

Specification

规格书

Customer Name: _____

Customer P/N: 5730 单晶 0.5WFactory P/N: T-5730A7-XXDB

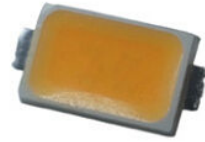
Sending Date: _____

Client approval 客户审核			Lencor approval 联豪光电审核		
Approval 核准	Audit 确认	Confirmation 制作	Approval 核准	Audit 确认	Confirmation 制作
<input type="checkbox"/> qualified <input type="checkbox"/> Disqualified 接受 不接受			DATE: 日期:		

1. 此规格书的最终解释权归深圳市联豪光电有限公司；
2. 此规格书如有更改会另行通知，但应采用书面形式双方签字盖章方才有效；

1. Features:

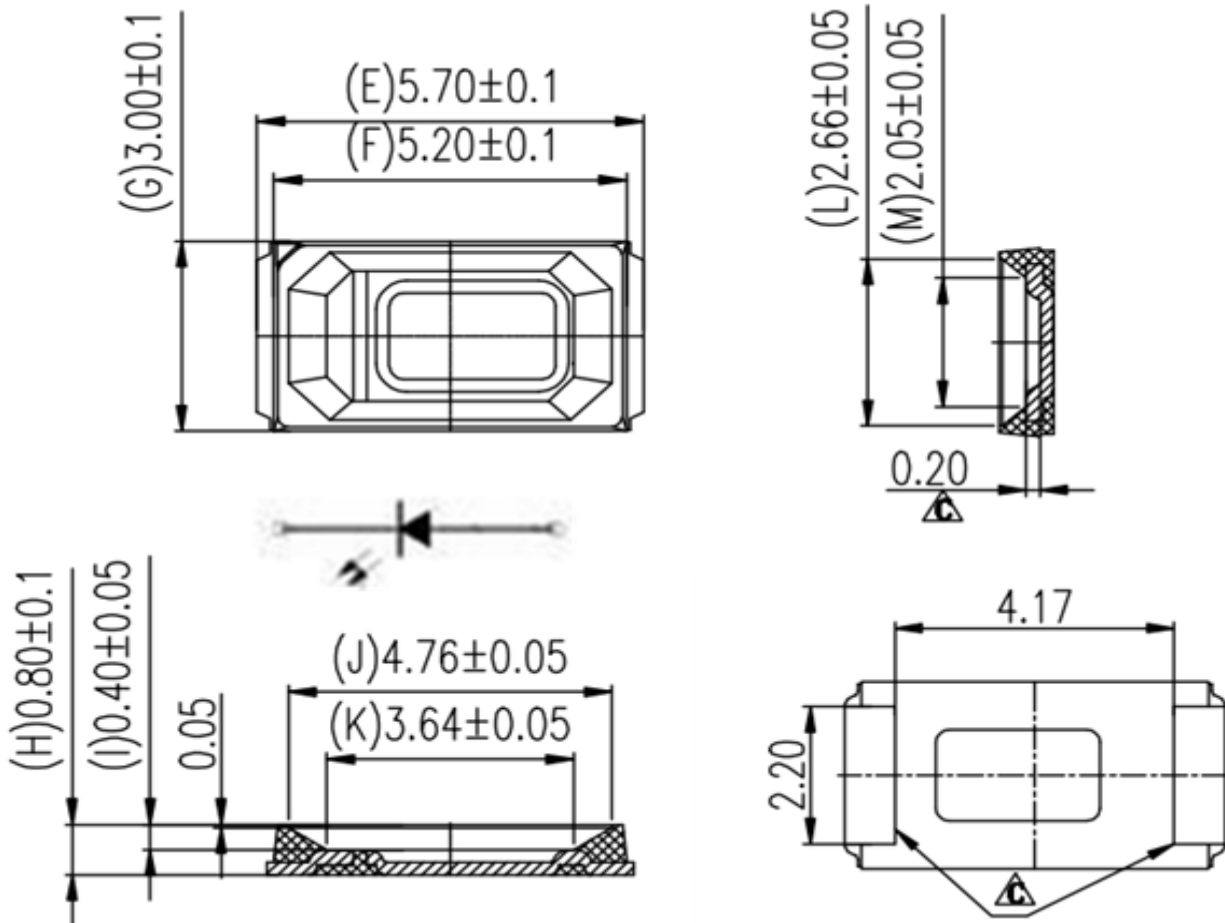
- 1.1 Package Size: 5.7*3.0*0.8mm
- 1.2 Emitted Color: White.
- 1.3 Light-emitting Type
- 1.4 Soldering Method: SMT Reflow Soldering
- 1.5 RoHS standard complied.



