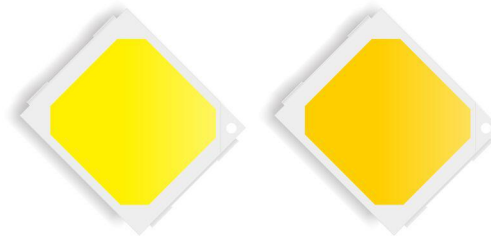


## GT-M2835--XX



### Product Description

GETIAN's SMD 2835 series products are with wide range of power for your choice. This solid-state semiconductor light source is widely applied to large-scale projects indoor and outdoor lighting design applications, such as street light, bulb light, spot light, etc..

High quality raw materials were used and the products must pass the strict reliability test when its been sent. It has an excellent performance in color consistency, lumen output, life span etc.

### Features

- power 0.2W, 0.5W, 1W available with high luminous efficacy
- pure red copper base
- flat light with 120 degree
- RoHS & EN62471 compliant
- > 30000 hrs
- super high CRI
- Mac Adam 3 or 5 steps available
- smooth light quality

### Application

- Indoor & outdoor commercial lighting;
- Led bulb light, street light, par light, etc.

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## Characteristics

Characteristics	Unit	Min	Typical	Max
Dimension L*W	mm		2.8*3.5*0.8mm	
Beam Angle $\theta$	deg.		120	
Correlated Color Temperature CCT	k	2900	5000	6500
Lumen output	lm	24		34
Color Rendering Index CRI	Ra	70	80	98
MacAdam Ellipse SDCM	step	3		5
Operating Temperature Top	°C	-40		+85
Storage Temperature Tst	°C	-40		+100
Testing Point Tc	°C			75
Junction Temperature Tj	°C			115
Reverse Current (Vr=5V) Ir	mA			1
ESD (HBM)	V			2000

## Coding Rules

Model	GT	COB	XX	X	XX	XX	XX
Code	GT	M	Type	Chip Qty	Color temperature	Brightness Grade	CRI Grade
Meaning	Getian	SMD Series	2835	1:1EA	W3:2900-3200 W4:4000-5000 W5:5000-6000 W6:6000-6500	24: 24-26 26: 26-28 28: 28-30 30: 30-32 32: 32-34	OB: RA70 OD: RA80 OF: RA90

**Specifications (Tc = 25°C)**

Standard If: 60mA		Typical Vf: 3V		Power: 0.2W	
Color	CCT (K)	CRI		3V @60mA (lm)	Part Number
		Min Ra	Min R9		
Warm White	2900-3200	80	0	22-24	GT-M28351W322-0D
				24-26	GT-M28351W324-0D
				26-28	GT-M28351W326-0D
				28-30	GT-M28351W328-0D
				30-32	GT-M28351W330-0D
		90	50	18-20	GT-M28351W318-0F
				20-22	GT-M28351W320-0F
				22-24	GT-M28351W322-0F
				24-26	GT-M28351W324-0F
				26-28	GT-M28351W326-0F
Neutral White	4000-5000	80	0	24-26	GT-M28351W424-0D
				26-28	GT-M28351W426-0D
				28-30	GT-M28351W428-0D
				30-32	GT-M28351W430-0D
				32-34	GT-M28351W432-0D
		90	50	20-22	GT-M28351W420-0F
				22-24	GT-M28351W422-0F
				24-26	GT-M28351W424-0F
				26-28	GT-M28351W426-0F
				28-30	GT-M28351W428-0F
Pure White	5000-6000	80	0	24-26	GT-M28351W524-0D
				26-28	GT-M28351W526-0D
				28-30	GT-M28351W528-0D
				30-32	GT-M28351W530-0D
				32-34	GT-M28351W532-0D
		90	50	20-22	GT-M28351W520-0F
				22-24	GT-M28351W522-0F
				24-26	GT-M28351W524-0F
				26-28	GT-M28351W526-0F
				28-30	GT-M28351W428-0F
Cool White	6000-6500	80	0	24-26	GT-M28351W624-0D
				26-28	GT-M28351W626-0D
				28-30	GT-M28351W628-0D
				30-32	GT-M28351W630-0D
				32-34	GT-M28351W632-0D
		90	50	20-22	GT-M28351W620-0F
				22-24	GT-M28351W622-0F
				24-26	GT-M28351W624-0F
				26-28	GT-M28351W626-0F
				28-30	GT-M28351W628-0F

