

SHENZHEN ATFU ELECTRONICS TECHNOLOGY CO.,LTD

SPECIFICATION FOR APPROVAL

客户名称 (Customer Name) :	
客户料号 (Customer NO.) :	
产品名称 (Product Name) :	2835 White SMD LED (High Voltage)
产品型号 (Product No.) :	AT-2835Wxx-1W36V
制定日期 (Date Prepared) :	2012-12-25

CUSTOMER CONFIRMATION			



SUPPLIER CONFIRMATION	
Designed by	
Check by	
Approval by	
Date	

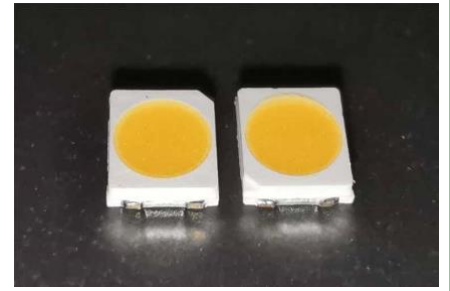
SHENZHEN ATFU ELECTRONICS TECHNOLOGY CO.,LIMITED

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◆ **Features:**

1. High voltage series.
2. General use.
3. Wide beam angle.
4. High efficiency.
5. Suitable for automatic placement equipment.
6. Compliance with EU REACH.
7. The product itself will remain within RoHS compliant Version.



◆ **Applications:**

1. Indicator and backlight in office and family equipment.
2. Flat backlight for LCD's, switches and symbols.
3. Light pipe application.
4. Outdoor & Indoor lighting application.
5. General use.

◆ **Device Selection Guide**

Prodcut No.	Emitting Color	Len Color
AT-2835W30-1W36V	Warm white	Yellow diffused
AT-2835W57-1W36V	Natural white	Yellow diffused
AT-2835W65-1W36V	Cold white	Yellow diffused

◆ **Absolute Maximum Ratings at Ta=25°C**

Parameters	Symbol	Max.	Unit
Power Dissipation	P _D	1000	mW
Peak Forward Current	I _{FP}	50	mA
Forward Current	I _F	30	mA
Reverse Voltage	V _R	5	V
Operating Temperature Range	T _{opr}	-40°C to +80°C	
Storage Temperature Range	T _{stg}	-40°C to +85°C	
Soldering Temperature	T _{sld}	260°C for 5 Seconds	

