承 认 书

客户名称：_____

物料编码：_____

产品型号：**JK-2835暖白2800-3200K**

编　　号：_____

日　　期： **2022-09-01**

产品描述：

- **贴片2835暖白 2800-3200K**
- 胶体颜色：**黄色**

承 认 签 章		
编制	**审核**	**核准**

客 户 确 认		
确认	**审核**	**核准**

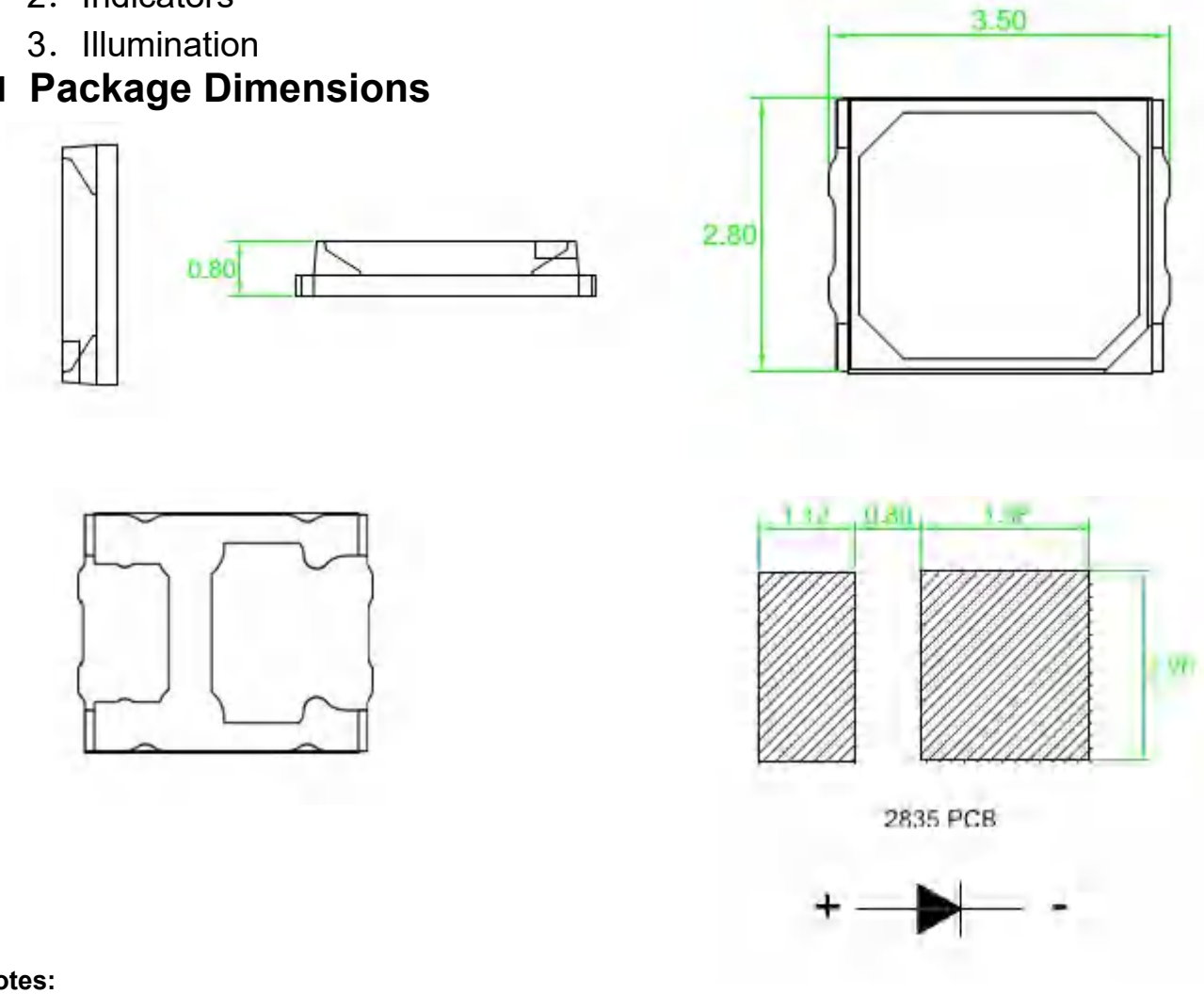
■ Features

1. 2.8*3.5*0.6mm standard package.
2. Emitted Color: White.
3. Wide viewing angle.
4. Suitable for all SMT assembly methods.
5. High luminous intensity output.
6. Pb-free.
7. RoHS compliant.
8. ERP compliant