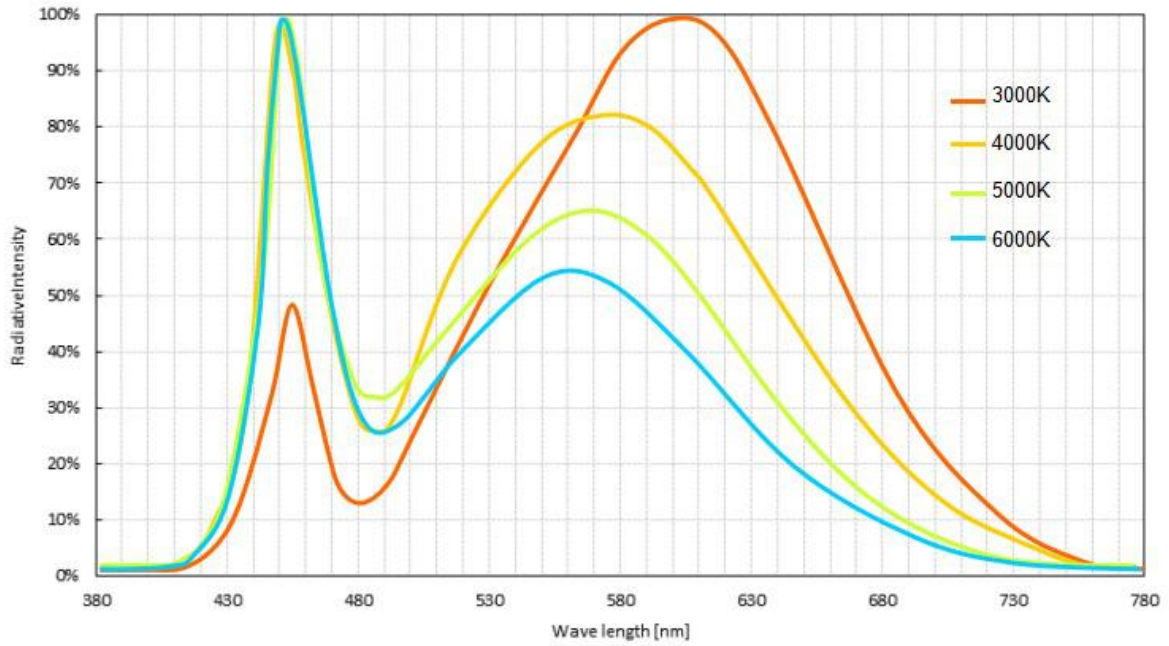
**Notes:**

Above charts include the most regular specs for cob led series for reference. Please consult sales representative for specs that are not listed or please visit [www.getiangroup.com](http://www.getiangroup.com).

