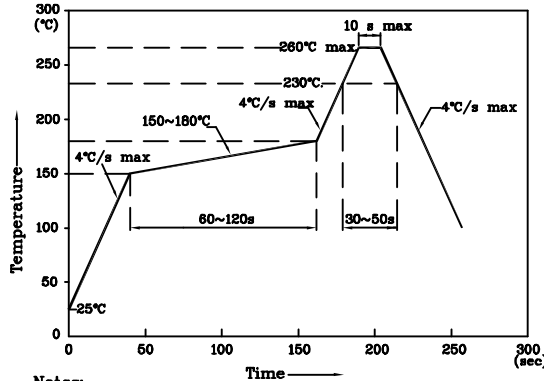


❖ CGS



**Reflow soldering is recommended and the soldering profile is shown below.  
 Other soldering methods are not recommended as they might cause damage to the product.**

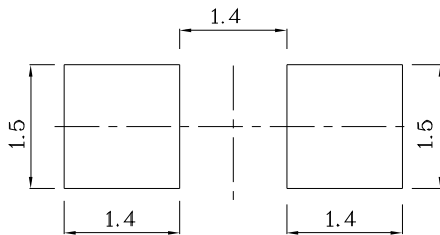
Reflow Soldering Profile For Lead-free SMT Process.



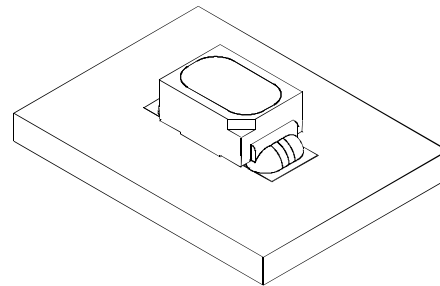
Notes:

1. Maximum soldering temperature should not exceed 260°C
2. Recommended reflow temperature: 145°C-260°C
3. Do not put stress to the epoxy resin during high temperatures conditions

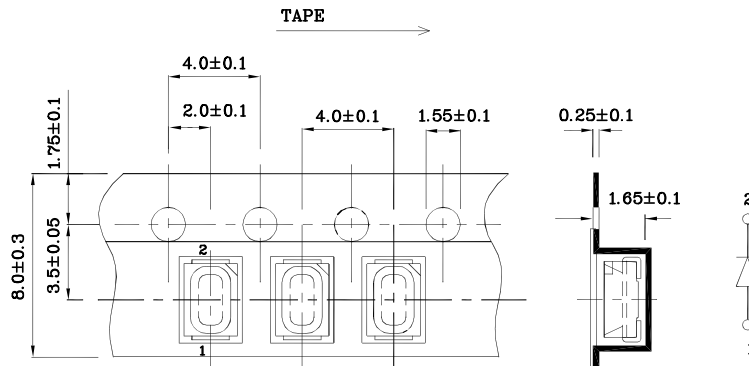
❖ Recommended Soldering Pattern (Units : mm; Tolerance: ±0.1)



❖ The device has a single mounting surface. The device must be mounted according to the specifications.



❖ 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:

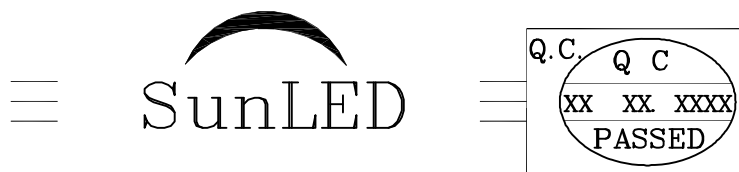
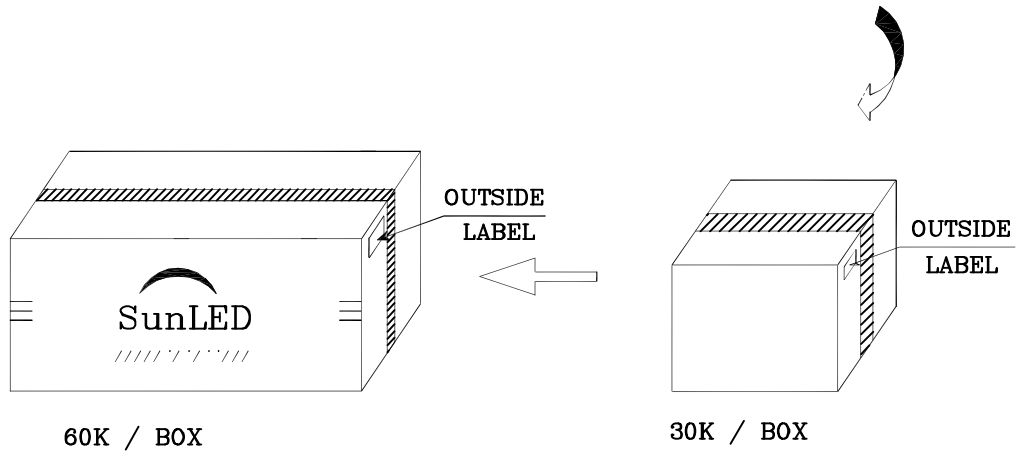
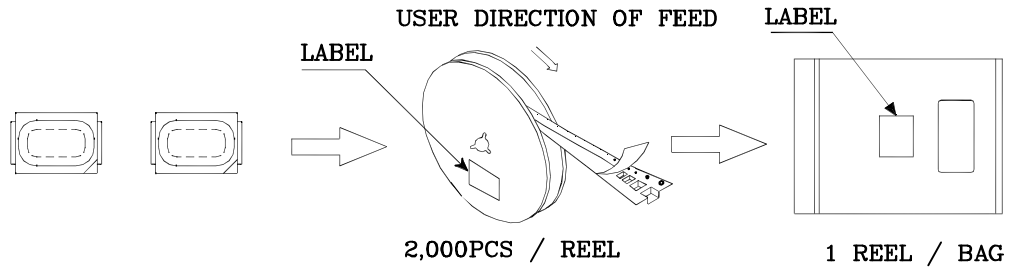
1. Wavelength: +/-1nm
2. Luminous intensity / luminous flux: +/-15%
3. Forward Voltage: +/-0.1V


Note: Accuracy may depend on the sorting parameters.



**PACKING & LABEL SPECIFICATIONS**

**XZCGS105S**



P/NO : XZxxx105x	
QTY : 2,000 pcs	CODE: XXX
S/N : XX	
LOT NO :	
 XXXXXXXXXXXXXXXXXXXXXXXX	
RoHS Compliant	