

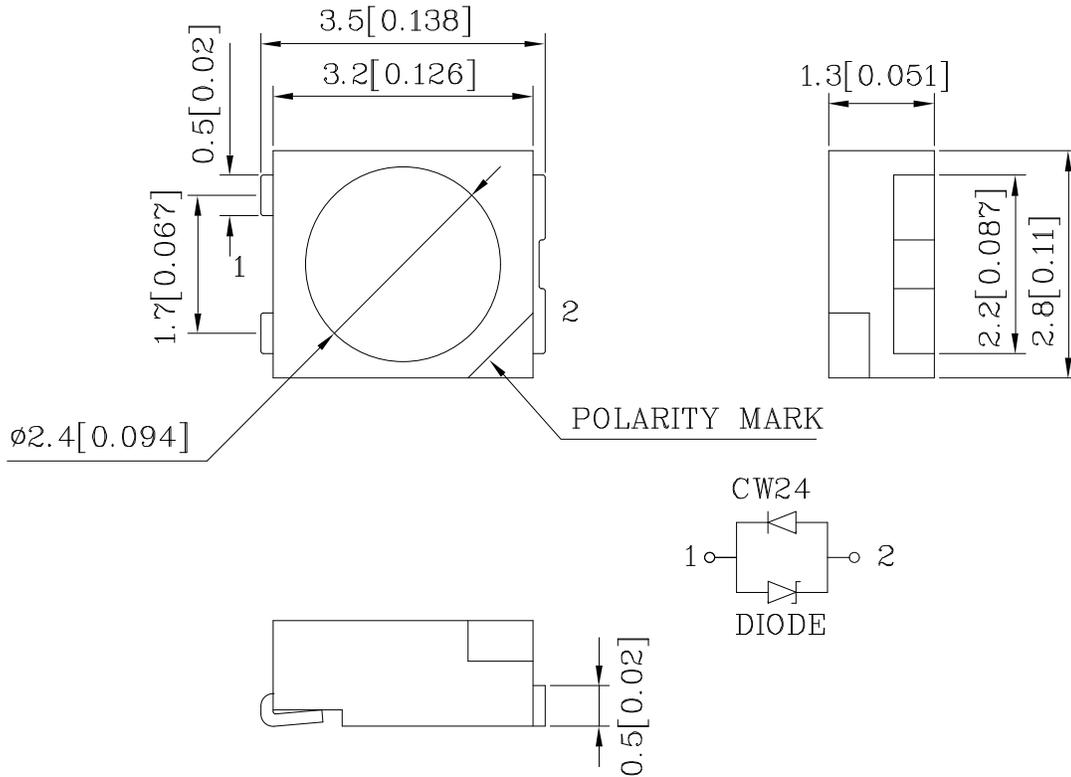
PRELIMINARY SPEC



ATTENTION
OBSERVE PRECAUTIONS
FOR HANDLING
ELECTROSTATIC
DISCHARGE
SENSITIVE
DEVICES

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.

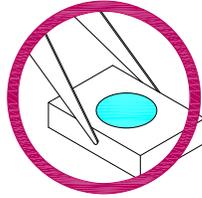


Handling Precautions

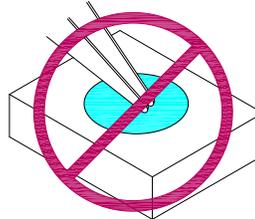
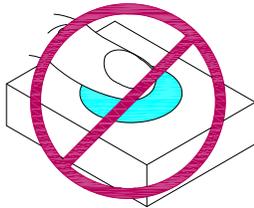
Compare to epoxy encapsulant that is hard and brittle, silicone is softer and flexible. Although its characteristic significantly reduces thermal stress, it is more susceptible to damage by external mechanical force.

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.

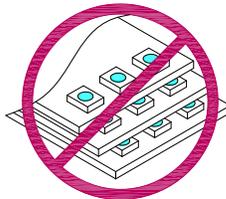
1. Handle the component along the side surfaces by using forceps or appropriate tools.



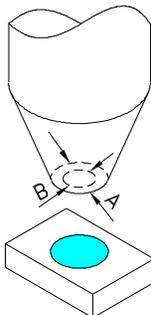
2. Do not directly touch or handle the silicone lens surface. It may damage the internal circuitry.



