SPECIFICATION FOR APPROVAL

Customer : _____

Customer Part No: _____

SHINING Part No: SN-NE3528LAXAR-N

Emitted color: Red

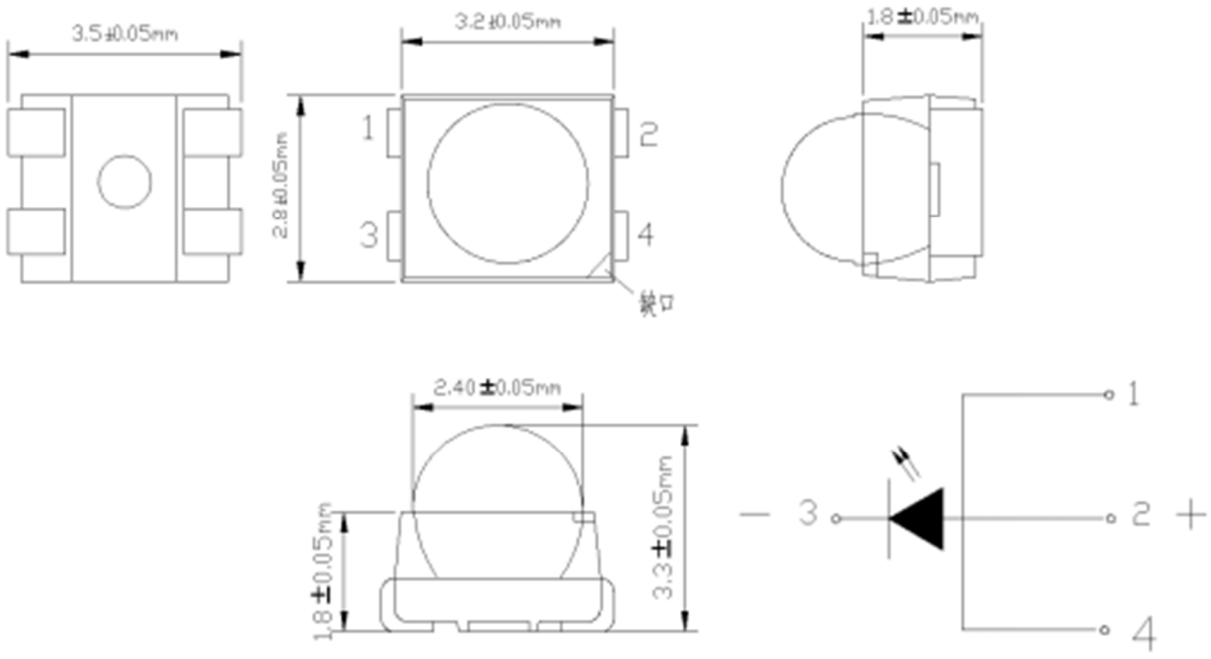
Revision History		
Date	**Revision History**	**Prepared**
2023.2.22	New Version	A/0
2023.3.13	Positive and negative polarity change	A/1

Confirmed By Customer	Approval by	Prepared by
	Liusan	Shaochengcheng

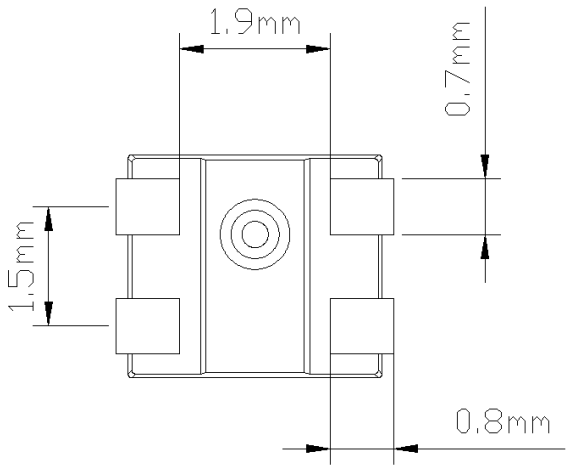
Feature

- Δ 3.50mm×2.80mm×3.3mm
- Δ 0.1W Low Power LED
- Δ Suitable for all SMT assembly And solder process.
- Δ Moisture sensitivity level: Level 5a
- Δ Vehicle lighting
- Δ Interior Decoration Lighting

PackageOutline



Pad size



Notes: All dimension units are millimeters.