■ Applications

1. General lighting
2. Indicators
3. Illumination

■ Package Dimensions



Notes:

1. All dimensions are in millimeter.
2. Tolerance is ±0.1mm unless otherwise noted.

■ Absolute Maximum Ratings at Ta = 25℃

Parameter	Symbol	Rating	Unit
Forward Current	IF	60	mA
Peak forward current	IF	100	mA
Power Dissipation	Pd	500	mW
Operating Temperature	Topr	-40 to +85	℃
Storage Temperature	Tstg	-40 to +100	℃
Electrostatic Discharge	ESD	2000	V
Soldering Temperature	Tsol	240±5	℃
Reverse Voltage	VR	5	V

Note: *1:Soldering time ≦ 5 seconds.

■Electro-Optical Characteristics (Ta=25℃)

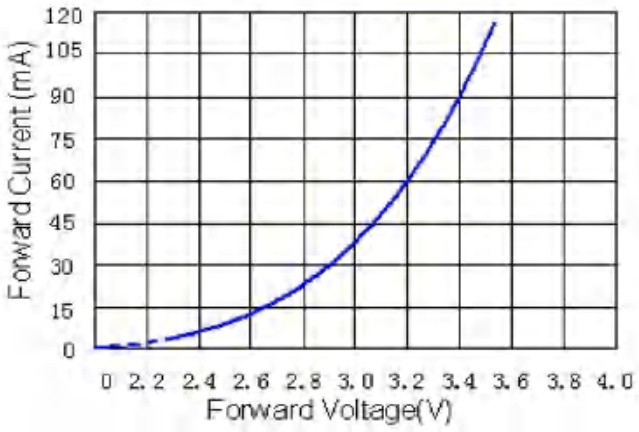
Parameter	**Symbol**	**Min.**	**Typ.**	**Max.**	**Unit**	**Conditions**
Forward voltage	VF	2.8	---	3.3	V	I_f=150mA
Luminous Flux	Φ	22	---	26	Lm	I_f=150mA
Color Temperature	CCT	2800	---	3200	K	I_f=150mA
Viewing angle	2θ1/2	---	120	---	Deg	I_f=150mA
Reverse current	IR	---	---	10	μA	VR=5V

Notes: Tolerance of Luminous Flux 10%;
Tolerance of Forward Voltage (VF) ±0.1V;

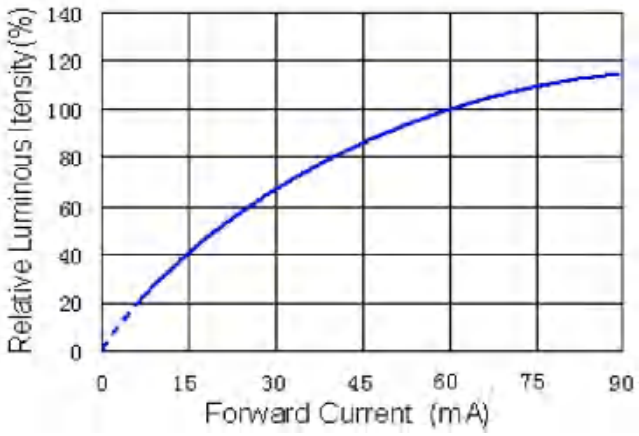
■Typical Electro-Optical Characteristic Curves:

(Environment Parameter： Temperature=25℃， Humidity=45%)