3. Do not stack together assembled PCBs containing exposed LEDs. 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		Viewing Angle 2 θ 1/2 [2]
				min.	typ.	min.	typ.	
XZCW24X109S	White	InGaAlN	Water Clear	5000	6990	17000	23000	120°

Absolute Maximum Ratings at TA=25°C

Parameter	Symbol	Value	Unit
Power Dissipation	P _t	585	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}	270	mA
Thermal Resistance [1] (Junction/ambient)	R _{th j-a}	180	°C/W
Thermal Resistance [1] (Junction/solder point)	R _{th j-s}	60	°C/W
Electrostatic Discharge Threshold (HBM)		8000	V

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.

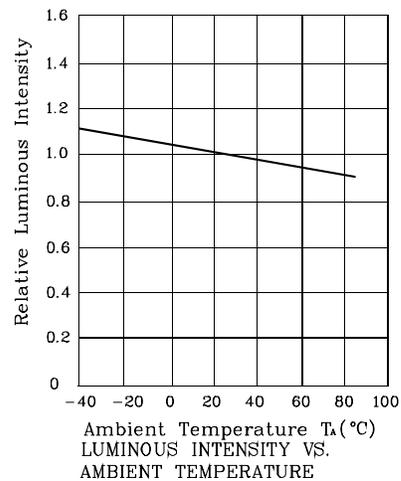
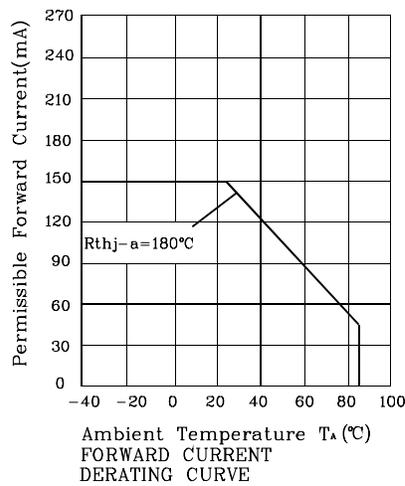
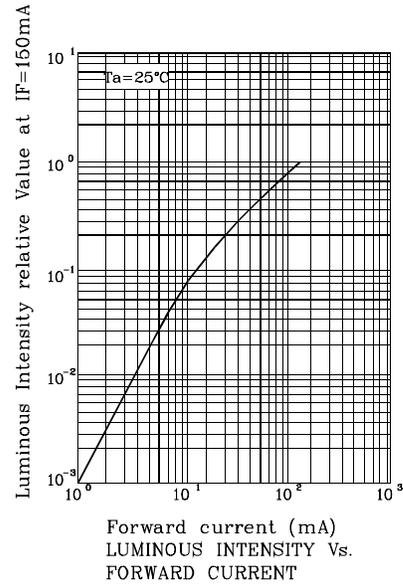
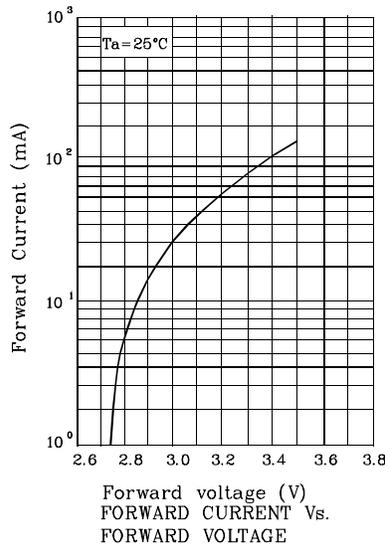
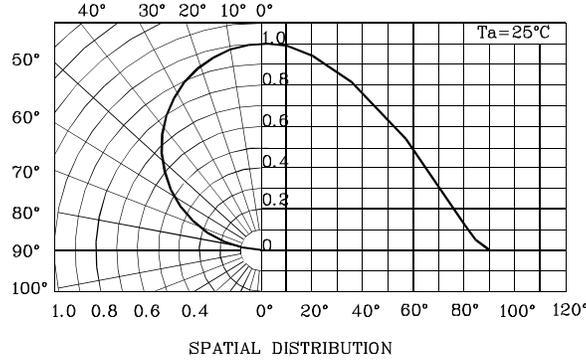
2.0 1/2 is the angle from optical centerline where the luminous intensity is 1/2 the optical centerline value.

3.1/10 Duty Cycle, 0.1ms Pulse Width.