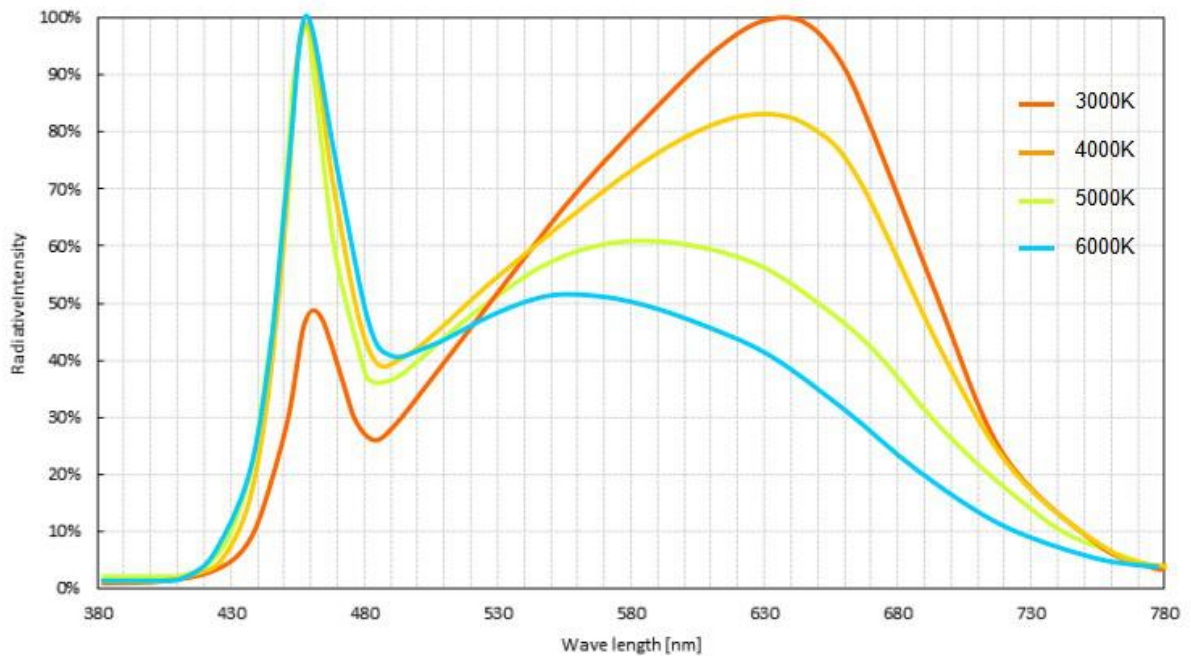
Machine Tolerance  $\pm 3\%$  on luminous flux.

Spectral Features (Tc = 25°C)

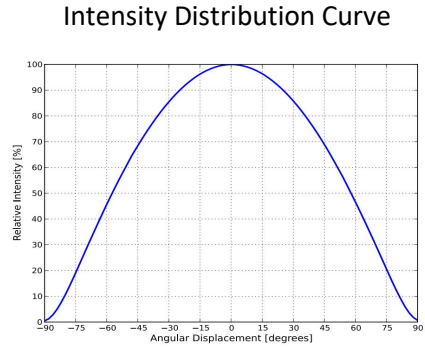
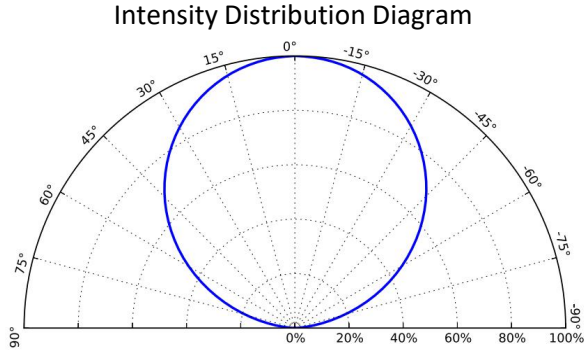
**CRI(Ra) 80Min**