Absolute maximum ratings at Ta=25℃

Parameter	Symbol	Rating	Units
Power Dissipation	Pd	100	mw
Continuous Forward Current	IF	50	mA
Pulsed Forward Current (1/10Duty Cycle, 0.1ms Pulsewidth）	IFP	70	mA
Reverse Voltage	VR	5	V
Electrostatic Discharge (HBM)	ESD	3000	V
Operating Temperature	Topr	-30 to +80	℃
Storage Temperature	Tstg	0-30	℃
Thermal Resistance	Rthj-s	20	℃/W
Junction Temperature	Tj	≤125	℃

Note:1/10 Duty cycle, 0.1ms pulse width.

Electro-optical characteristics at Ta=25℃

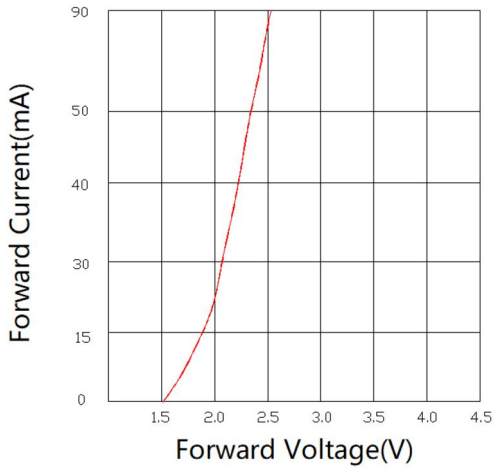
Parameter	Symbol	Min	Typ	Max	Unit	Test Condition
Luminous Intensity	IV	4000	--	6000	mcd	IF=50mA
Viewing Angle	2 θ 1/2	20	--	40	deg	Note 1
Dominant Wavelength	λ d	620-630			nm	IF=50mA
Color rendering index	Ra		--			
Forward Voltage（R）	VF	2.0	--	2.6	V	IF=50mA
ReverseCurrent	IR	--	--	10	μ A	VR=5V

Note

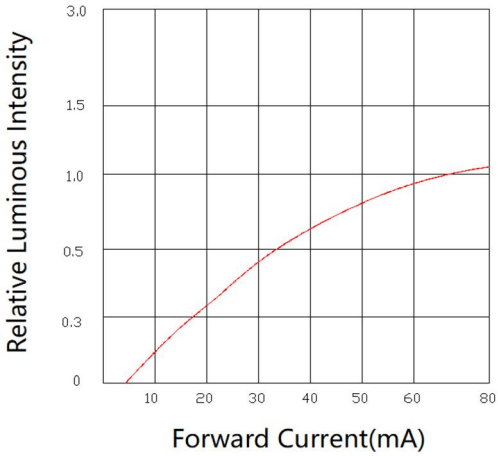
1. 1/2 is the angle from optical centerline where the luminous intensity is 1/2 the optical centerline value
2. The above luminous flux measurement allowance tolerance is ±15%.
3. The above Color Rendering Index measurement allowance tolerance is ±2
4. The above forward voltage measurement allowance tolerance is ±0.1V