2. Applications:

- 2.1 Flash lamp
- 2.2 LED Light Tube
- 2.3. General lighting.

3. Package Outline Dimension:



Notes:

- 1. All dimensions are in millimeters (inches).
- 2. Tolerance is ±0.10mm unless otherwise specified.

4. Selection Guide

Part NO	Chip Materials	Lens type
T-5730A7-XXDB	InGaN	Yellow Diffused

Mass Production list

Part NO	CCT (K) Min	CCT (K) Typ	CCT (K) Max	Φ (1m) Min	Φ (1m) Max	Test Condi-tion s
T-5730A7-P3DB	6200	6450	6800	55	70	IF=150mA
T-5730A7-P1DB	4800	5000	5300	55	70	IF=150mA
T-5730A7-N1DB	3800	4000	4200	55	70	IF=150mA
T-5730A7-W4DB	3300	3500	3700	50	65	IF=150mA
T-5730A7-W3DB	2900	3000	3100	50	65	IF=150mA
T-5730A7-W2DB	2600	2700	2800	50	65	IF=150mA

5. Electrical-optical characteristics(Ta=25℃)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
Forward Voltage	V _f	2.8	---	3.4	V	I _F =150mA
Viewing Angle	2θ _{1/2}	---	120	---	deg	
ColorRenditionIndex	RA	80	---	85		
Reverse Current	I _R	---	---	1	μA	VR=5V

Note:

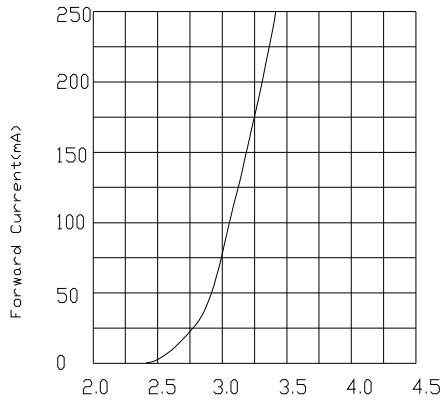
1. Tolerance of luminous intensity is ±10%
2. Tolerance of forward voltage is ±0.05V

6. Absolute Maximum Ratings(Ta=25°C)

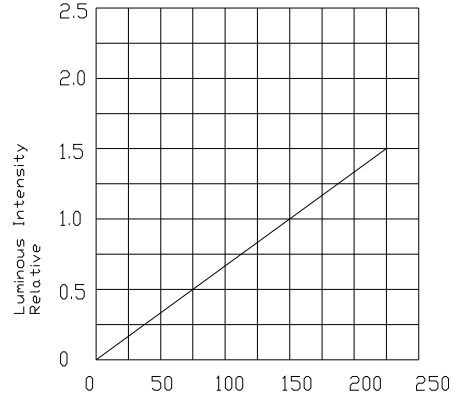
Parameter	Symbol	Rating	Unit
Power Dissipation	Pd	500	mW
Forward Current	I _F	150	mA
Peak Pulse Current * 1	I _{FP}	300	mA
Reverse Voltage	V _R	5	V
Soldering Temperature	Tsol	240 (for 10 seconds)	°C
Operating Temperature	Topr	-30°C~80°C	-
Storage Temperature	Tstg	-40°C~100°C	-
Electrostatic discharge (HBM)	ESD	2000	V
Thermal Resistance (Junction / Soldering point)	Rthj-s	35	°C/W
Junction Temperature	Tj	115	°C

