

<b>Customer Approved</b>
<b>Date:</b>

**Part No.:**  
**LT535UVA-Q01T2**

**DATA SHEET**

Issue Date: 2018.07.13

Issue No.: LTD-535-001

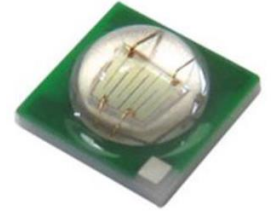
REVISION: V2

Designer	Checker	Approver
<i>Vic</i>	<i>Rock</i>	<i>Jeff</i>

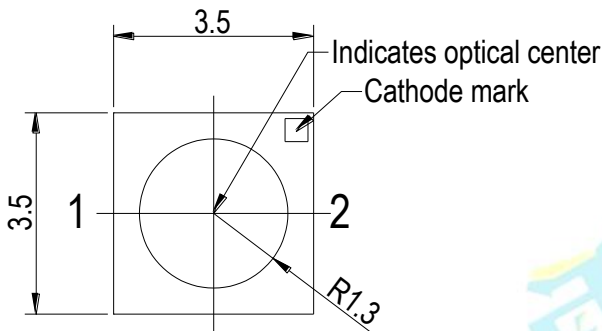
SMD UV Type ■ Top view 3535 Lens Package  
LT535UVA-Q01T2

**Features**

- 3535 package
- Top view LED
- High Radiant flux density
- Compatible with infrared and vapor phase reflow solder process
- Pb-free
- RoHS compliant



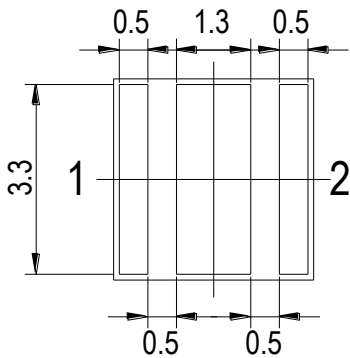
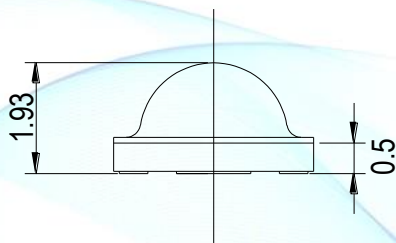
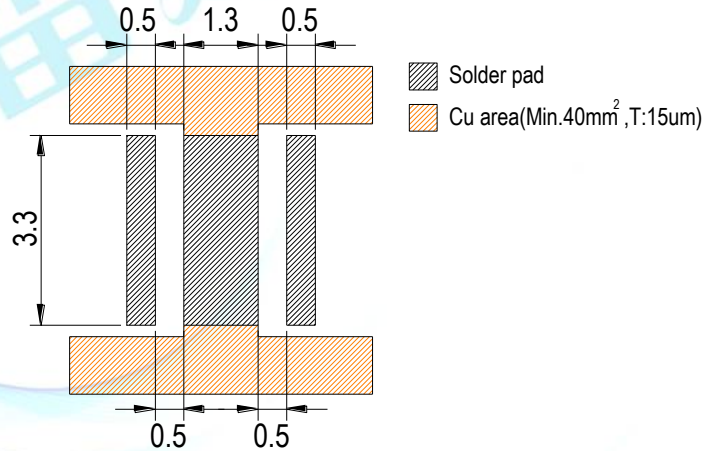
**Package Dimensions**



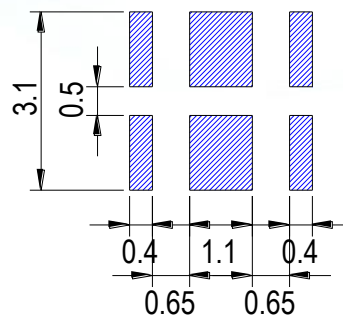
**Polarity**



**Recommended solder pad**



**Solder stencil**



Note:  
Tolerance unless mentioned is  $\pm 0.1$ mm, Unit = mm.