Typical optical characteristics curves

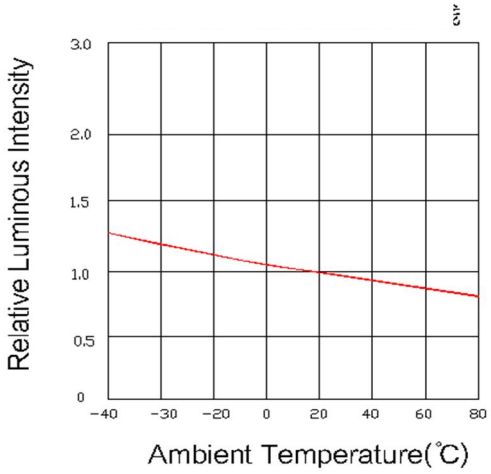
Forward Voltage VS.Forward Current



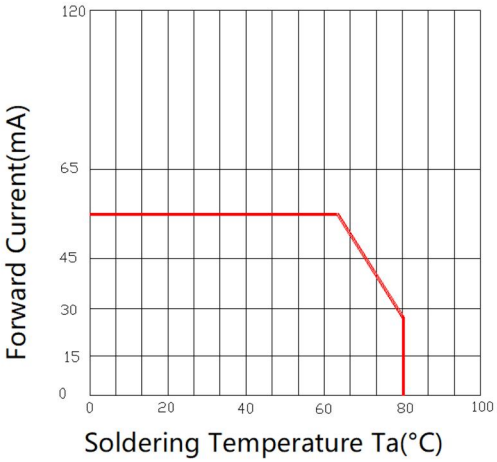
Forward Current VS.Relative Intensity



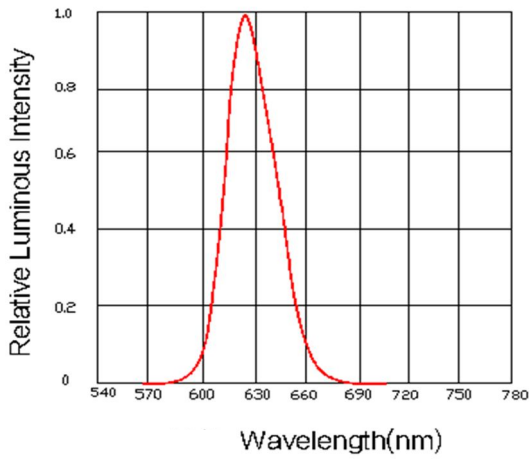
Ambient Temperature VS.Relative Intensity



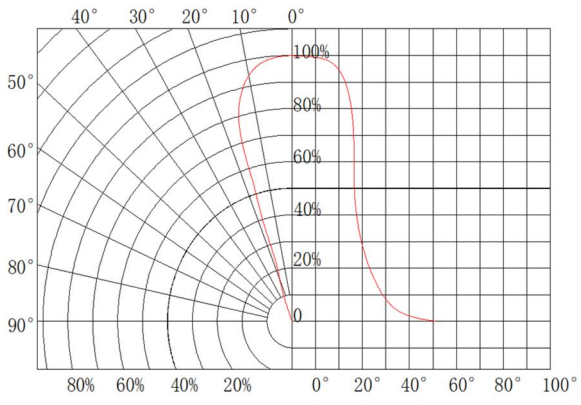
Soldering Temperature VS.Forward Current



Relative Spectral emission



Radiation diagram



Reliability Test Items And Conditions

Test Items	Ref. Standard	Test Condition	Time	Quantity	Ac/Re
Reflow	IEC/TR 60068-3-12-2014	Temp:260℃ max T=8 sec	3 times	22PCS	0/1
Temperature Cycle	IEC60068-2-14 : 2009	85℃±5℃ 15min ↑ ↓ 5 min -40℃±5℃ 15min	100Cycles	22PCS	0/1
High Humidity Heat Life Test	IEC60068-2-78: 2001	Ta=85℃ RH=85% IF=50mA	500H	22PCS	0/1
High Temperature Storage	Tested with standard	Temp:85℃±5℃	1000H	22PCS	0/1
Low Temperature Storage	IEC60068-2-1: 2007	Temp:-40℃±5℃	1000H	22PCS	0/1
Life Test	Tested with standard	Ta=25℃±5℃ IF=50mA	1000H	22PCS	0/1

Failure Criteria

Test Items	Symbol	Test Condition	Failure Criteria	
			MIN	MAX
forward voltage	VF	IF=50mA	--	U.S.L*)x1.1
reverse current	IR	VR = 5V	--	10uA
light quantity	Im	IF=50mA	L.S.L*)x0.7	

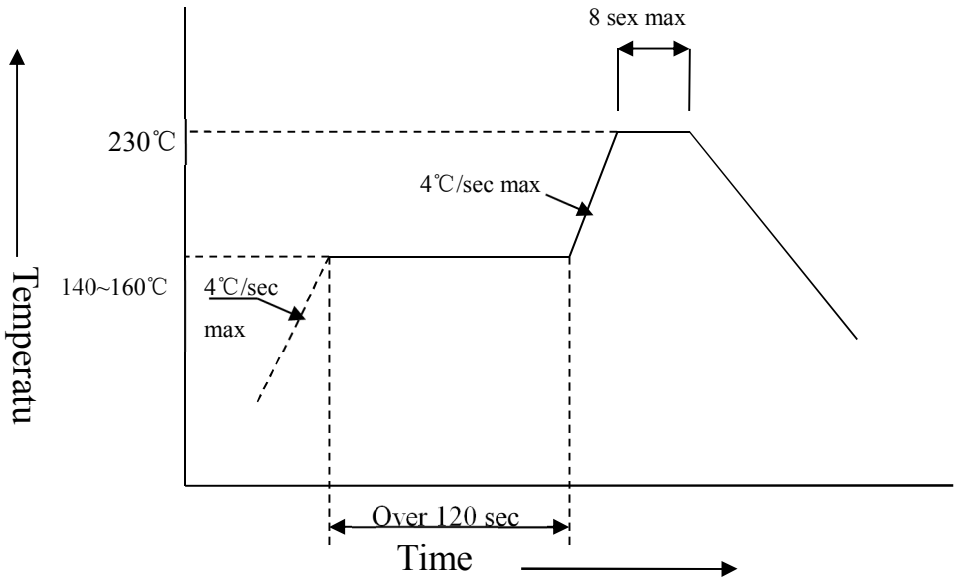
U.S.L: Upper Specification Limit L.S.L: Lower Specification Limit