1 I_{FP} condition: pulse width \cong 0.1msec,duty cycle \cong 1/10

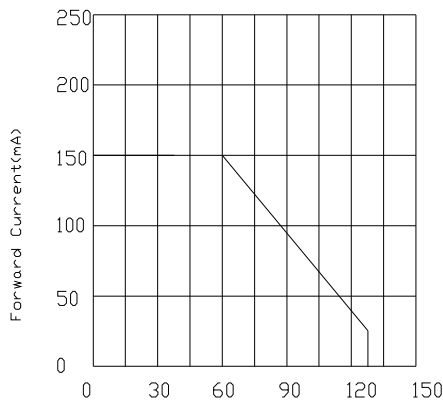
7. Typical Electro-Optical Characteristics Curves



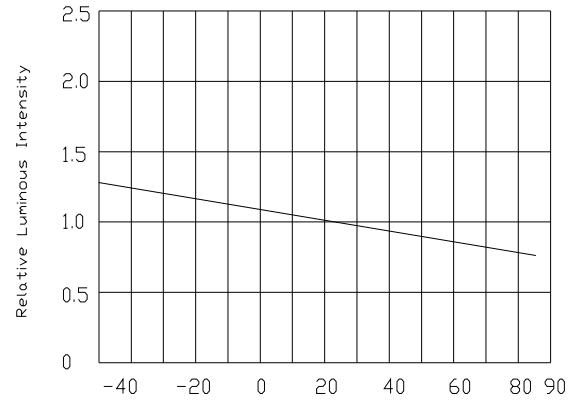
forward Voltage(V)
 FORWARD CURRENT Vs FORWARD VOLTAGE



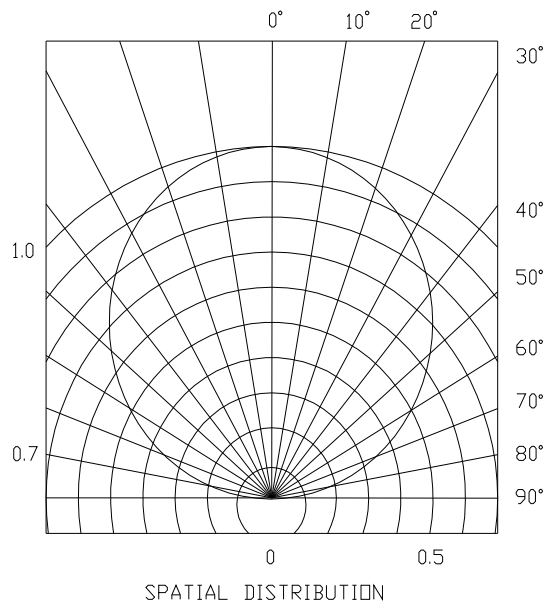
IF-forward Current(mA)
 LUMINOUS INTENSITY Vs FORWARD CURRENT