## Applications

- Dental Curing and Teeth Whitening
- Sterilization and Medical
- Ink and Adhesive Curing
- DNA Gel

## Absolute Maximum Ratings (T<sub>Soldering</sub>=25°C)

Parameter	Symbol	Rating	Unit
Forward Current	I <sub>F</sub>	700	mA
Peak Forward Current (T=1ms, tp=0.1ms)	I <sub>FP</sub>	1000	mA
Power Dissipation	P <sub>d</sub>	3	W
Operating Temperature	T <sub>opr</sub>	-40 ~ +85	°C
Storage Temperature	T <sub>stg</sub>	-40 ~ +100	°C
Soldering Temperature	T <sub>sol</sub>	Reflow Soldering : 260 °C for 10 sec. Hand Soldering : 350 °C for 3 sec.	
Reverse Voltage	V <sub>R</sub>	5	V

### Notes:

- 1.The products are sensitive to static electricity and must be carefully taken when handling products.
- 2.Tsol Conditions:3mm from the base of epoxy bulb.

## Electro-Optical Characteristics (T<sub>Soldering</sub>=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
Radiant Power	Φ <sub>e</sub>	0.8	1.0	1.2	W	I <sub>F</sub> =700mA
Dominant Wavelength	λ <sub>D</sub>	375	385	395	nm	I <sub>F</sub> =700mA
Forward Voltage	V <sub>F</sub>	3.4	3.6	3.8	V	I <sub>F</sub> =700mA
Viewing Angle	2θ <sub>1/2</sub>	-----	100	120	deg	I <sub>F</sub> =700mA
Reverse Current	I <sub>R</sub>	-----	-----	5	μA	V <sub>R</sub> =5V

### Notes:

- 1.Tolerance of Radiant Power ±10%.
2. Tolerance of Dominant Wavelength : ±1nm.
3. Tolerance of Forward Voltage : ±0.1V.