**CRI(Ra) 90Min**

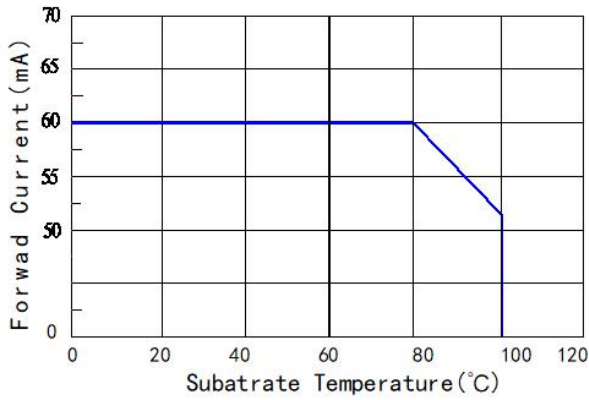


### Typical Spatial Distribution (Tc = 25°C)

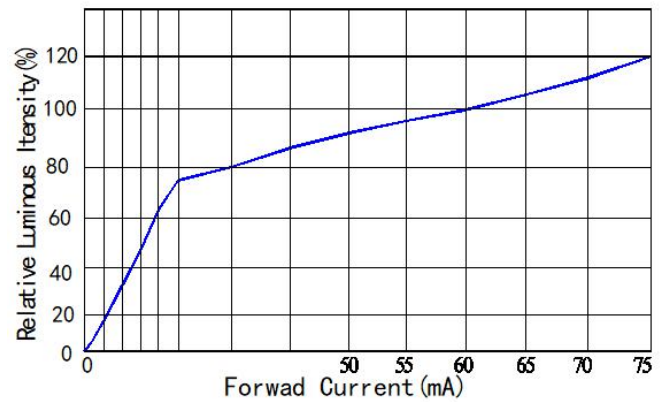


### Typical Electro-Optical Characteristics Curves

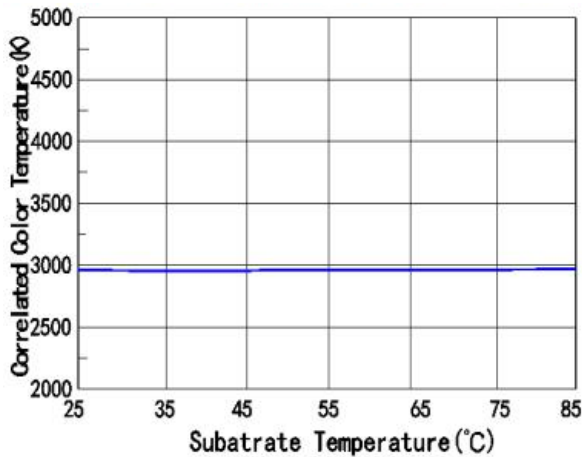
Forward Current VS Junction Temperature



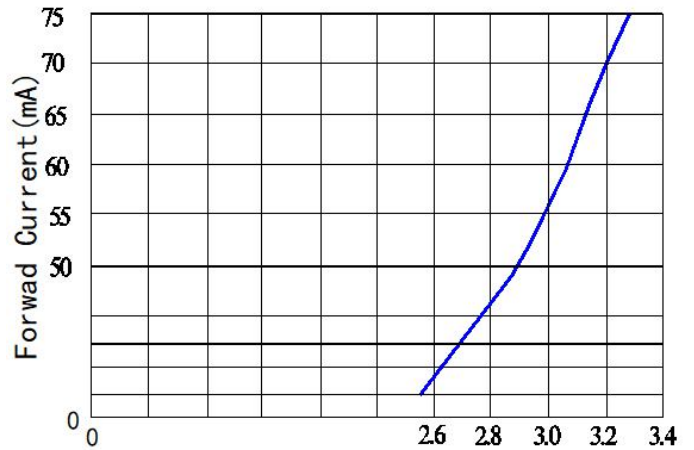
Relative Flux VS Forward Current



Correlated Color Temperature VS Substrate Temperature

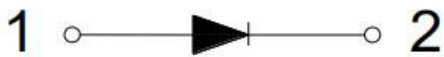
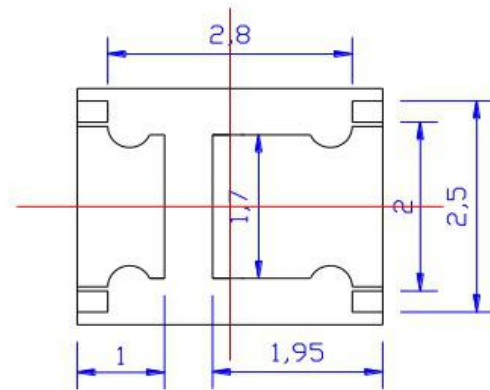
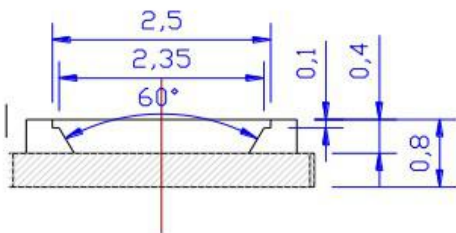
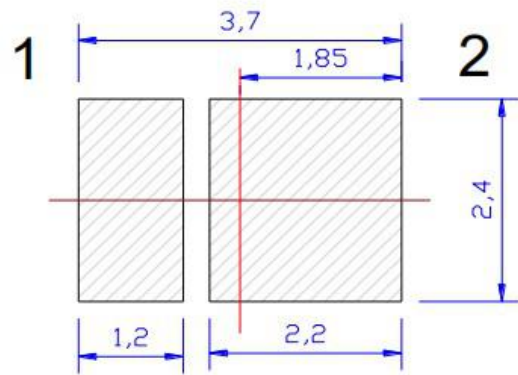
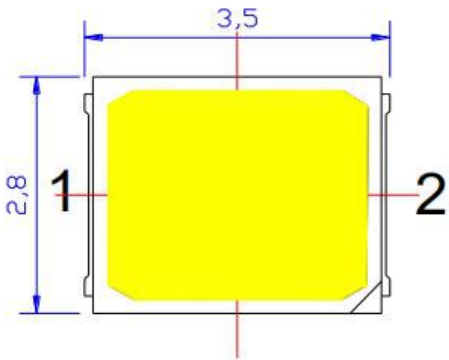


Forward Current VS Forward Voltage



**Dimensions (Unit:mm)**

Tolerance +/-0.5mm



## Reliability Tests

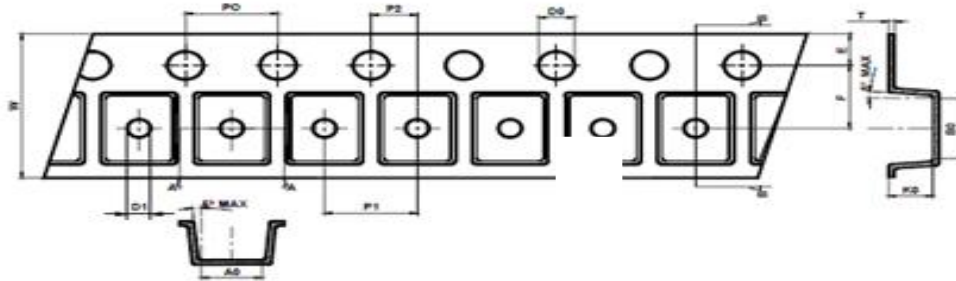
Test Items	Standard Test Method	Test Conditions	Note	Number of Damaged