Ambient Temperature Ta(°C)
 FORWARD CURRENT DERATING CURVE

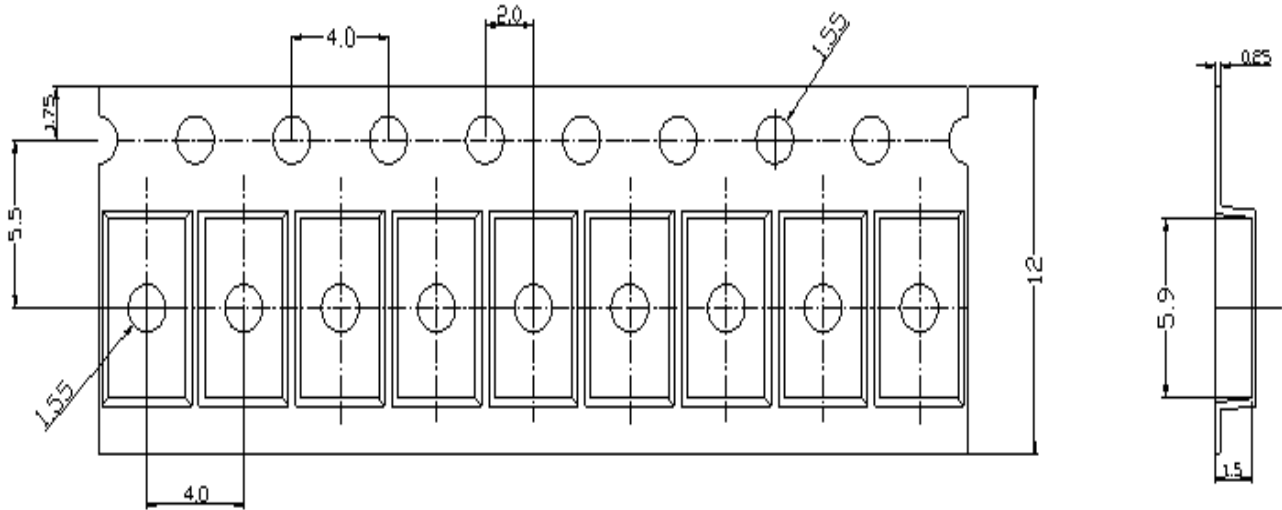


Ambient Temperature Ta(°C)
 LUMINOUS INTENSITY Vs AMBIENT TEMPERATURE

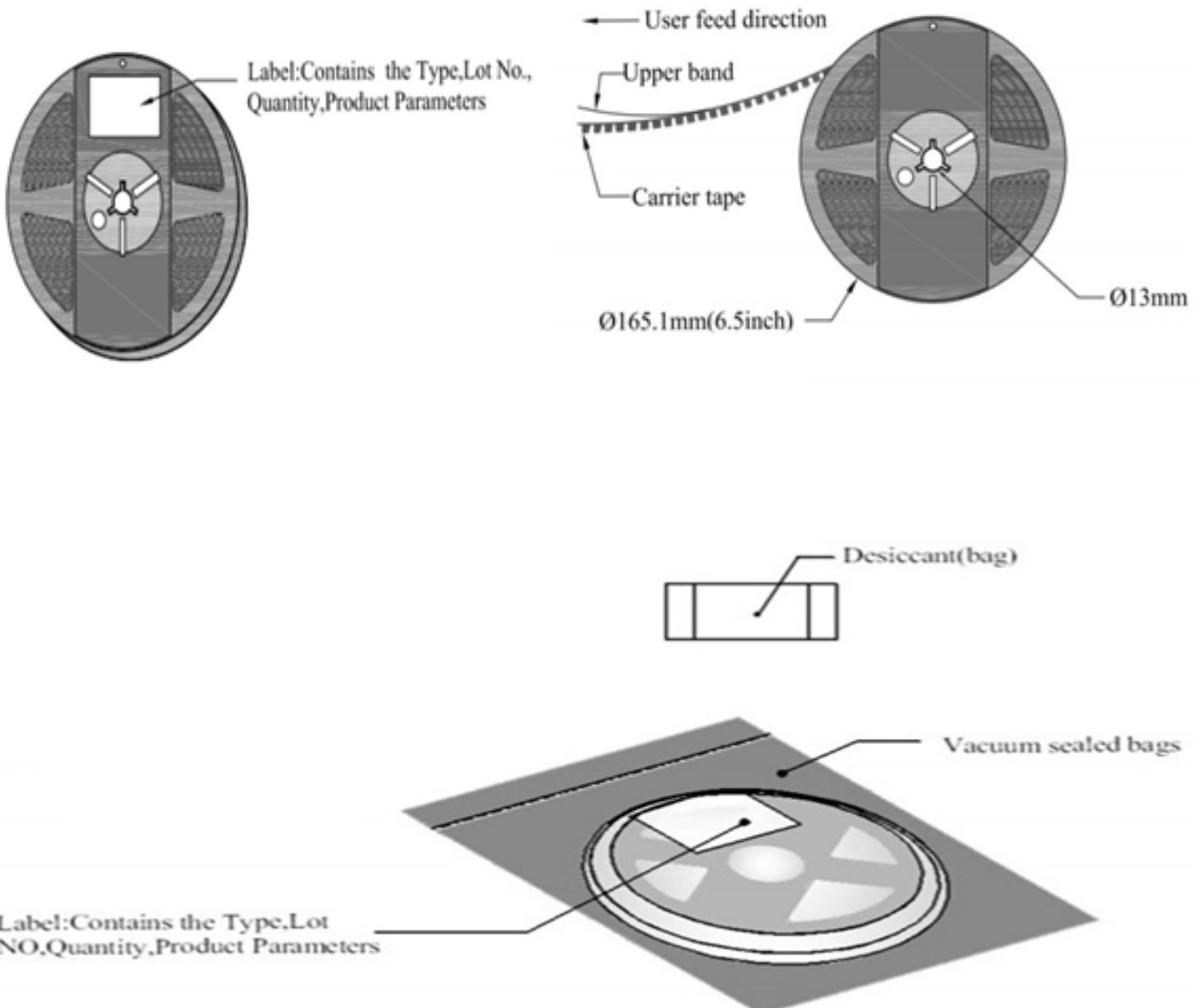


8.Tapping specifications (Units: mm)

Loaded quantity: 4000 pcs/reel



9.Package Method:(unit:mm)