**Typical Electro-Optical Characteristics Curves**

Fig.1-Forward Current(V) vs. Forward Voltage  $T_s=25^\circ\text{C}$

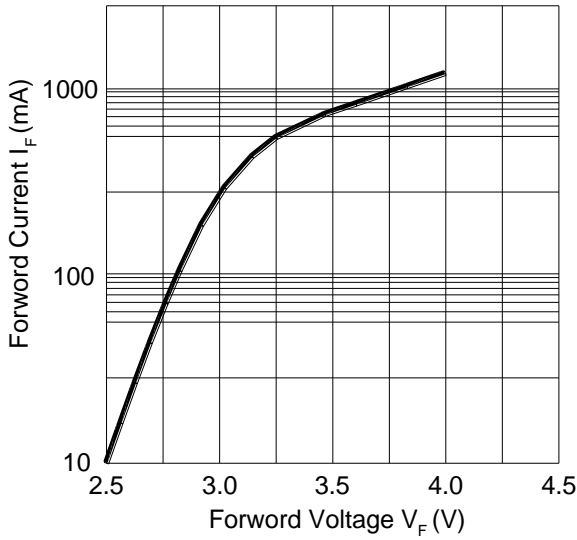


Fig.2-Radiant Power vs. Forward Current  $T_s=25^\circ\text{C}$

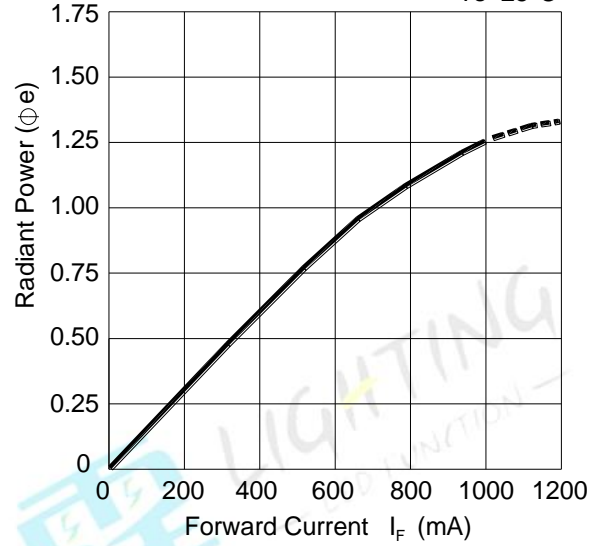


Fig.3-Max. Driving Forward Current vs. Soldering Temperature

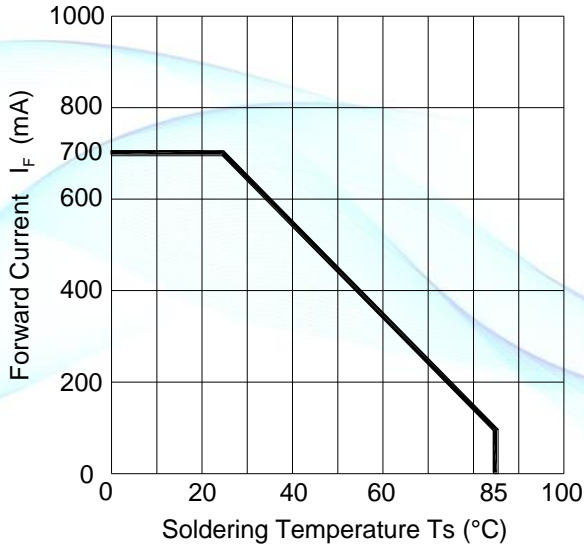
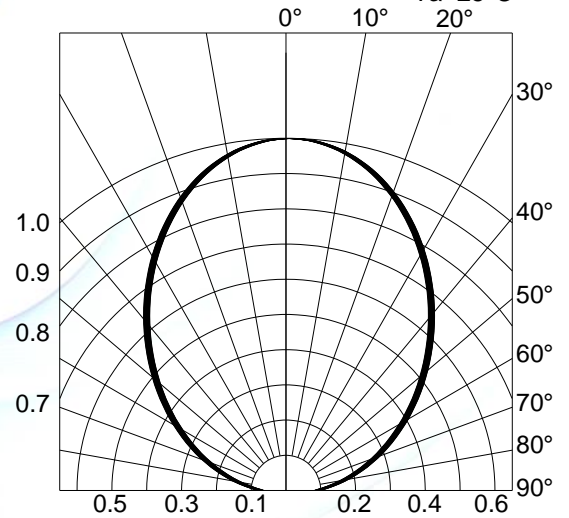


