



Features

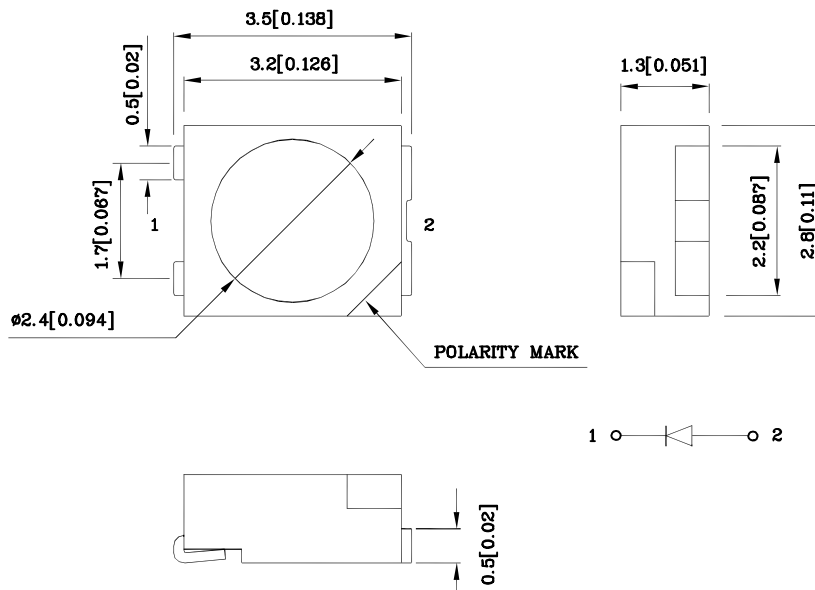
- Ideal for indication light on hand held products
- Long life and robust package
- Variety of lens types and color choices available
- Package: 1500pcs / reel
- Moisture sensitivity level : level 2a
- RoHS compliant



ATTENTION
OBSERVE PRECAUTIONS
FOR HANDLING
ELECTROSTATIC
DISCHARGE
SENSITIVE
DEVICES



Package Schematics



Notes:

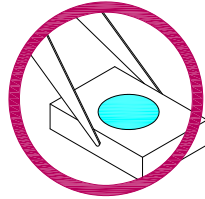
1. All dimensions are in millimeters (inches).
2. Tolerance is $\pm 0.25(0.01)$ unless otherwise noted.
3. Specifications are subject to change without notice.

Handling Precautions

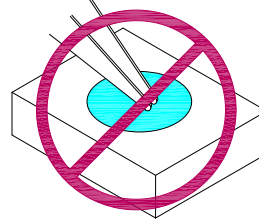
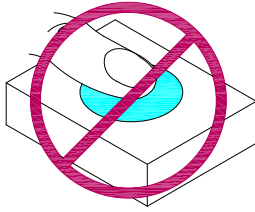
Compare to epoxy encapsulant that is hard and brittle, silicone is softer and flexible. Although its characteristic significantly reduces thermal stress, it is more susceptible to damage by external mechanical force.

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

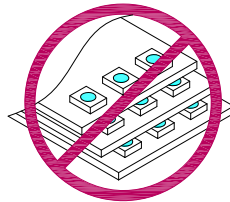
1. Handle the component along the side surfaces by using forceps or appropriate tools.



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



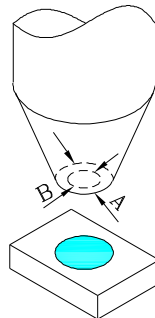
3. Do not stack together assembled PCBs containing exposed LEDs. Impact may scratch the silicone lens or damage the internal circuitry.



4.1. 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.

4.2. A pliable material is suggested for the nozzle tip to avoid scratching or damaging the LED surface during pickup.

4.3. The dimensions of the component must be accurately programmed in the pick-and-place machine to insure precise pickup and avoid damage during production.



5. As silicone encapsulation is permeable to gases, some corrosive substances such as H₂S might corrode silver plating of leadframe. Special care should be taken if an LED with silicone encapsulation is to be used near such substances.