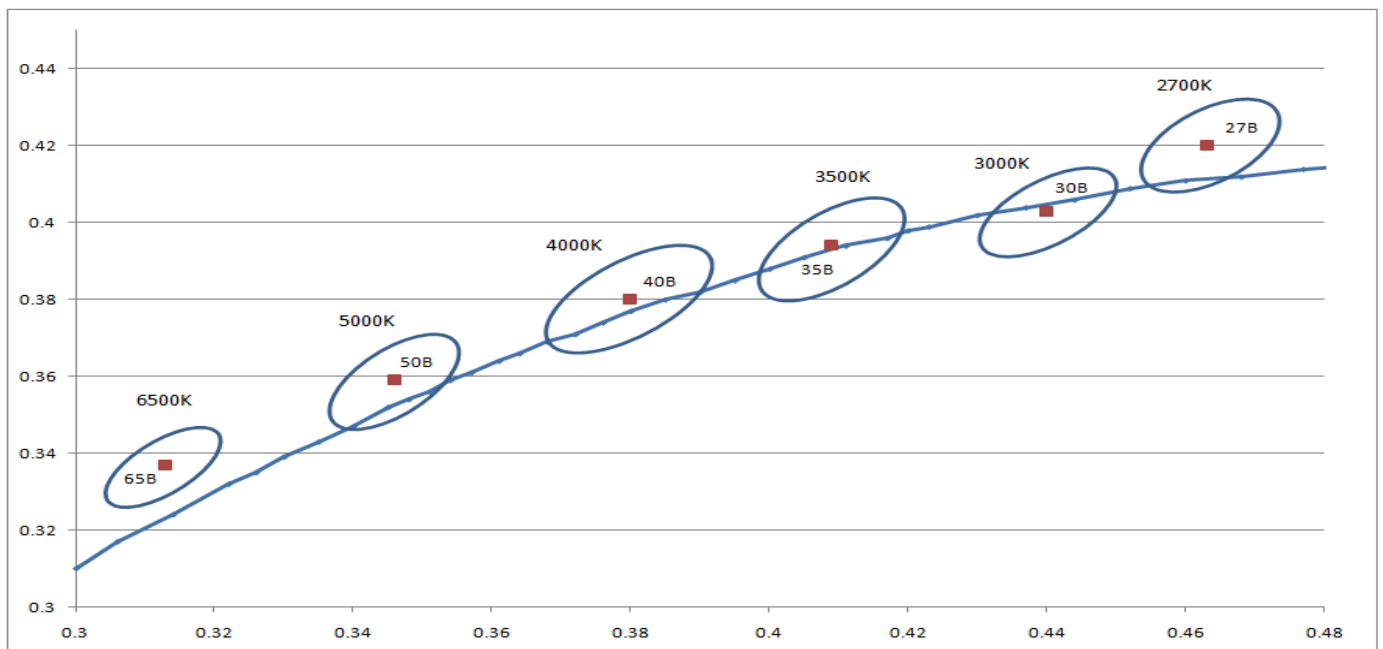
10. Label Description

SMD model: *****	
Lot No: *****	
Drive current: *****	ϕ : *****
VF: *****	Ra: *****
CT: *****	Bin: *****
QTY: *****	Date: *****

※ Forward voltage (tolerance is $\pm 0.05V@I_f=150mA$):

BIN CODE	Min.(v)	Max.(v)
	2.8	3.0
	3.0	3.2
	3.2	3.4

CIE Chromaticity Diagram(tolerance is $\pm 0.005@I_f=150mA$)



Bin Range of Chromaticity Coordinate

CCT	Bin code Bin		CIE-X	CIE-Y
6500k	65B	6200-6800	0.313	0.337
5000K	50B	4800-5300	0.346	0.359
4000K	40B	3800-4200	0.380	0.380
3500k	35B	3250-3650	0.409	0.394
3000K	30B	2900-3100	0.44	0.403
2700K	27B	2600-2800	0.463	0.42

11. Reliability Test Items and Conditions:

No.	Test Item	Test Conditions	Sample Quantity	Ac/Re