Fig.4-Radiation Diagram  $T_a=25^\circ\text{C}$



### Typical Electro-Optical Characteristics Curves

Fig.5-Forward Voltage Shift vs. Junction Temperature

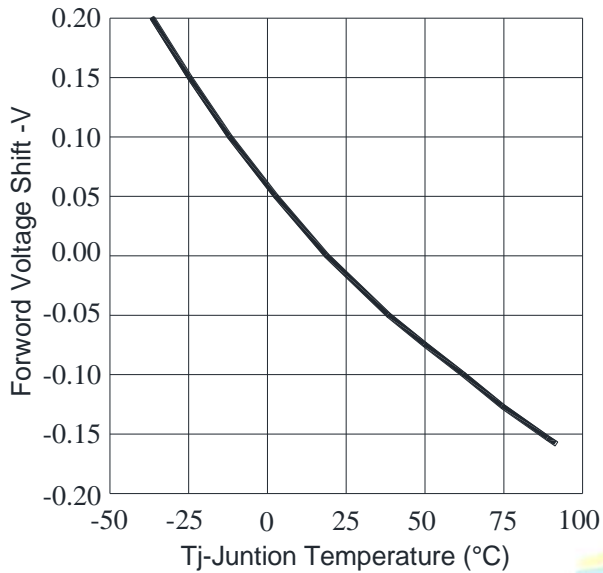
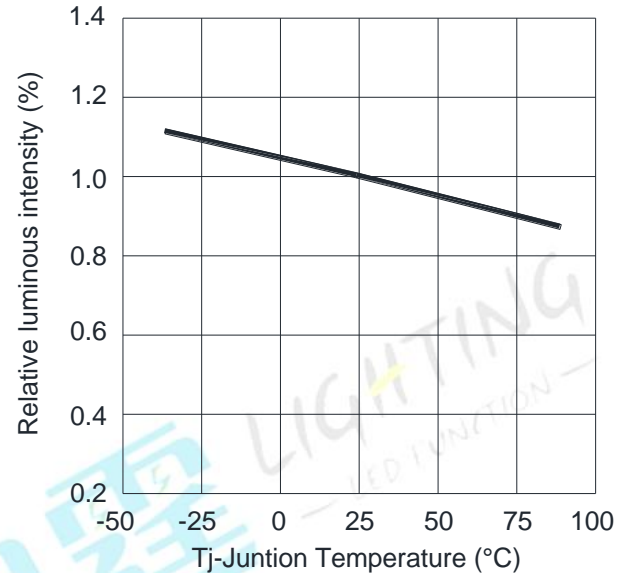
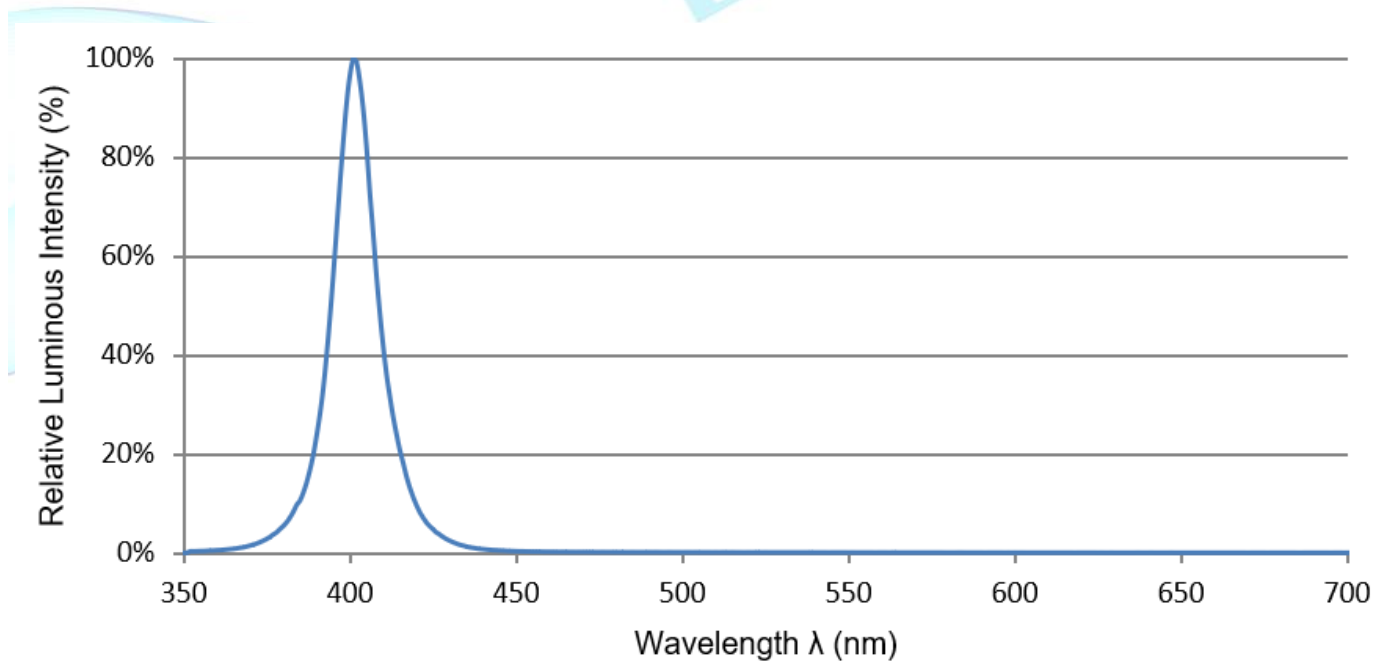