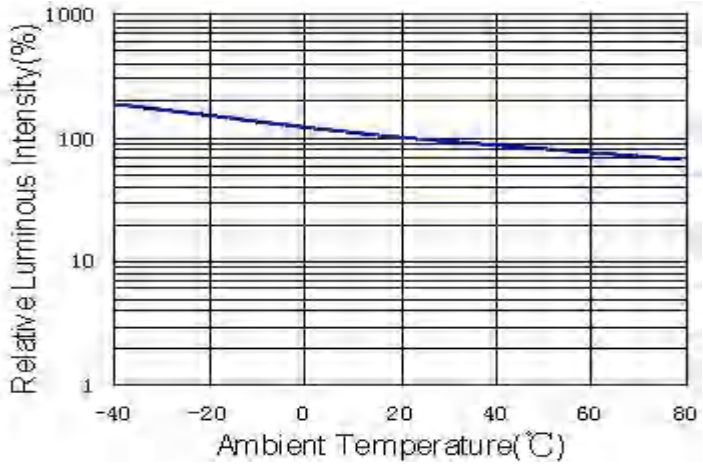
Forward Current VS Forward Volatage



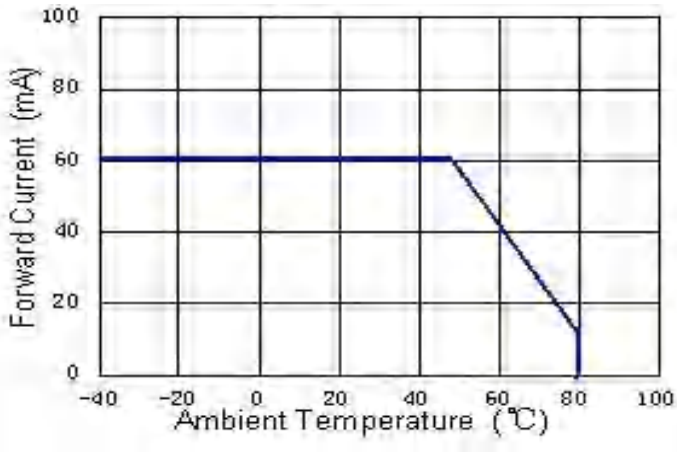
Relative Flux VS Forward Current



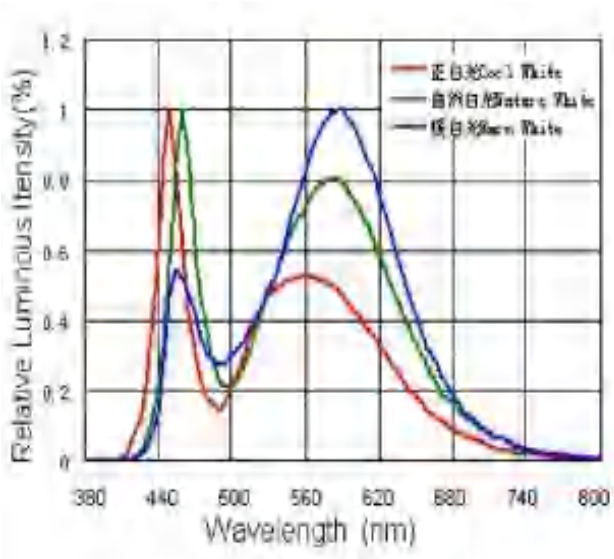
Relative Flux VS Ambient Temperature



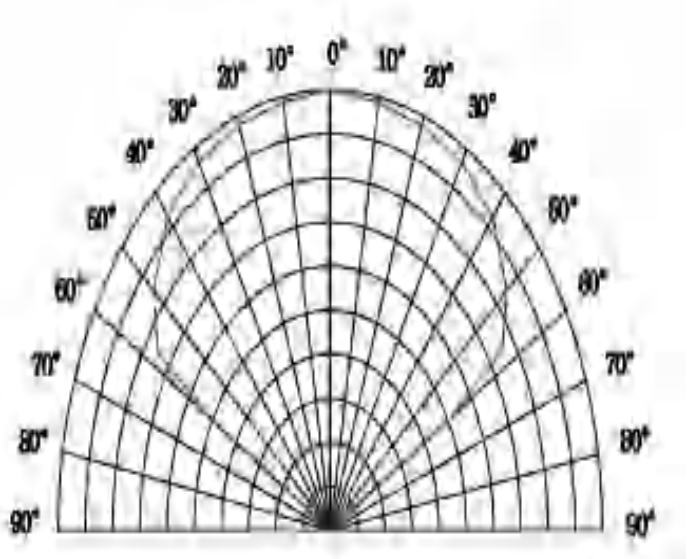
Forward Curent VS Ambient Temperature



Relative Spectral Distribution



Typical Spectral Distribution



■Reliability test items and conditions:

The reliability of products shall be satisfied with items listed below.
Confidence level：97%
LTPD：3%

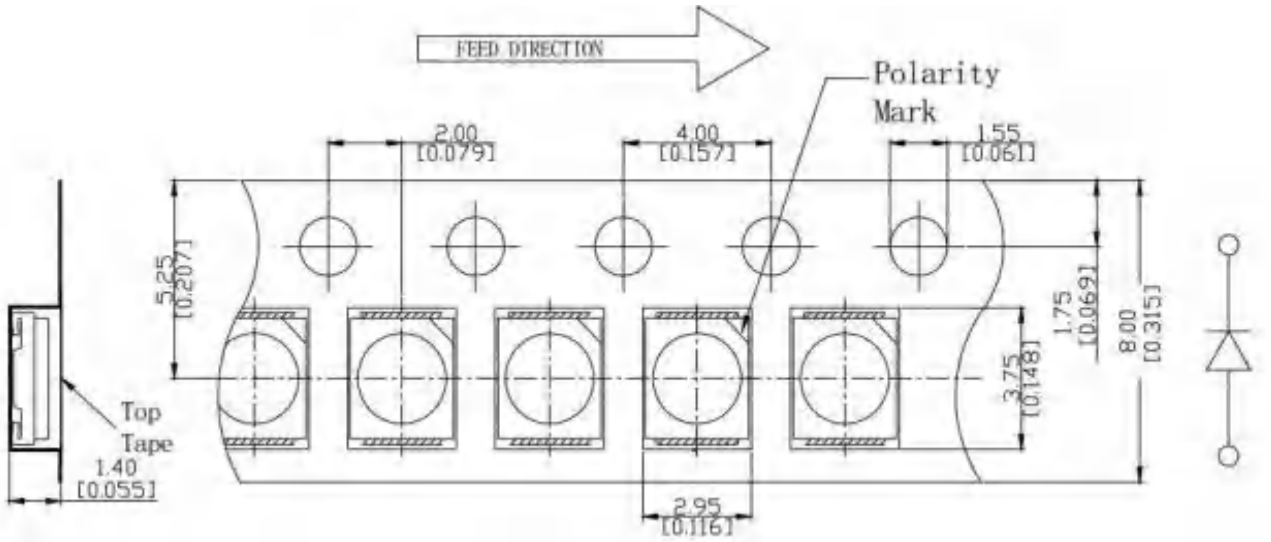
NO	Item	Test Conditions	Test Hours/Cycle	Sample Size	Failure Judgment Criteria	Ac/Re
1	Solder Heat	TEMP : 240℃ ± 5 ℃	10 SEC	76 PCS	Iv≦Ivt*0.5 or Vf≧U or Vf≦L	0/1
2	Temperature Cycle	H : +100℃ 15min ∫ 5 min L : -40℃ 15min	300 CYCLES	76 PCS		0/1
3	Thermal Shock	H : +100℃ 5min ∫10 sec L : -10℃ 5min	300 CYCLES	76 PCS		0/1
4	High Temperature Storage	TEMP : 100℃	1000 HRS	76 PCS		0/1
5	Low Temperature Storage	TEMP : -40℃	1000 HRS	76 PCS		0/1
6	DC Operating Life	TEMP : 25℃ IF = 60mA	1000 HRS	22 PCS		0/1
7	High Temperature / High Humidity	85℃ / 85% RH	1000 HRS	76 PCS		0/1

Notes:

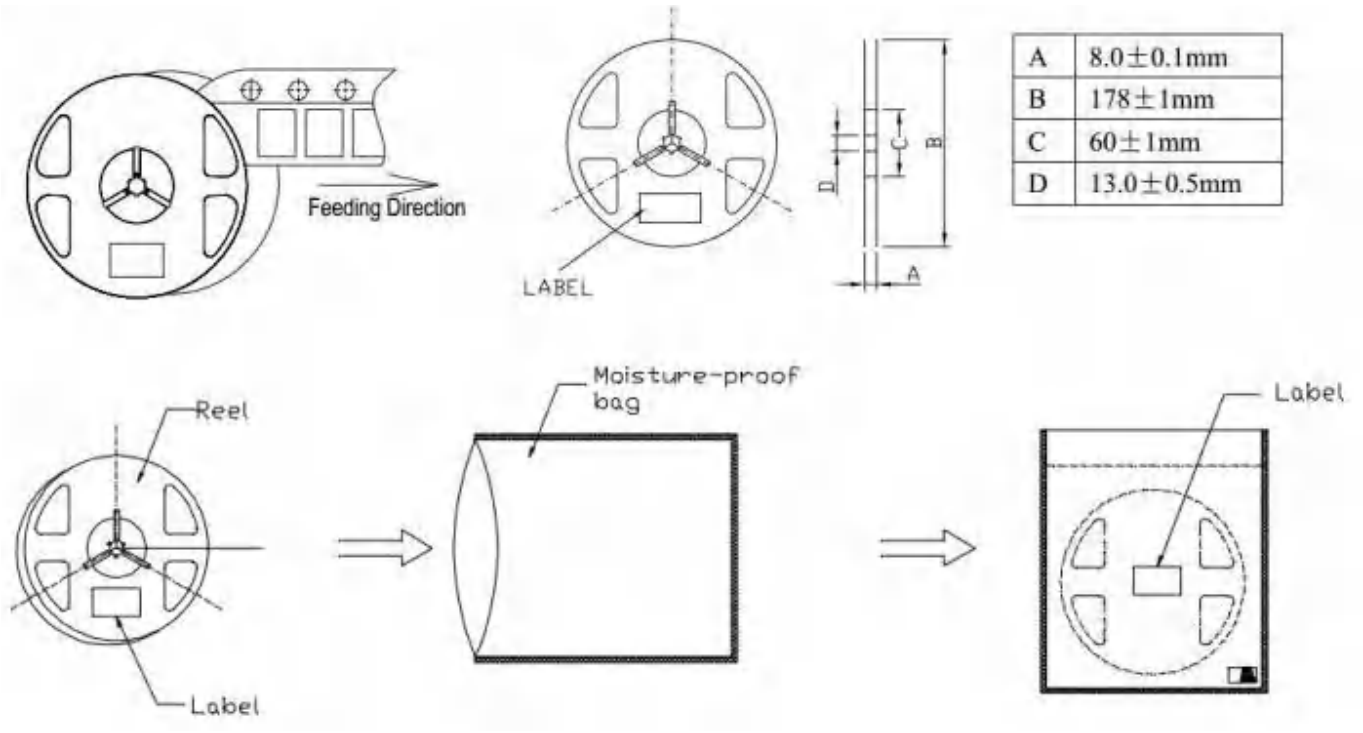
Ivt：To test Iv value of the chip before the reliablility test
Iv：The test value of the chip that has completed the reliablility test
U：Upper Specification Limit
L：Lower Specification Limit

■Packaging Specifications

Dimensions of Tape (Unit: mm)



Dimensions of Reel (Unit: mm)



A	8.0±0.1mm
B	178±1mm
C	60±1mm
D	13.0±0.5mm

■Notes:

1. Tolerance unless mentioned is ±0.1mm; Unit = mm；
2. The maximum number of missing lamps is two;
3. The cathode is oriented towards the tape sprocket hole in accordance with ANSI/EIA RS-481 specifications.