◆ **Electrical Optical Characteristics at Ta=25°C**

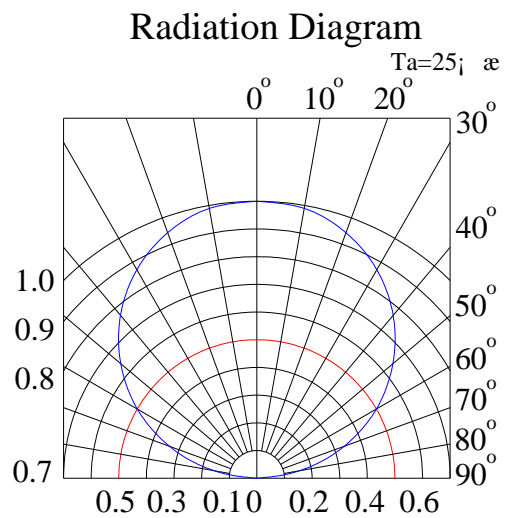
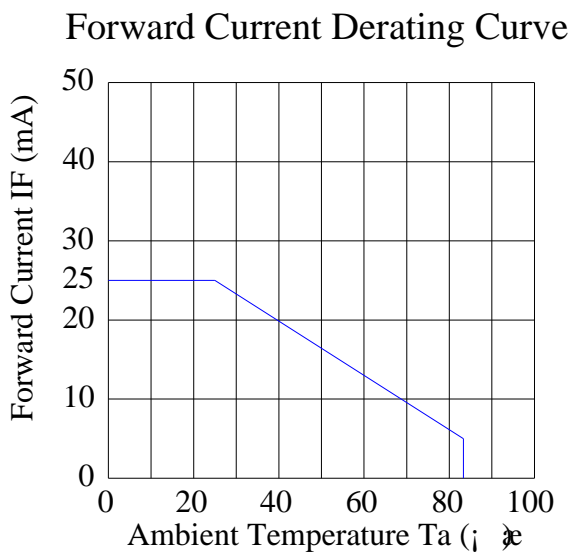
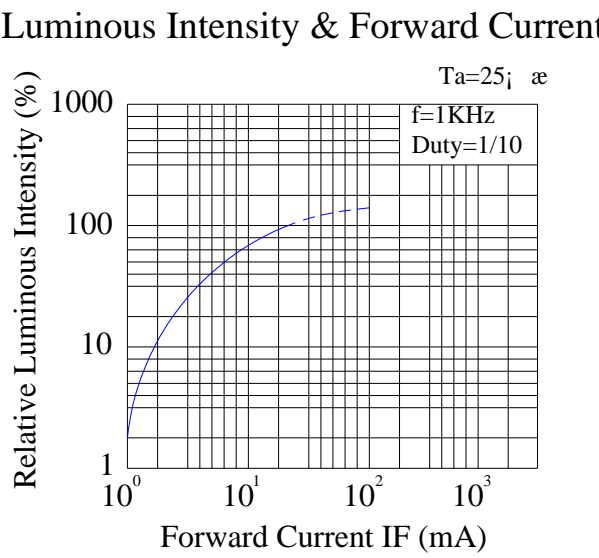
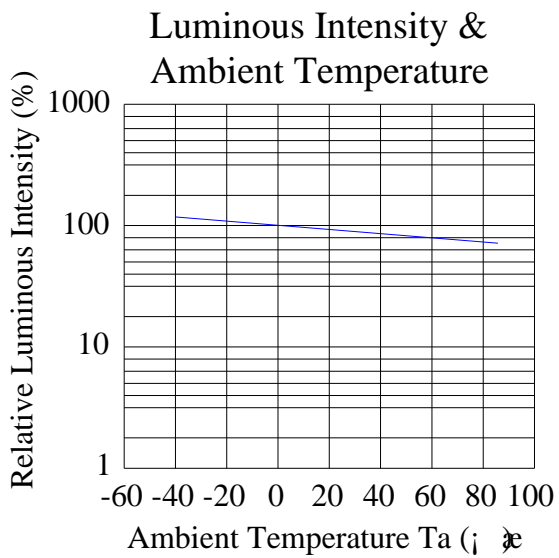
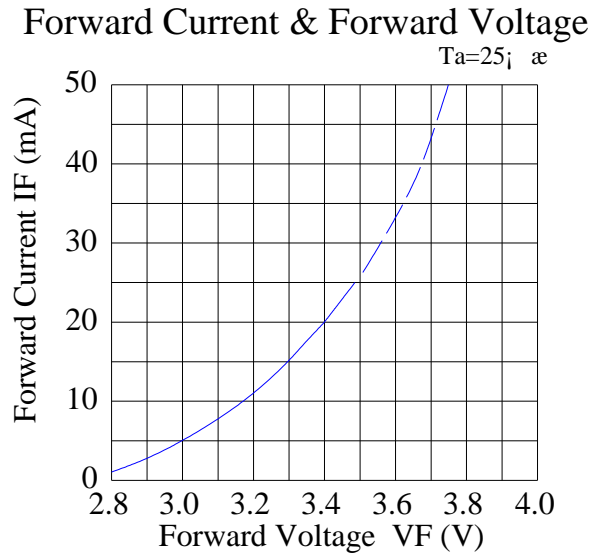
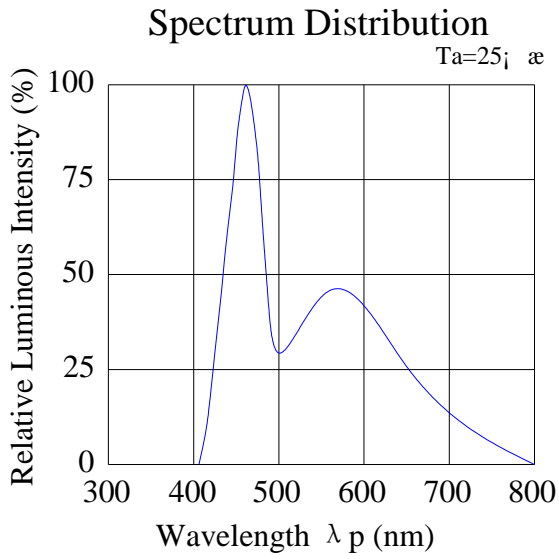
Parameters	Symbol	Min.	Typ.	Max.	Unit	Test Condition
Luminous Intensity	I _v	100	---	120	lm	IF=30mA (Note 1)
Viewing Angle *	2θ _{1/2}	---	120	---	Deg	IF=30mA (Note 2)
Chromaticity Coordinates	x	---	0.36	---		IF=30mA (Note 3)
	y	---	0.37	---		
Forward Voltage	V _F	---	36	---	V	IF=30mA
Reverse Current	I _R	---	---	10	μA	V _R =5V