Fig.6-Relative Luminous Flux vs. Junction Temperature



### Spectrum Distribution



**Moisture Resistant Packing Materials**

**Label Explanation**



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P/N: ××××××××

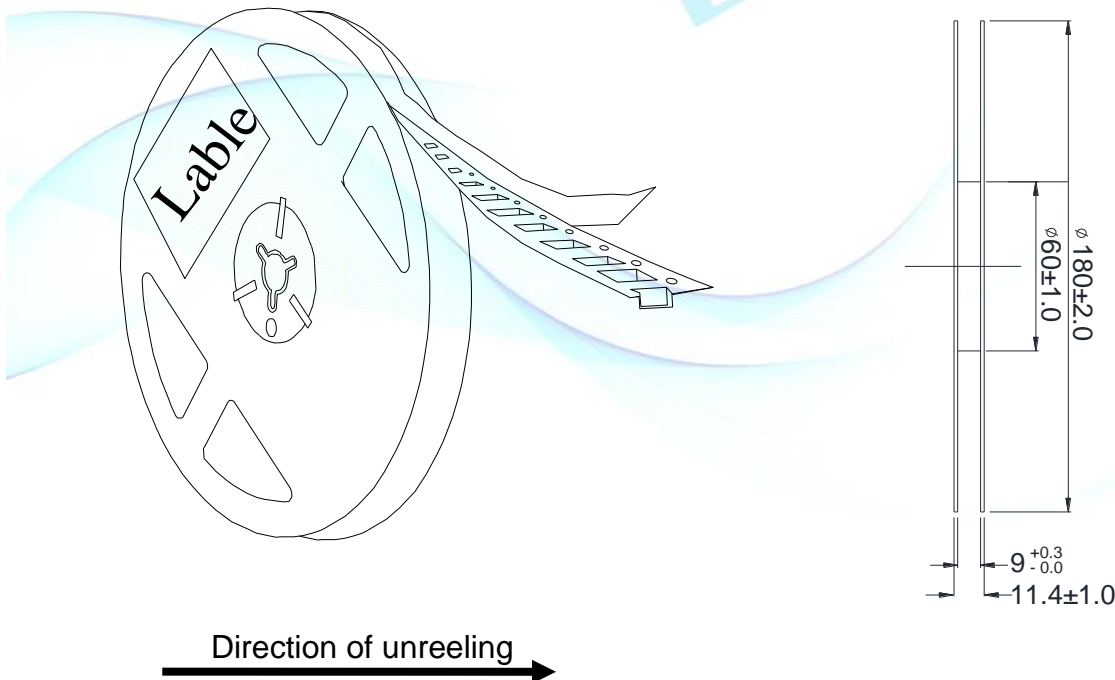
TYPE: LXXXXXXX-XXXX

	CODE	MIN	MAX	
IV:	××	××	××	mW
HUE:	××	××	××	
VF:	××	××	××	V
QYT:	××××			
LOT NO.:	××××××××			



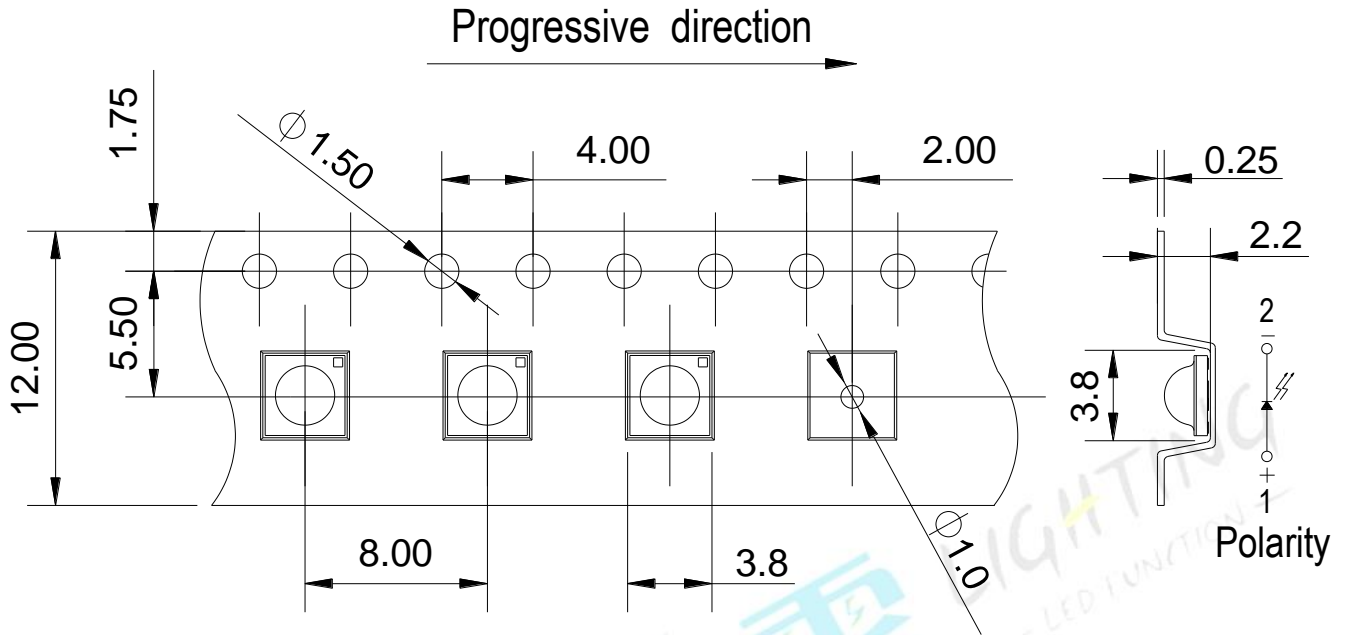

- \* QR code:  