Reflow Soldering	JEITA ED-4701 300 301	A.T <sub>A</sub> =230±5°C TIME=30 -60S B.T <sub>A</sub> =240±5°C TIME=110-120S C.T <sub>A</sub> =260±5°C TIME=10±1S D.T <sub>A</sub> =230±5°C TIME=30-60S	3 time	0/50
High Temperature Storage	JEITA ED-4701 200 201	T <sub>A</sub> =100±5°C	1000 Hrs	0/50
Low Temperature Storage	JEITA ED-4701 200 202	T <sub>A</sub> =-40±5°C	1000 Hrs	0/50
Temperature Humidity Storage	JEITA ED-4701 100 103	T <sub>A</sub> =85±5°C , RH=90%RH	1000 Hrs	0/50
Thermal Shock Test	JEITA ED-4701 300 307	-40°C ~ 100°C 15min 10 Second 15 min	100 Cycles	0/50
Temperature Cycling Test	JEITA ED-4701 100 105	40°C ~ 25°C ~100°C ~25°C 30min 15min 30min	100 Cycles	0/50
Operating Life Test	MIL-STD-750:1026 MIL-STD-883:1005 JIS C 7021 :B-1	T <sub>A</sub> =25°C I <sub>F</sub> =60	1000 Hrs	0/50