1	Operation Life	Test at If=DC150mA Temp: Room temperature Test time=1000hrs	22	0/1
4	High Temperature High Humidity	Temp. =+65℃ RH=90%HR Test time=500hrs	22	0/1
3	Temperature Cycle	-40℃ ~ +100℃ 10min 5min 10min Test Time=100cycle	22	0/1
4	High Temperature Storage	High Temp. =+85℃ Test time=1000hrs	22	0/1
5	Low Temperature Storage	Low Ta=-40℃ Test time=1000hrs	22	0/1
6	Reflow Soldering	Operation heating: 240℃(Max.), within 10seconds. (Max.)	22	0/1

※ Criteria for failure

- Iv: Below 30% of initial rating
- Vf: Over 20% of upper limit rating
- IR: Over 2 times of upper limit rating

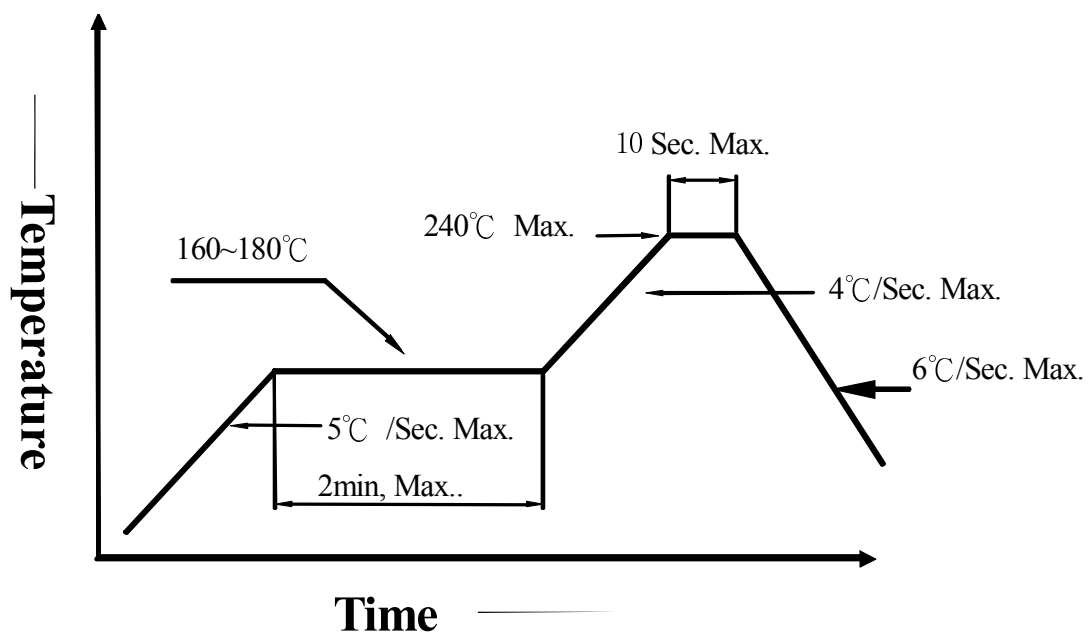
Note: 1. One test shall be taken within 2 hours.