Part Number	Emitting Color	Emitting Material	Lens-color	Luminous Intensity (I _F =150mA) mcd		Luminous Flux (I _F =150mA) mlm		Wavelength nm λP	Viewing Angle 2 θ 1/2 [2]
				min.	typ.	min.	typ.		
XZMOL109S	Red	AlGaInP	Water Clear	8000	12990	8600	12000	626	120°

Absolute Maximum Ratings at TA=25°C

Parameter	Symbol	Value	Unit
Power Dissipation	P _D	510	mW
Junction Temperature [1]	T _J	110	°C
Operating Temperature	T _{op}	-40 To +85	°C
Storage Temperature	T _{stg}	-40 To +85	°C
DC Forward Current [1]	I _F	150	mA
Peak Forward Current [3]	I _{FM}	350	mA
Thermal Resistance [1] (Junction/ambient)	R _{th j-a}	200	°C/W
Thermal Resistance [1] (Junction/solder point)	R _{th j-s}	80	°C/W

Notes:

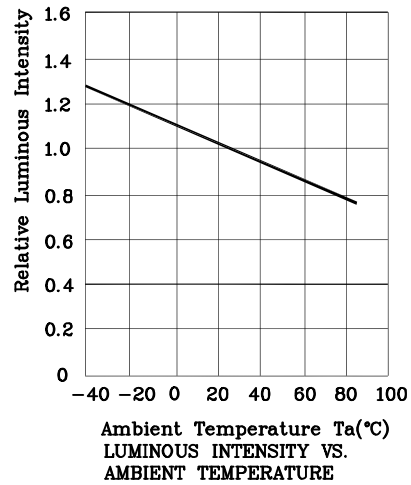
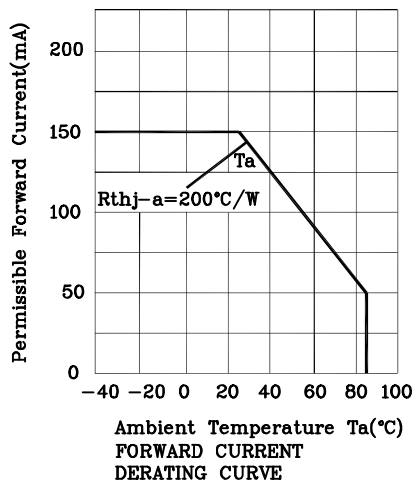
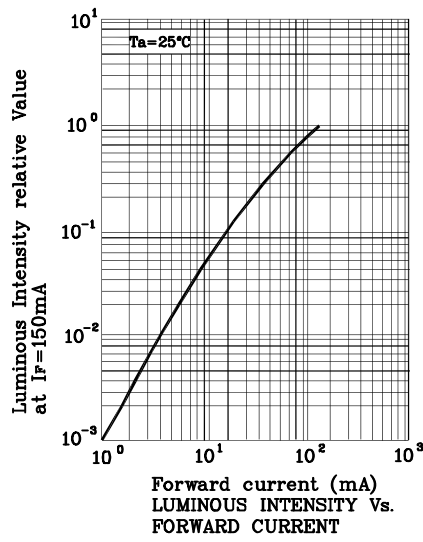
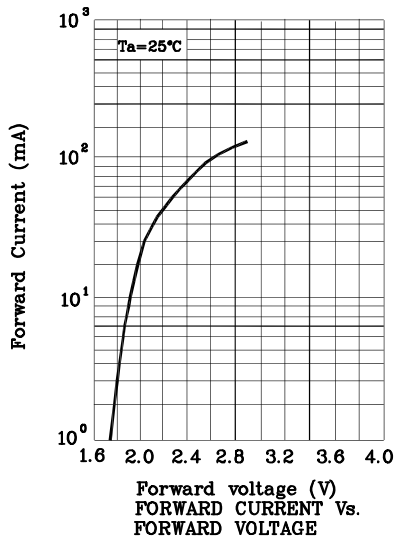
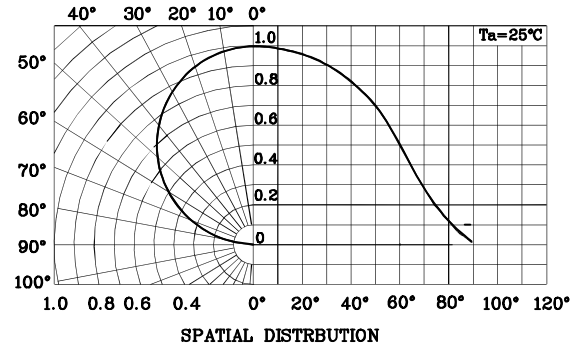
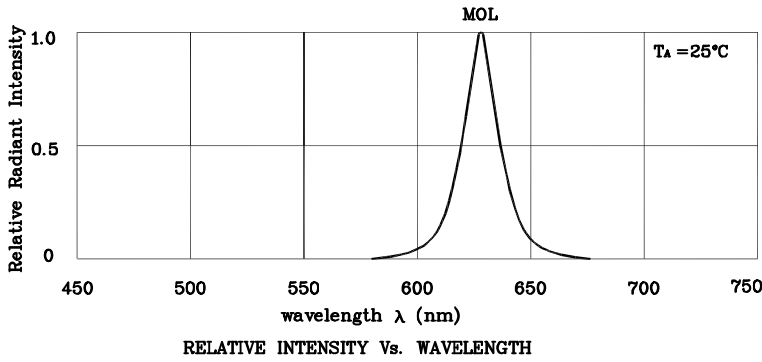
1.Results from mounting on PC board FR4(pad size≥70mm²), mounted on pc board-metal core PCB is recommend for lowest thermal Resistance.

