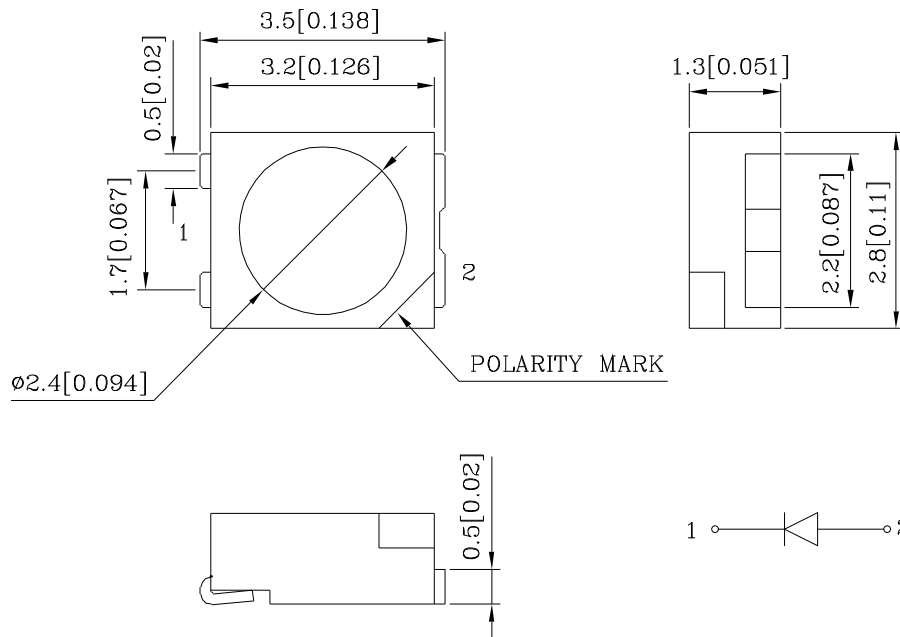


PRELIMINARY SPEC

Features

- SINGLE COLOR.
- SUITABLE FOR ALL SMT ASSEMBLY AND SOLDER PROCESS.
- AVAILABLE ON TAPE AND REEL.
- IDEAL FOR BACKLIGHTING.
- WHITE SMD PACKAGE, SILICONE RESIN.
- LOW THERMAL RESISTANCE.
- PACKAGE: 1500PCS / REEL.
- MOISTURE SENSITIVITY LEVEL : LEVEL 2a.
- RoHS COMPLIANT.



Notes:

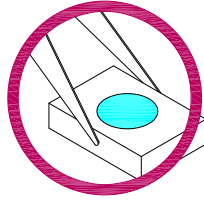
1. All dimensions are in millimeters (inches).
2. Tolerance is $\pm 0.25(0.01)$ " unless otherwise noted.
3. Specifications are subject to change without notice.

Handling Precautions

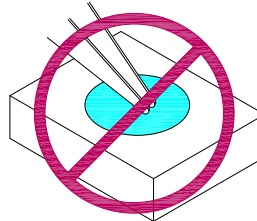
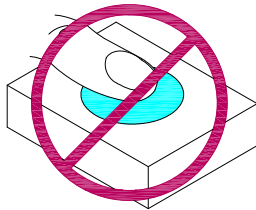
Compare to epoxy encapsulant that is hard and brittle, silicone is softer and flexible. Although its characteristic significantly reduces thermal stress, it is more susceptible to damage by external mechanical force.

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

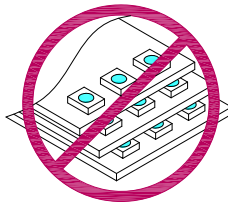
1. Handle the component along the side surfaces by using forceps or appropriate tools.



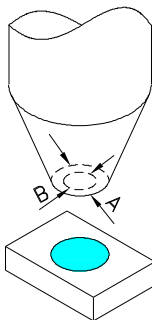
2. Do not directly touch or handle the silicone lens surface. It may damage the internal circuitry.



3. Do not stack together assembled PCBs containing exposed LEDs. Outside 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.



Part Number	Emitting Color	Emitting Material	Lens-color	Luminous Intensity (IF=150mA) mcd		Luminous Flux (IF=150mA) mlm		Wavelength nm λ P	Viewing Angle 2 θ 1/2 [2]
				min.	typ.	min.	typ.		
XZMOL109S	Red	AlInGaP	Water Clear	3800	5990	2500	4000	626	120°