## Criteria for Judging LED Failure(T<sub>c</sub>=25°C)

Items	Symbol	Test Conditions	Criteria for Judging LED Failure	
			Min.	Max.
Forward Voltage	V <sub>F</sub>	I <sub>F</sub> =60mA	---	Initial Data ×1.1
Luminous Intensity	I <sub>v</sub>	I <sub>F</sub> =60mA	Initial Data × 0.8	---
Reverse Current	I <sub>R</sub>	V <sub>R</sub> =5V	---	≤ 10μA
Wave length	λ <sub>D</sub> /λ <sub>P</sub>	I <sub>F</sub> =Test Current	/	Initial Data±2nm
Appearance	/	View check	No mechanical damage	

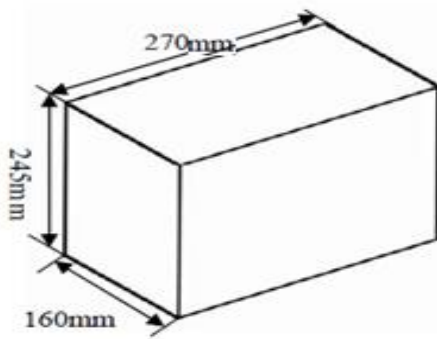
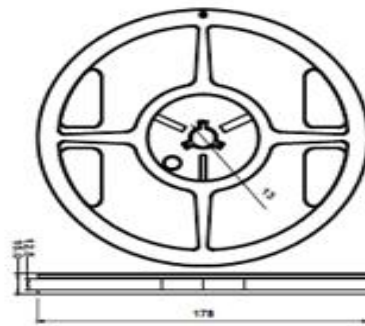


Packaging (Unit:mm)

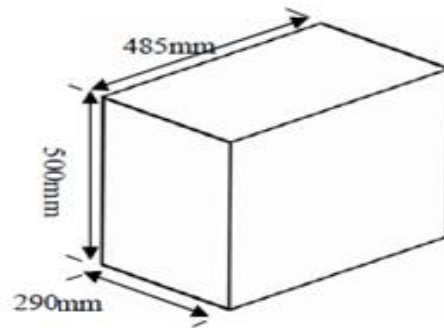


symbol	A0	B0	K0	P0	P1	P2	T
spec	2.90±0.10	3.65±0.10	2.15±0.10	4.00±0.10	4.00±0.10	2.00±0.05	0.25±0.05
symbol	E	F	D0	D1	W	10P0	
spec	1.75±0.10	3.50±0.05	1.55±0.05	10MIN	8.00 <sup>+0.30</sup> <sub>-0.21</sub>	40.0±0.20	

Unit:mm



12 Reels in one Box



6 Boxes in one Carton



## Cautions

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### 1. Storage

Before opening the package: The LEDs should be kept at 5~30°C and 60%RH or less. The LEDs should be used within a year. After opening the package: The LED must be used within 24 hours, else should be kept at 5~30°C and 30% RH or less. The LEDs should be used within 7days after opening the package. If unused LEDs remain, they should be stored in moisture proof packages, recommended to return the LEDs to the original moisture proof bag and to reseal the moisture proof bag again. If the LEDs have exceeded the storage time, baking treatment should be performed more than 24 hours at 60 ± 5°C.

### 2. Soldering Iron

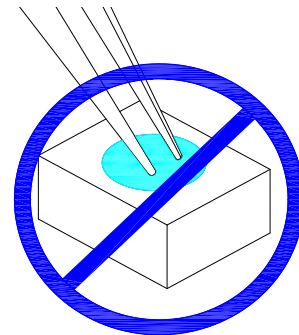
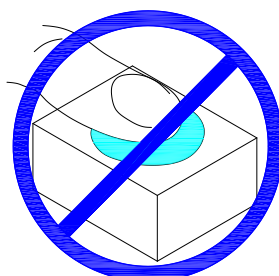
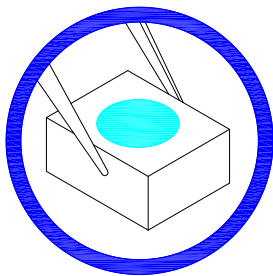
- 2.1. When hand soldering, keep the temperature of iron below less 300°C less than 3 seconds
- 2.2 The hand solder should be done only one times

### 3. Repairing

Repair should not be done after the LEDs have been soldered. When repairing is unavoidable, a double-head soldering iron should be used (as below figure). It should be confirmed in advance whether the characteristics of LEDs will or will not be damaged by repairing.