■Reflow profile

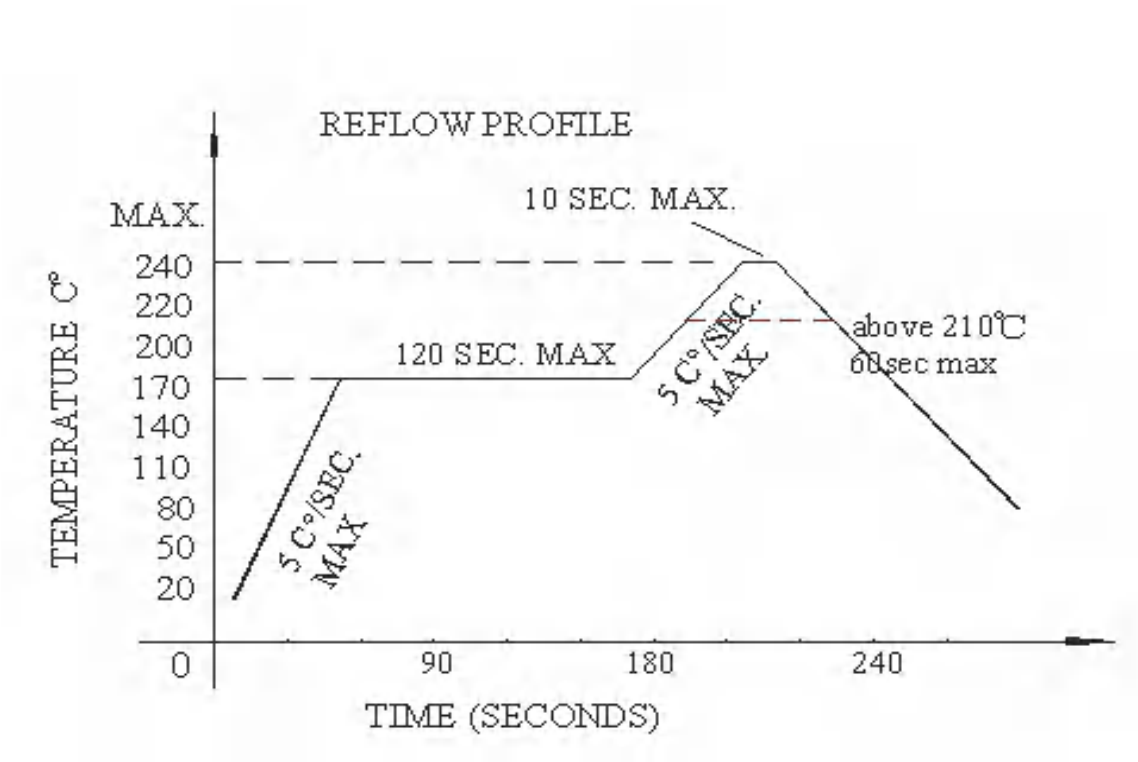
Soldering condition

Recommended soldering conditions

Reflow		Soldering	
Pre-heat	160～180℃	Temperature	280℃Max.
Pre-heat time	120 seconds Max.		
ak temperature	240℃Max.		
Soldering time	10 seconds Max.	Soldering time	3 second Max.(one time only)
Condition	Refer to Temperature-profile		

■**After reflow soldering rapid cooling should be avoided**

Pb-free solder temperature profile



1. The highest control the welding temperature to 240 ℃；
2. Reflow soldering should not be done more than two times；
3. When soldering ,do not put stress on the LEDs during heating；

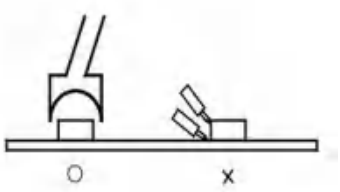
Soldering iron

1. When hand soldering, keep the temperature of the iron under 280℃, and at that temperature keep the time under 3 sec；
2. The hand soldering should be done only a time；
3. The basic spec is ≤5 sec. when the temperature of 240℃, do not contact the resin when hand soldering；

Rework

1. Customer must finish rework within 5 sec under 240℃；
2. The head of iron can not touch the resin；

Twin-head type is preferred；



■ CAUTIONS

Storage

1. Storage condition before opening the package: 5℃~30℃, the largest percentage relative humidity is 60% and the storage period is one month. The LEDs beyond the storge period just can be used after dealing as step 4.