2. Each test shall be taken when the tested LED in normal ambient conditions after completion of previous test.

12 · Precautions for use :**12.1 Soldering**

SMD LED encapsulation gumwater is flexible, and external force easily damages radiant surface and plastic shell. So when soldering , Please handle with care !

- a. Reflow soldering shall be not more than two times and is suggested to be taken under reflow curve conditions with No-clean Flux, .The radiant surface shall be clean and unclean surface may influence the emitting color.
- b. Manual soldering is only used for repairing. Anti-static iron (25W) is recommended and tweezer or iron should not touch the radiant surface and plastic parts. The soldering time should be not more than 3 seconds.
- c. Don't twist LED in course of manual soldering and testing, which may cause LED failure.
- d. Please select the LED devices in the same BIN on the same PCB, otherwise may cause chromatic aberration.

e. Lead free reflow curve as follows:**12.2 Cleaning**

- a. Ultrasonic cleaning is not allowed. We recommend isopropyl alcohol or pure alcohol to for cleaning or dipping within 1 minute and reuse after 15 minutes in room temperature. LThe radiant surface shall be

clean after cleaning and otherwise may influence radiant color.

b. Isoamyl acetate, trichloroethylene, acetone, sulfide, nitride, acid, alkali and salt shall be avoided from LED, which may cause damage to LED.

12.3 Encapsulation

a. Encapsulation glue containing sodium ion or sulfide shall be avoided, which may cause fading fluorescence powder (poisoning).

b. When using normal encapsulation glue, trial testing is recommended for 168-hour operation before mass production.

12.4 Storage

- a. The LED should be stored at 30°C or less and 60%RH or less before opening the package. The storage shall not be over half a year.
- b. After opening the package, the LEDs should be kept at 30-35%RH or less, and should be used within 3 days.
- c. When temperature card shows 20% above after package opened, baking treatment shall be conducted before use (for reel package, : baking at 70±3°C for 12 hrs; for bulk goods, baking at 120±5°C for 4 hrs)
- d. Acid, alkali and corrosive gas should be avoided in storage environment and intensively shock and high magnetic field also avoided.

12.5 Static Electricity

a. Static electricity or Peak surge voltage may damage LED and instantaneous voltage shall be avoided when turning on or off the lights.

b. Please wear anti-static wrist strap, anti-static glove and anti-static shoes and , and all the equipment as well as instruments must be grounded well. After LED damaged, leakage current increases obviously and forward voltage drops under low current, , which leads failed light under low current.

12.6 Test

a. **The LED should be driven under rated current and** current-limiting resistor shall be added in the circuit so as to avoid damage to LED from enormous current fluctuation caused by slight voltage change.

b. Surge voltage shall be avoided when the circuit turns on or off, so to not damage the LED. Please see the below chart to check the circuit.

12.7 Other

Radiant color of LED will be slightly changed under different current and it is recommended that LED is be used in series with resistor. when LED lighted, please don't watch the radiant surface, otherwise LED may damage your eyes.