Electrical / Optical Characteristics at TA=25°C

Parameter	Symbol	Value	Unit
Chromaticity Coordinate x acc.to CIE1931 I _F =150mA [Typ.]	X	0.31	-
Chromaticity Coordinate y acc.to CIE1931 I _F =150mA [Typ.]	Y	0.31	-
Forward Voltage I _F =150mA [Min.]	V _F	3.1	V
Forward Voltage I _F =150mA [Typ.]		3.5	
Forward Voltage I _F =150mA [Max.]		3.9	
Temperature Coefficient Of x I _F =150mA, -10 ° C ≤ T ≤ 100 ° C [Typ.]	TC _x	0.15	10 ⁻³ /° C
Temperature Coefficient Of y I _F =150mA, -10 ° C ≤ T ≤ 100 ° C [Typ.]	TC _y	0.13	10 ⁻³ /° C
Temperature Coefficient Of V _F I _F =150mA, -10 ° C ≤ T ≤ 100 ° C [Typ.]	TC _v	-3.1	mV/° C

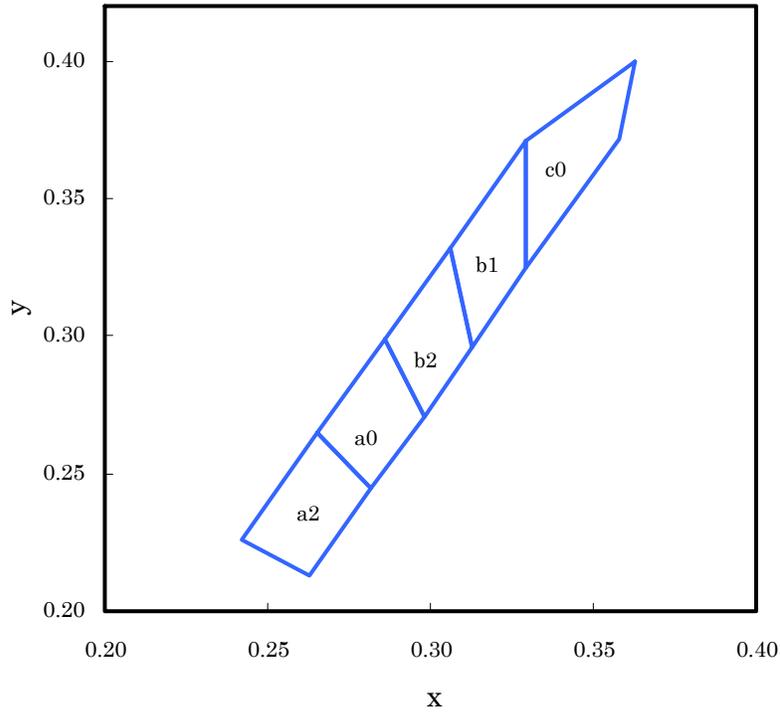
XZCW24X109S





XZCW24X109S

White CIE



Rank a2				
X	0.263	0.282	0.265	0.242
Y	0.213	0.245	0.265	0.226

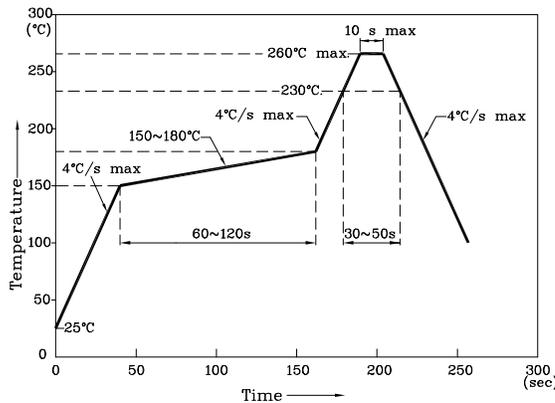
Rank a0				
X	0.282	0.298	0.286	0.265
Y	0.245	0.271	0.299	0.265

Rank b2				
X	0.298	0.313	0.306	0.286
Y	0.271	0.296	0.332	0.299

Rank b1				
X	0.313	0.329	0.329	0.306
Y	0.296	0.325	0.371	0.332

Rank c0				
X	0.329	0.358	0.363	0.329
Y	0.325	0.372	0.400	0.371

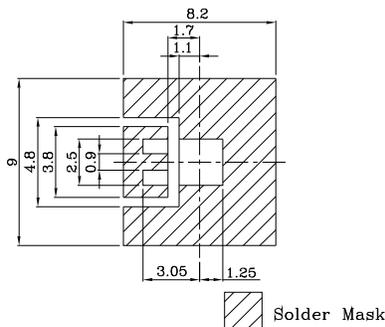
Reflow Soldering Profile For Lead-free SMT Process.



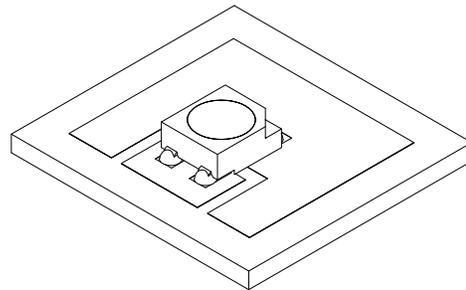
NOTES:

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.