## ◆ Handling Precautions

1. Compare to epoxy encapsulant that is hard and brittle, silicone is softer and flexible. Although its characteristic significantly reduces thermal stress, it is more prone to damage by external mechanical force. As a result, Special handling precautions must be observed during assembling using silicone encapsulated LED products, Failure to comply might leads to damage and premature failure of the LED.
2. Handle the component along the side surface by using forceps or appropriate tools; do not directly touch or Handle the silicone lens surface, it may damage the internal circuitry.

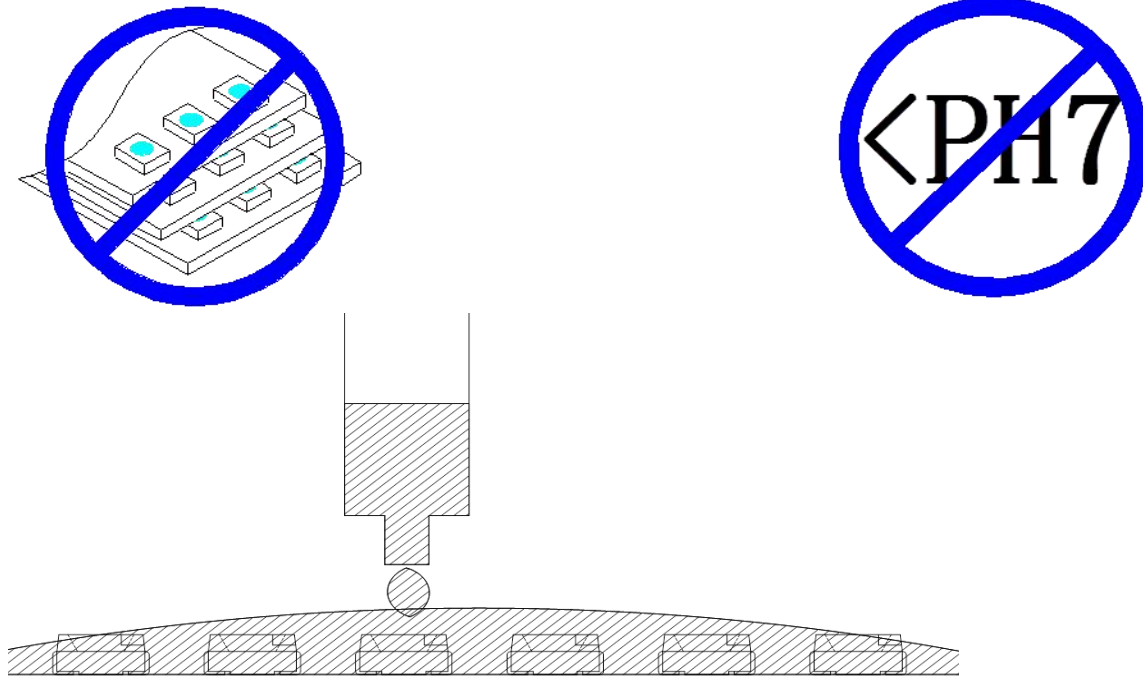


3. Do not stack together assembled PCBs containing LEDs. Impact may scratch the silicone lens or damage the internal circuitry

4. No suitable to operate in acidic environment, PH<7

5. LED operating environment and sulfur element composition cannot be over 100PPM in the LED mating usage material.

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 900PPM, the single content of Chlorine element is required to be less than 900PPM, the total content of Bromine element and Chlorine element in the external glue of the application products is required to be less than 1500PPM



◆ **Notes:**

1. Above specification may be changed without notice. We will reserve authority on material change for above specification.
2. When using this product, please observe the absolute maximum ratings and the instructions for the specification sheets. We assume no responsibility for any damage resulting from use of the product which does not comply with the instructions included in the specification sheets.