SMT Reflow Soldering Instructions SMT

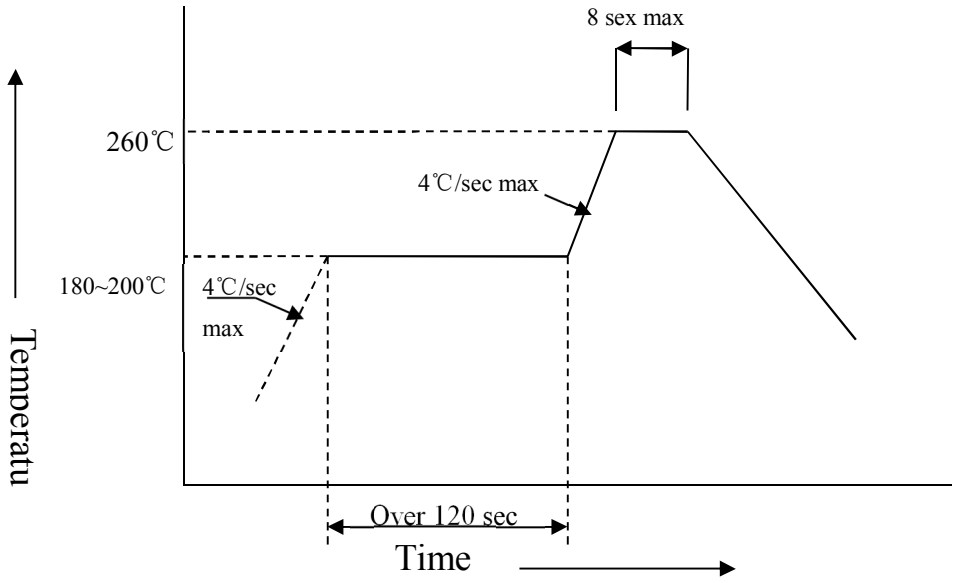
Reflow Soldering Instructions

Number of reflow process shall be less than 1 times

Lead Solder



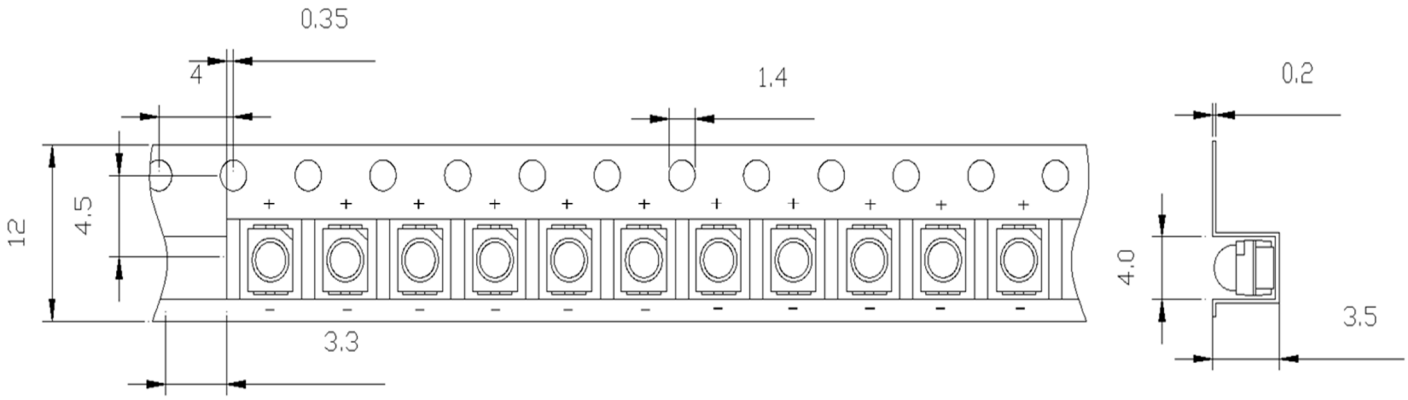
Lead-Free Solder



Packing

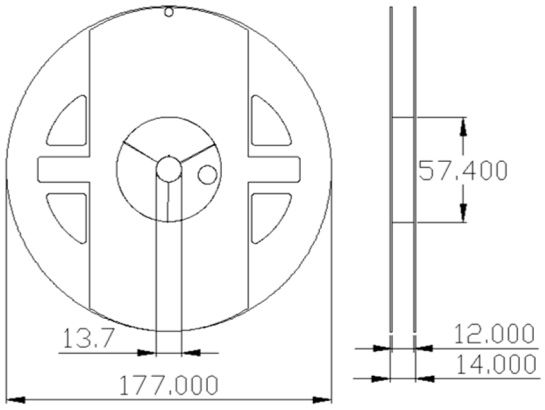
Tape Specifications (Units : mm)