Contains all of the following information
- \* P/N: Product Number
- \* TYPE :Part NO.
- \* IV: Radiant Power
- \* HUE: Dominant Wavelength
- \* VF: Forward Voltage Rank
- \* QTY: Packing Quantity
- \* LOT NO.: Lot Number

**Taping method: Loaded Quantity 2,000 pcs Per Reel**



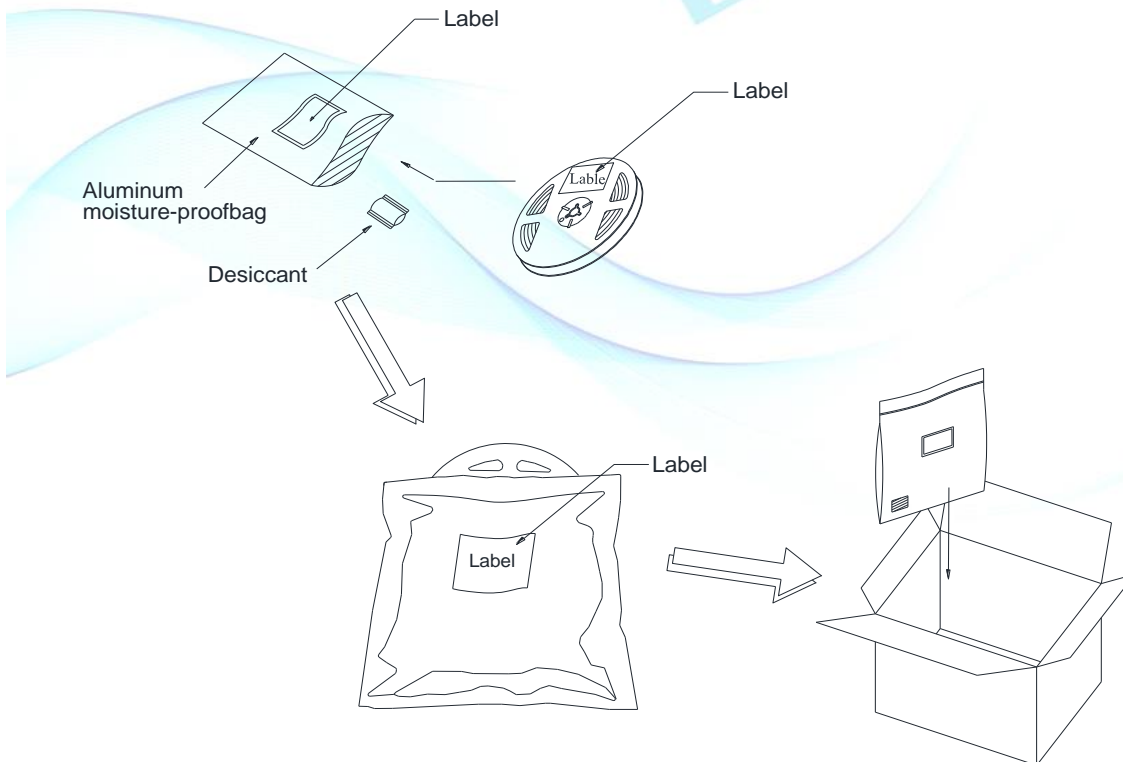
- Notes:
1. Tolerance unless mentioned is  $\pm 0.1$ mm, Unit = mm.
  2. Minimum packing amount is 1000 pcs per reel.