Notes:

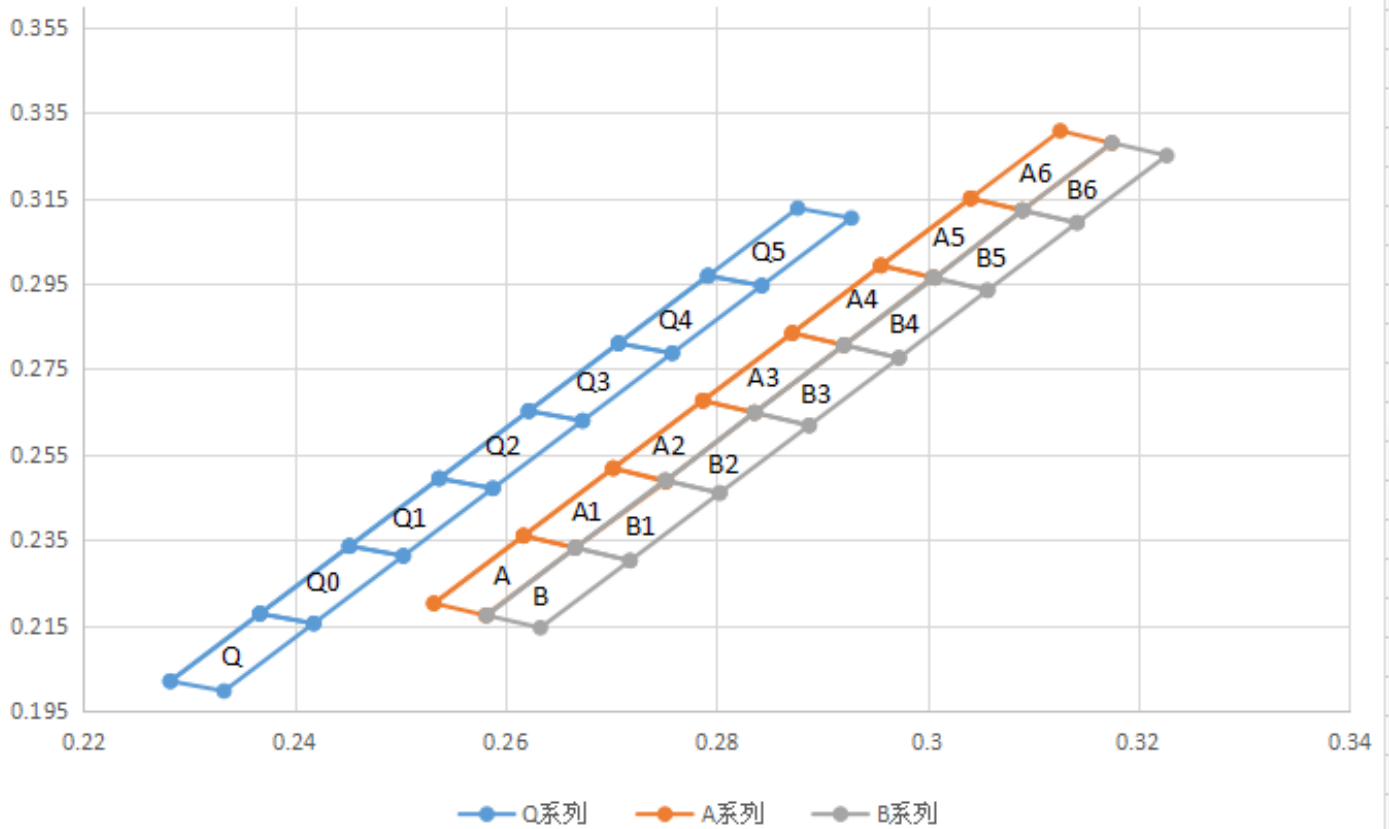
1. Luminous Intensity Measurement allowance is ± 10%.
2. θ_{1/2} is the off-axis angle at which the luminous intensity is half the axial luminous intensity.
3. It use many parameters that correspond to the CIE 1931 2°. X, Y, and Z are CIE 1931 2° values of Red, Green and Blue content of the measurement.