2.θ 1/2 is the angle from optical centerline where the luminous intensity is 1/2 the optical peak value.

3.1/10 Duty Cycle, 0.1ms Pulse Width.

Electrical / Optical Characteristics at TA=25°C

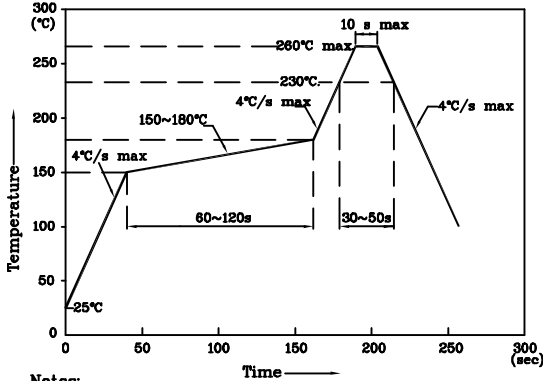
Symbol	Parameter	Device	Typ.	Max.	Units	Test Conditions
λ _{peak}	Peak Wavelength	Red	626		nm	I _F =150mA
λ _D	Dominant Wavelength	Red	618		nm	I _F =150mA
Δλ _{1/2}	Spectral Line Half-width	Red	20		nm	I _F =150mA
C	Capacitance	Red	25		pF	V _F =0V;f=1MHz
V _F	Forward Voltage	Red	2.9	3.4	V	I _F =150mA
I _R	Reverse Current	Red		10	uA	V _R = 5V



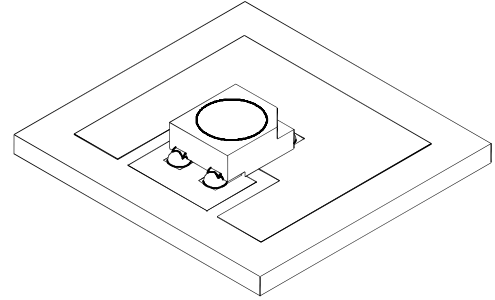
LED is recommended for reflow soldering and soldering profile is shown below.

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

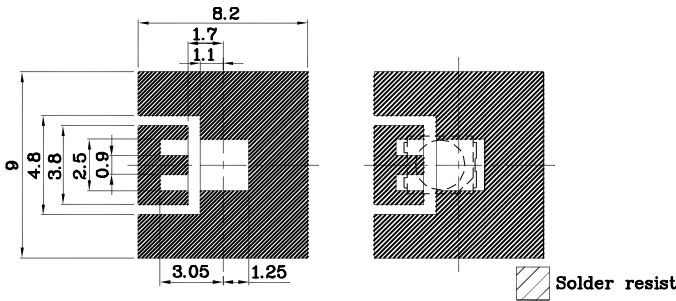
Reflow Soldering Profile for SMD Products (Pb-Free Components)



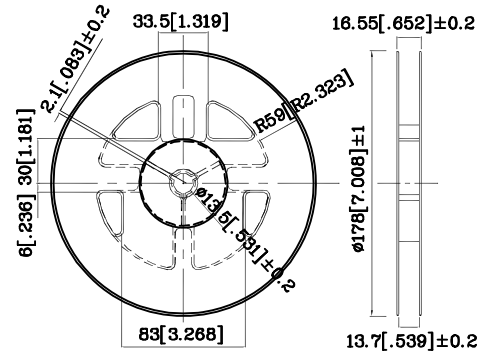
- Notes:
1. Maximum soldering temperature should not exceed 260°C
 2. Recommended reflow temperature: 145°C-260°C
 3. Do not put stress to the epoxy resin during high temperatures conditions