**Carrier Tape Dimensions:**



Note:  
Tolerance unless mentioned is  $\pm 0.1$ mm, Unit = mm.

**Moisture Resistant Packing Process**



Moisture/Reflow sensitivity classification  
IPC / JEDEC J-STD-020C: Level 2



**Reliability Test Items and Conditions**

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

Confidence level : 90%

LTPD : 10%

No.	Items	Test Condition	Test Hours/Cycles	Sample Size	Ac/Re
1	Reflow Soldering	Temp.: 260°C/10sec.	6 Min.	22 PCS.	0/1
2	Thermal Shock	H : +100°C/5min ∩ 10 sec L : -10°C/5min	300 Cycles	22 PCS.	0/1
3	Temperature Cycle	H : +100°C/15min ∩ 5 min L : -40°C/15min	300 Cycles	22 PCS.	0/1
4	High Temperature/Humidity Storage	Ta=85°C,85%RH	1000 Hrs.	22 PCS.	0/1
5	Low Temperature Storage	Ta=-40°C	1000 Hrs.	22 PCS.	0/1
6	High Temperature Storage	Ta=100°C	1000 Hrs.	22 PCS.	0/1
7	DC Operation Life	Ta=25°C, I <sub>F</sub> = 700mA	1000 Hrs.	22 PCS.	0/1



## Precautions for Use

### 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.

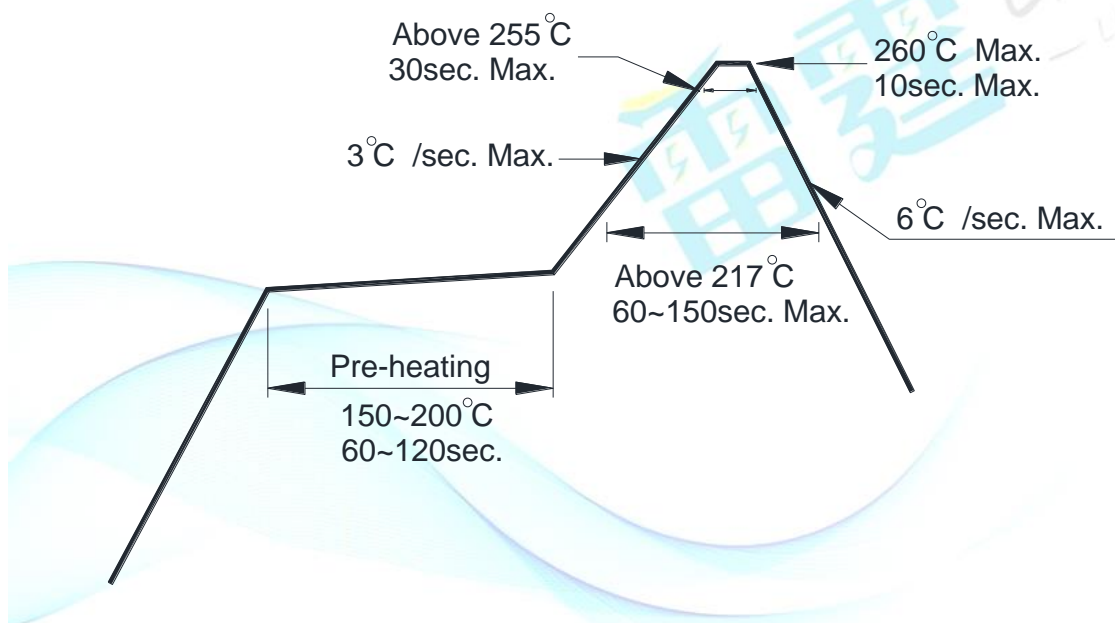
2.3 After opening the package: The LED's floor life is 1 year. under 30°C or less and 60%RH or less. If unused LEDs remain, it should be stored in moisture proof packages.

2.4 If the moisture absorbent material (silica gel) has faded 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 300°C for 3 seconds within once in less than the soldering iron capacity 20W. 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.