◆ **Typical Electrical / Optical Characteristics Curves**

(25°C Ambient Temperature Unless Otherwise Noted)



◆ CIE Chromaticity Diagram:



◆ Chromaticity Coordinates Specifications for Bin Rank:(1)

BIN Code	X	Y	BIN Code	X	Y	BIN Code	X	Y
A5	0.2956	0.2992	A6	0.3041	0.3149	B	0.2582	0.2174
	0.3041	0.3149		0.3126	0.3307		0.2666	0.2332
	0.309	0.3121		0.3175	0.3278		0.2718	0.2302
	0.3007	0.2963		0.309	0.3121		0.2633	0.2145
B1	0.2666	0.2332	B2	0.2752	0.2489	B3	0.2836	0.2648
	0.2751	0.249		0.2836	0.2648		0.2921	0.2806
	0.2803	0.246		0.2888	0.2618		0.2973	0.2776
	0.2718	0.2302		0.2803	0.246		0.2888	0.2618
B4	0.2921	0.2806	B5	0.3007	0.2963	B6	0.309	0.3121
	0.3005	0.2964		0.309	0.3121		0.3175	0.3279
	0.3057	0.2934		0.3142	0.3092		0.3227	0.3249
	0.2973	0.2776		0.3057	0.2934		0.3142	0.3092

◆ **Reliability Test Items And Conditions:**

The reliability of products shall be satisfied with items listed below:

Confidence level: 90%. LTPD: 10%.

1) Test Items and Results:

No.	Test Item	Test Hours/Cycles	Test Conditions	Sample Size	Ac/Re
1	Life Test	1000Hrs.	Ta=25° C IF=30mA	25pcs	0/25
2	High Humidity Heat Life Test	500Hrs.	85° C RH=85% IF=30mA	25pcs	0/25
3	Low Temperature Life Test	1000Hrs.	Ta=-25° C IF=30mA	25pcs	0/25
4	Temperature Cycle	100cycle	-45° C 30min ↑↓20 min 105° C 30min	25pcs	0/25
5	Thermal Shock	100cycle	-10° C 15min ↑↓5sec 100° C 15min	25pcs	0/25
6	High Humidity Heat Cycle	10cycle	30° C- 65° C 90%RH 24hrs/1cycle	25pcs	0/25
7	High Temperature Storage	1000Hrs.	Ta=100° C	25pcs	0/25
8	Humidity Heat Storage	1000Hrs.	Ta=85° C RH=85%	25pcs	0/25
9	Low Temperature Storage	1000Hrs.	Ta=-40° C	25pcs	0/25