Absolute Maximum Ratings at TA=25°C

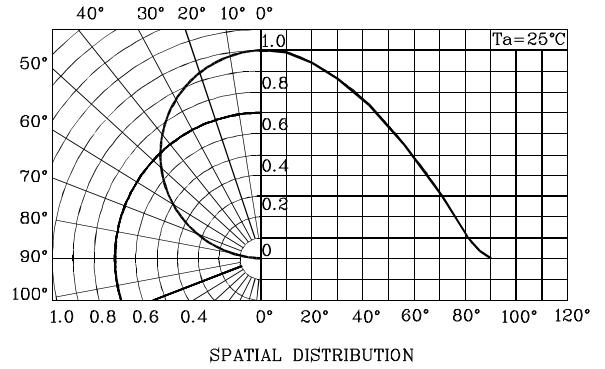
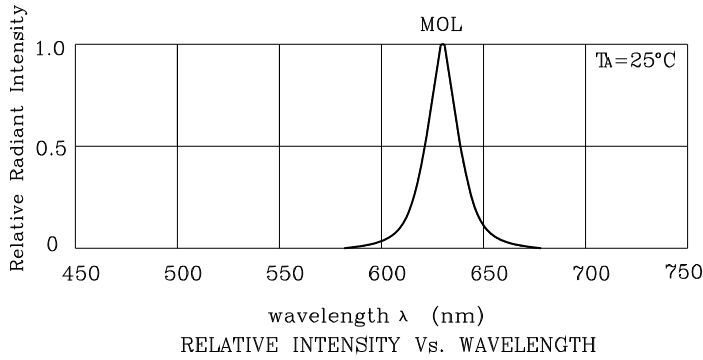
Parameter	Symbol	Value	Unit
Power Dissipation	Pt	615	mW
Junction Temperature [1]	TJ	110	°C
Operating Temperature	Top	-40 To +85	°C
Storage Temperature	Tstg	-40 To +85	°C
DC Forward Current [1]	IF	150	mA
Peak Forward Current [3]	IFM	350	mA
Thermal Resistance [1] (Junction/ambient)	Rth j-a	200	°C/W
Thermal Resistance [1] (Junction/solder point)	Rth j-S	80	°C/W

Notes:

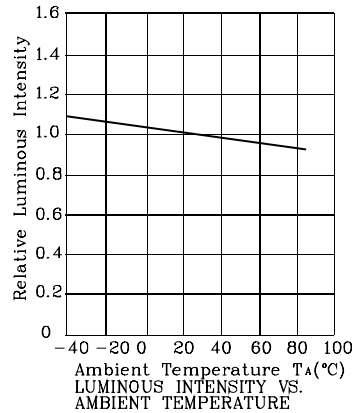
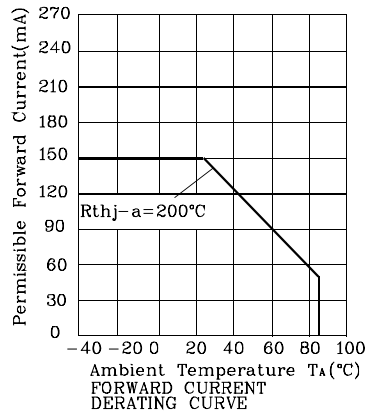
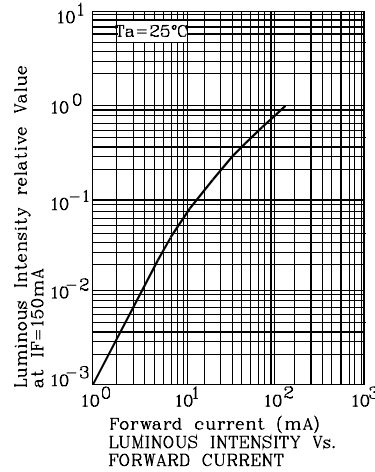
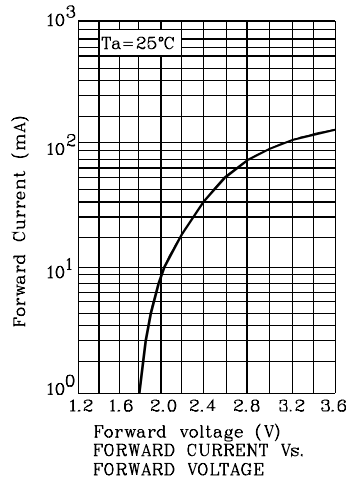
- Results from mounting on PC board FR4(pad size≥70mm²), mounted on pc board-metal core PCB is recommend for lowest thermal Resistance.
- 2.0 1/2 is the angle from optical centerline where the luminous intensity is 1/2 the optical centerline value.
- 3.1/10 Duty Cycle, 0.1ms Pulse Width.

Electrical / Optical Characteristics at TA=25°C

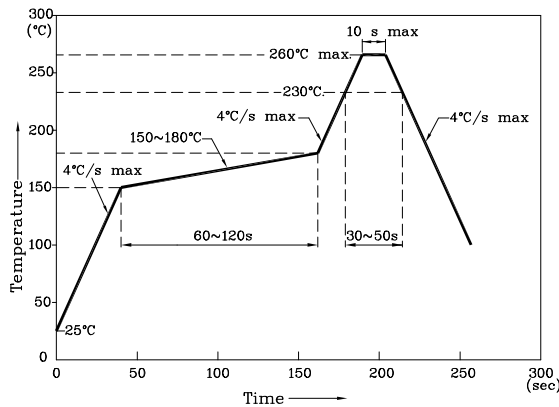
Symbol	Parameter	Device	Typ.	Max.	Units	Test Conditions
λ peak	Peak Wavelength	Red	626		nm	IF=150mA
λ D	Dominant Wavelength	Red	618		nm	IF=150mA
Δλ 1/2	Spectral Line Half-width	Red	20		nm	IF=150mA
C	Capacitance	Red	25		pF	VF=0V;f=1MHz
VF	Forward Voltage	Red	3.6	4.1	V	IF=150mA
IR	Reverse Current	Red		10	uA	VR = 5V