Packing unit2004PCS/reel

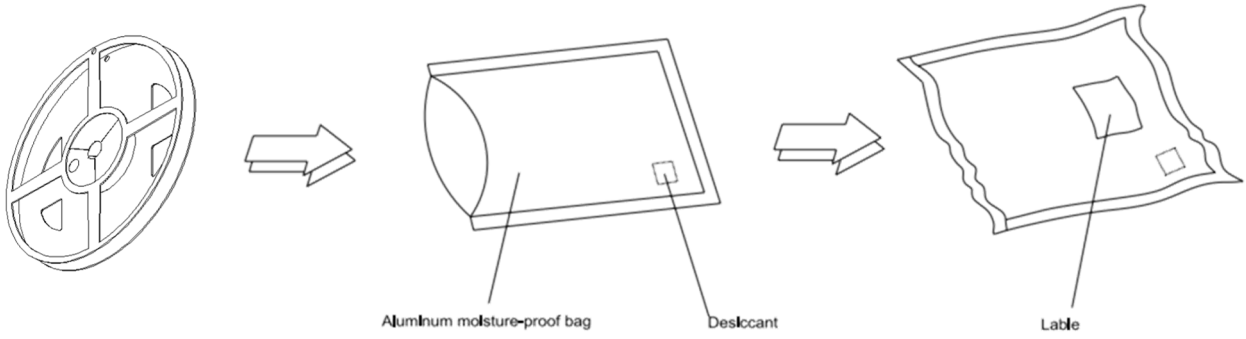


Adhesion Strength of Cover Tape : Adhesion strength to be 0.1 – 0.7N when the cover tape is turned off fromthe carrier at 10˚angle to be the carrier tape.

Reel Dimensions



Moisture Resistant Packaging



SMD LED Instruction Manual

Dear partners!

Thank you for your trust and support to our company. In order to enhance your understanding of the product characteristics of our company, it is convenient for you to grasp the characteristics of its use during use, to minimize or avoid unnecessary product damage or performance mismatch caused by human factors. Specifically here.

1. Material confirmation

Please check the package for leaks, other damage, and check if the label matches your company's requirements. If you find an abnormality, please contact us in time.

2. Unopened smd led storage

The unopened smd led should not be stored for a long time as much as possible, because the storage environment is not easy to control. You can choose a recent delivery based on your order. The storage environment is best to choose moisture-proof cabinet, the temperature is about 30 degrees, the humidity is below 60%, in this case RGB products can be stored for 30 days, white light products can be stored for 60 days. Regardless of whether the storage time is exceeded or not, be sure to perform the first test before production. If you find a problem, please contact us as soon as possible.

3. Precautions after unpacking

After receiving the smd led of our company, please arrange the production as soon as possible. Due to the different storage environments of each warehouse, it is not recommended to make large quantities of stocks. Please use up the product within 24 hours after opening the package. It is recommended to perform 60 degree low temperature baking for 12-24 hours before use.

4. It is not recommended to mix different batches of smd led

Test before the production according to the first inspection standard. If you find any abnormality in the smd led, please contact us. Please do not mix different batches of smd led during the production process. If you can't avoid it, you need to use the leds of the previous batch. Please confirm the package is normal, and then confirm the first piece. Finally, the products produced by this batch of smd led are separately distinguished.

5. It is not recommended to store the smd led after unpacking.

Please accurately calculate the demand for the production line. If storage is required, it is recommended to store in a 60 degree oven.In the production process, please fill in the reflow soldering after the patch is completed, and the reflow soldering is not repeatable.

6. Reflow soldering. Check the ESD protection measures during soldering and assembly.

7. smd led for outdoor application, the finished product design is to use a cover lens as much as possible, and then potting seal.

It is not recommended to seal directly on the surface of the lamp. The potting glue should try to choose a gluewith low permeability and oxygen permeability and good adhesion to aluminum. The controller's negative pressure should be minimized.

8. Finished luminaires that have been installed outdoors.

If the luminaires cannot be used in time after commissioning, please pay attention to the timing aging. Please use a small current to illuminate all the chips in the early stage of aging. Do not scan the program. After aging for two hours, the current is gradually amplified, do not scan the program, and often aging for 4 hours once a month. In the initial stage of use, please adjust the speed of the controller to the slowest and the color conversion speed is the slowest.