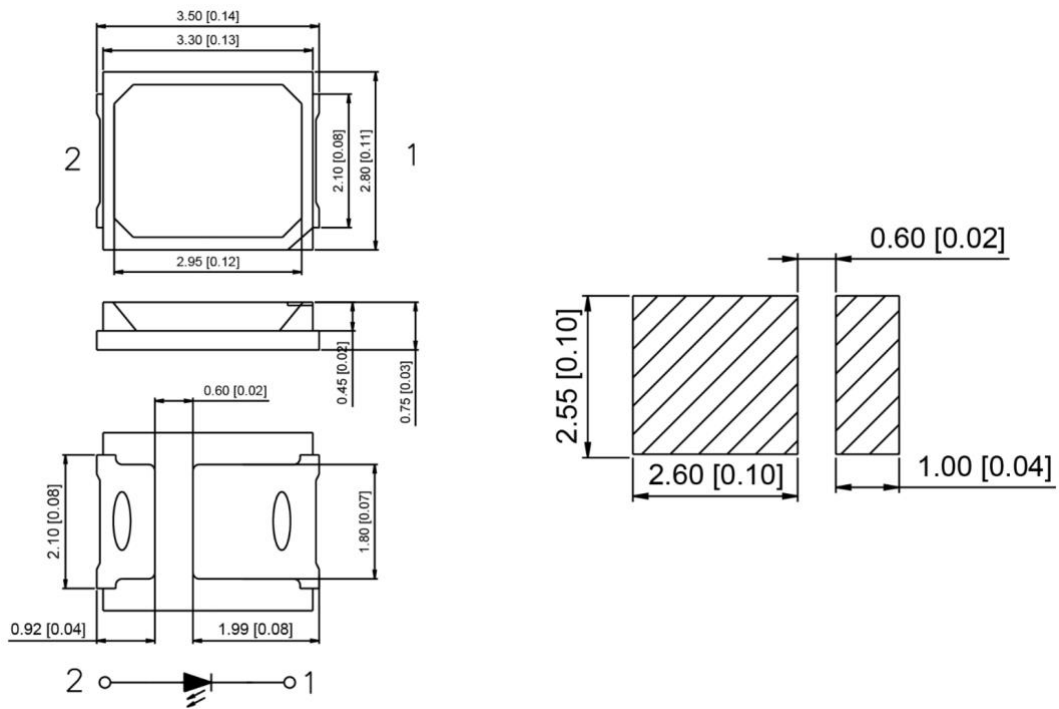
2) Criteria for Judging the Damage:

Item	Symbol	Test Conditions	Criteria for Judgment	
			Min	Max
Forward Voltage	VF	IF=30mA	---	Over U×1.2
Reverse Current	IR	VR=5V	---	Over U×2.0
Luminous Intensity	IV	IF=30mA	Below S×0.5	---

Note:

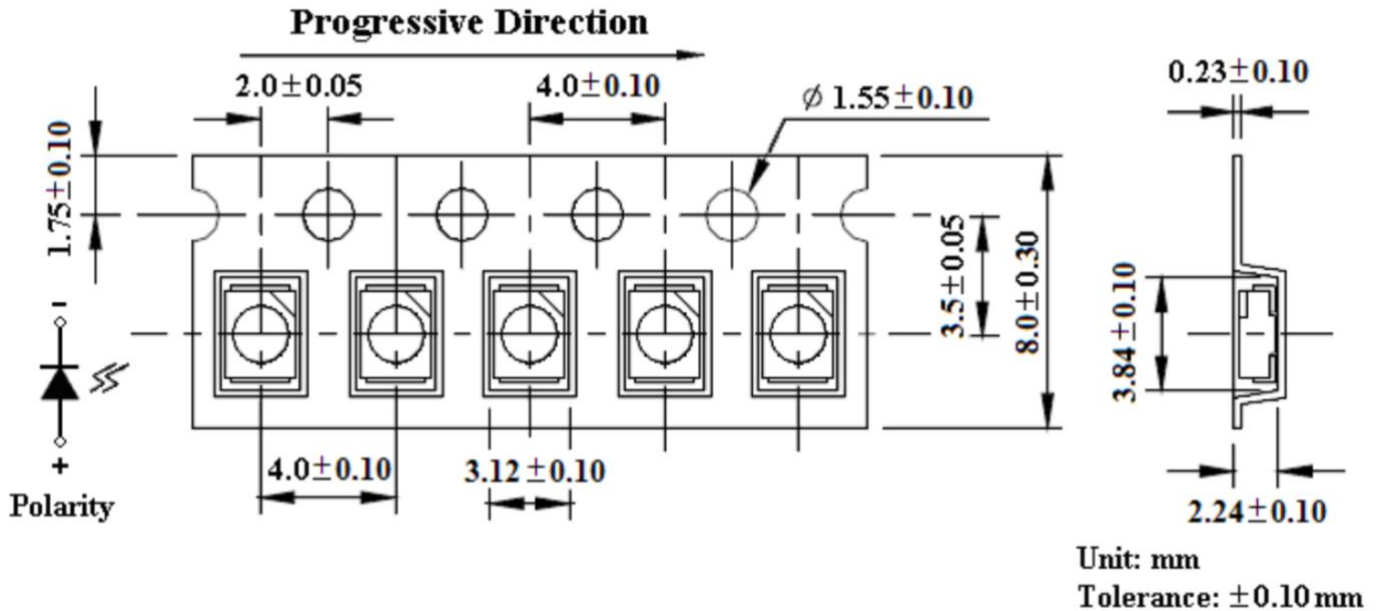
1. U means the upper limit of specified characteristics. S means initial value.
2. After each test, remove test pieces, wait for 2 hours and test pieces have returned to ambient temperature, then take next measurement.

◆ **Outline dimensions**



◆ **Carrier Packing Dimensions:**

Loaded quantity 4000PCS per Reel.



NOTES:

1. All dimensions are in millimeters (inches).
2. Tolerance is $\pm 0.30\text{mm}$ (0.012") unless otherwise specified.
3. Specifications are subject to change without notice.

◆ Please read the following notes before using the product:

1. Over-current-proof

Customer must apply resistors for protection, otherwise slight voltage shift will cause big current change (Burn out will happen).