❖ MOL



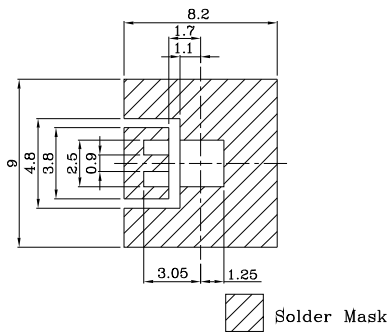
Reflow Soldering Profile For Lead-free SMT Process.



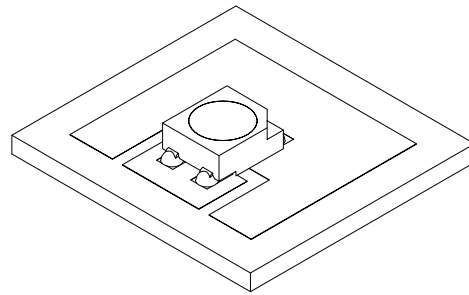
NOTES:

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.

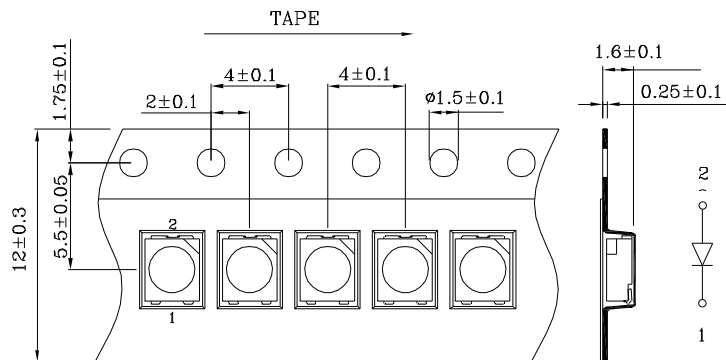
❖ Recommended Soldering Pattern
(Units : mm; Tolerance: ±0.1)



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



❖ Tape Specification (Units : mm)



Remarks:

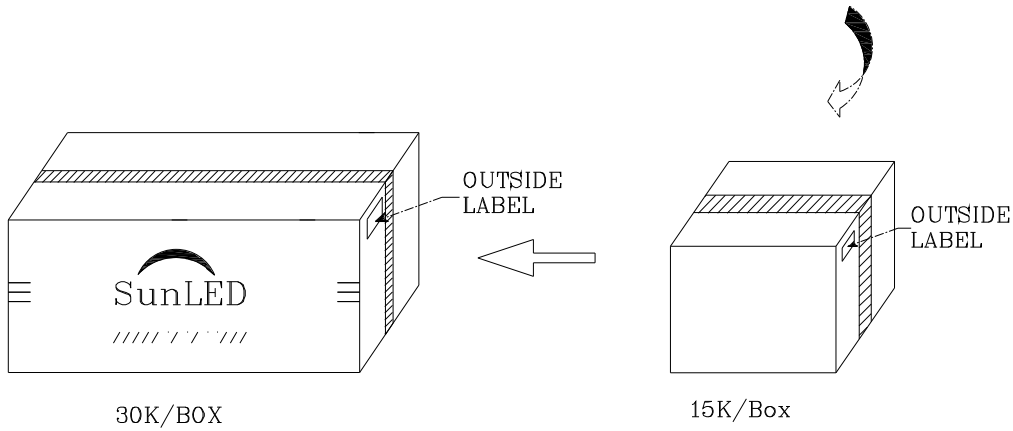
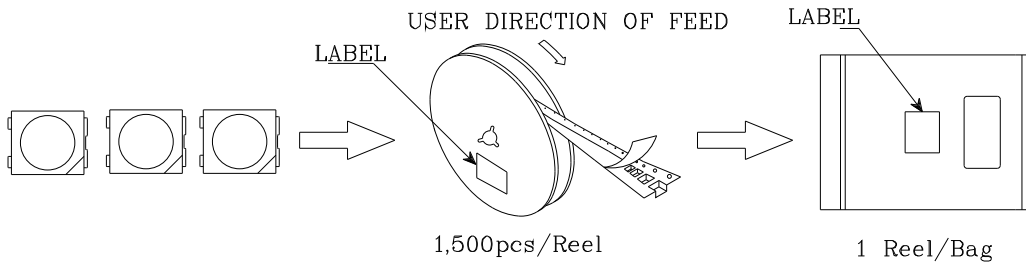
If special sorting is required (e.g. binning based on forward voltage, Luminous intensity / luminous flux, or wavelength), the typical accuracy of the sorting process is as follows:


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

XZMOL109S



P/NO : XZxxx109x	
QTY : 1,500 pcs	CODE: XXX
S/N : XX	
LOT NO :	
 XXXXXXXXXXXXXXXXXXXXXXXXXXXX	
RoHS Compliant	