2 .After opening the package, If the LEDs will be Infrared reflow soldering, Oxygen phase reflow soldering or any other welding.

a. must be welding within 24 hours.
b. the storage humidity must be below 30%.

3 .If the situation does not satisfy 2a or 2b, the LEDs must be roasted.

4 .If the LEDs need to be roasted, the roast temperature should be 60℃+/-3 and the roast timeshould be 48 hours.

ESD

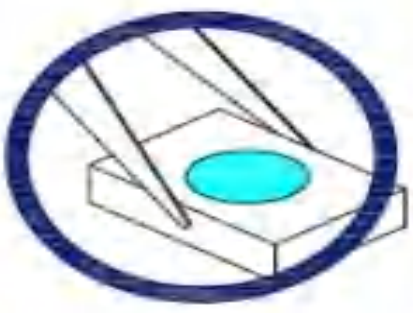
Static Electricity or power surge will damage the LED.
The following procedures may decrease the possibility of ESD damage:
1.All production machinery and test instruments must be electrically grounded.
2.Use a conductive wrist band or anti-electrostatic glove when handling these LEDs. 3.Maintain a humidity level of 50% or higher in production areas.
4.Use anti-static packaging for transport and storage.

Handing 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.

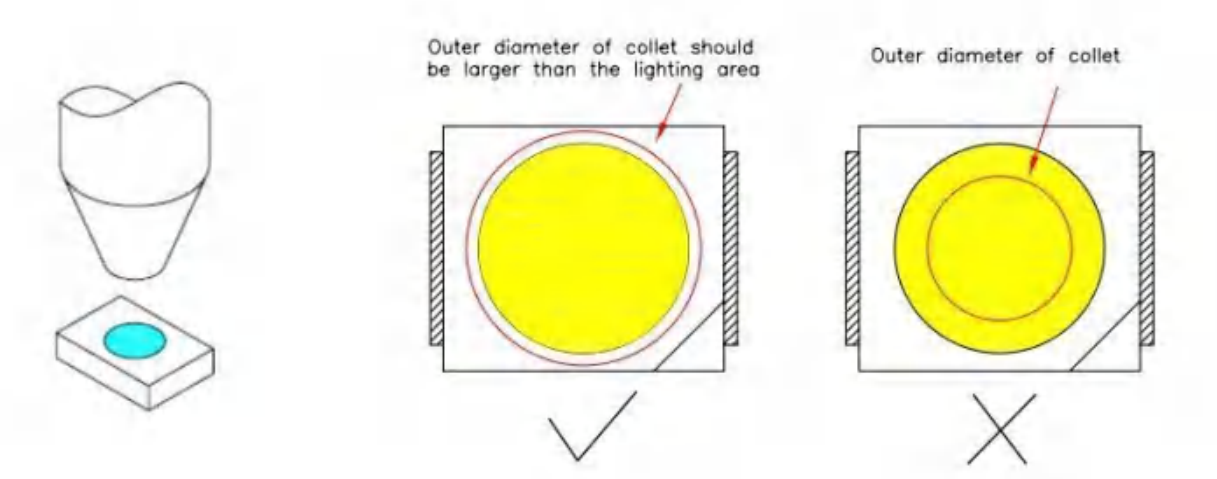
1. Handle the component along the side surfaces by using forceps or appropriate tools



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 intemal circuitry.

4.During surface-mounting,the pickup capillary diameter should be larger than the silicone lens to insure the capillary does not scratch or damage the lens.



5.LED operating environment and sulfur element composition cannot be over 100PPM in the LED mating usage material.（ LED 工作环境及与 LED 适配的材料中硫元素及化合物成份不可超过 100PPM）

6.When we need to use external glue for LED application products, please make sure that the external glue matches the LED packaging glue. Additionally ,as most of LED packaging glue is silica gel,and it has strong Oxygen permeability as well as strong moisture permeability; in order to prevent external material from getting into the inside of LED, which may cause the malfunction of LED, the single content of Bromine element is required to be less than 500PPM,the single content of Chlorine element is required to be less than 500PPM,the total content of Bromine element and Chlorine element in the external glue of the application products is required to be less than 1000PPM. Other points for attention, please refer to our LED user manual.