2. Storage

2.1 Do not open moisture proof bag before the products are ready to use.

2.2 Before opening the package, the LEDs should be kept at 30°C or less and 90%RH or less.

2.3 The LEDs should be used within a year.

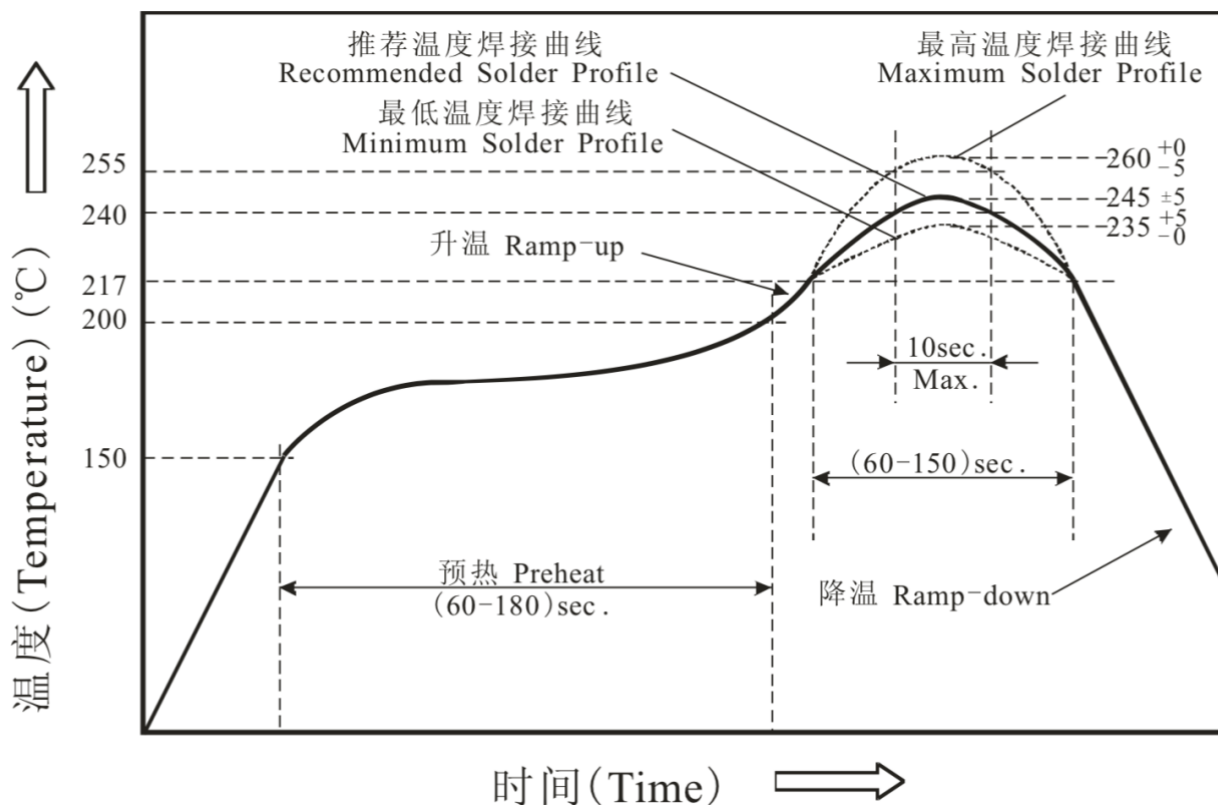
2.4 After opening the package, the LEDs should be kept at 30°C or less and 70%RH or less.

2.5 The LEDs should be used within 168 hours (7 days) after opening the package.

2.6 If the moisture adsorbent material (silica gel) has fabled away or the LEDs have exceeded the storage time, baking treatment should be performed using the following conditions. Baking treatment: 60±5°C for 24 hours.

3. Soldering Condition

3.1 Pb-free solder temperature profile.



3.2 Reflow soldering should not be done more than two times.

3.3 When soldering, do not put stress on the LEDs during heating.

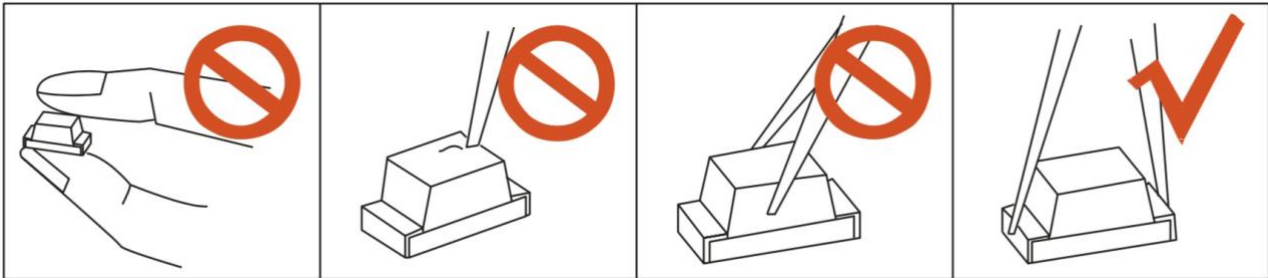
3.4 After soldering, do not warp the circuit board.

4. Soldering Iron

Each terminal is to go to the tip of soldering iron temperature less than 260°C for 5 seconds within once in less than the soldering iron capacity 25W. Leave two seconds and more intervals, and do soldering of each terminal. Be careful because the damage of the product is often started at the time of the hand solder.

5. 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 beforehand whether the characteristics of the LEDs will or will not be damaged by repairing.



6. Caution in ESD

Static Electricity and surge damages the LED. It is recommended to use a wrist band or anti-electrostatic glove when handling the LED. All devices, equipment and machinery must be properly grounded.