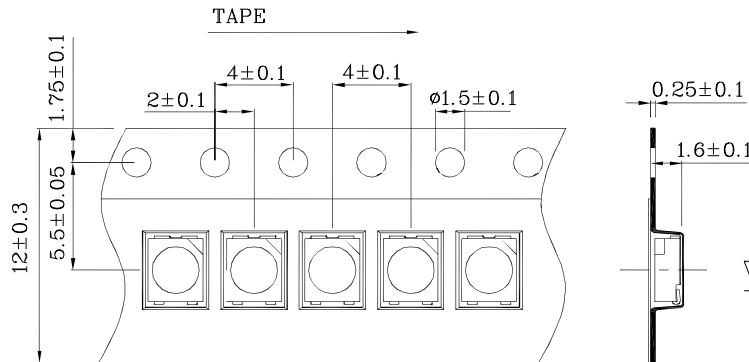
❖ Recommended Soldering Pattern (Units : mm; Tolerance: ± 0.1)



❖ Reel Dimension



❖ Tape Specification (Units : mm)



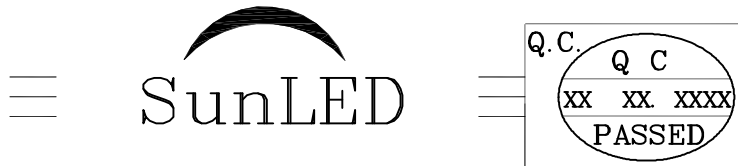
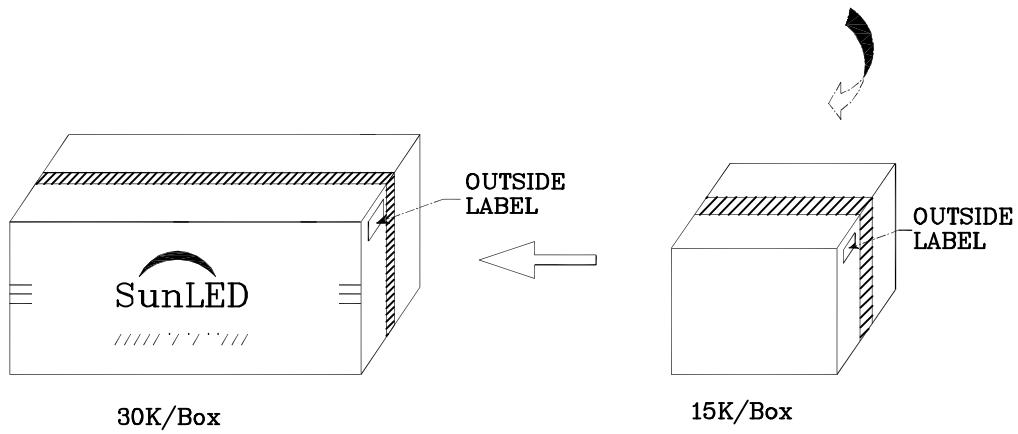
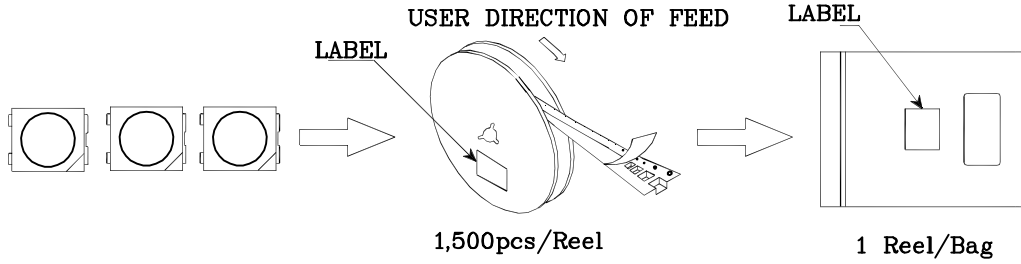
Remarks:


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.

PACKING & LABEL SPECIFICATIONS



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