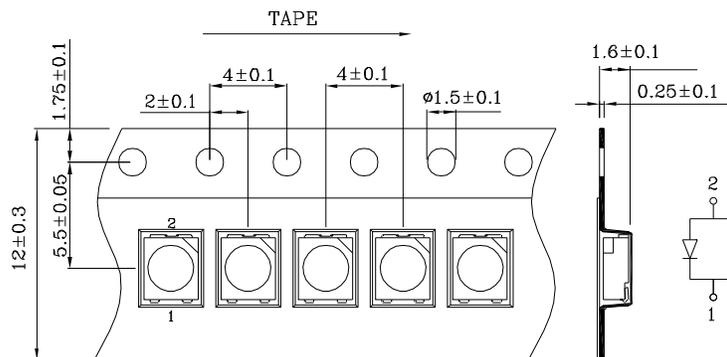
❖ Recommended Soldering Pattern (Units : mm; Tolerance: ±0.1)



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



❖ Tape Specification (Units : mm)



Remarks:

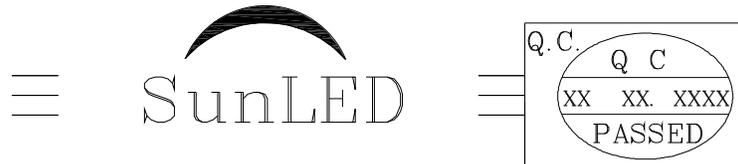
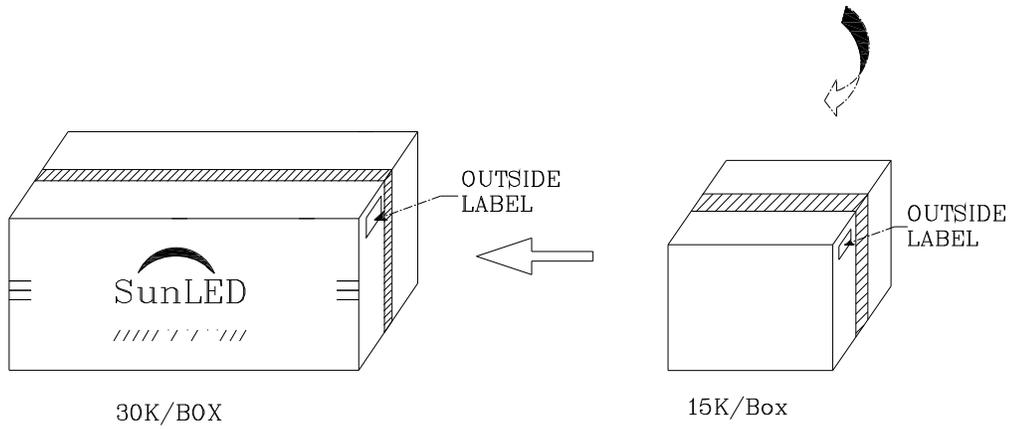
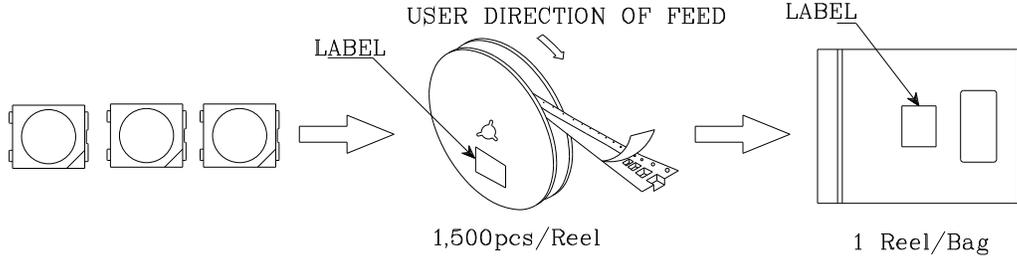
If special sorting is required (e.g. binning based on forward voltage, luminous intensity/ luminous flux or chromaticity), the typical accuracy of the sorting process is as follows:

1. Measurement tolerance of the chromaticity coordinates is ±0.01.
2. Luminous Intensity/ Luminous Flux: +/-15%
3. Forward Voltage: +/-0.1V

Note: Accuracy may depend on the sorting parameters.

PACKING & LABEL SPECIFICATIONS

XZCW24X109S



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