# SPECIFICATION

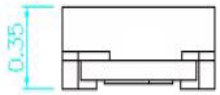
Product name：0201WHITE

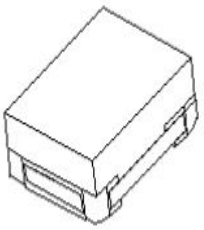
Description:

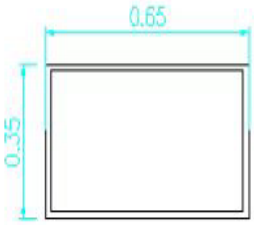
- 0.57×0.27×0.34  Chip SMD
- Colloid Color:  Yellow Diffused
- Emission Color:光 White light
- Viewing Angle :130°

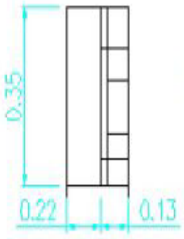
# 1. Dimensions

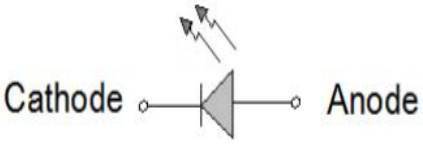
Units:mm

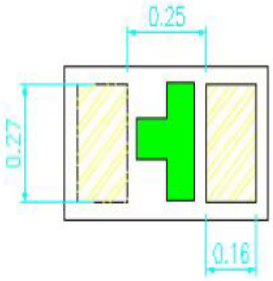


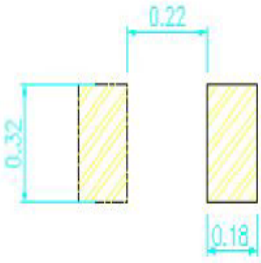






建议焊盘尺寸

All dimensions area in mm tolerance is ±0.05mm unless otherwise noted.tes:

## 2. Electrical/Optical characteristics

(1) Absolute Maximum Ratings (TA=25°C)

| Item | Symbol | Absolute Maximum Rating | Unit |
|---|---|---|---|
| | | White | |
| Forward Current | IF | 10 | mA |
| Pulse Forward Current | IFP | 30 | mA |
| Reverse Voltage | VR | 5 | V |
| Power Dissipation | PD | 30 | mW |
| Operating Temperature | Topr | -40°C To +85°C | ° C |
| Storage Temperature | Topr | -20°C To +60°C | ° C |
| Soldering Temperature | Tsld | Reflow Soldering回流焊接:245°C | for 10sec. |
| | | Hand Soldering手工焊接 : 350°C | for 3sec |

IFP Conditions : 1/10 Duty Cycle, 0.1 msec Pulse Width

(2) Electrical/Optical Characteristics (TA=25°C)

| Symbol | Item | Units | Device | Min | Typ. | Max. | Test Conditions |
|---|---|---|---|---|---|---|---|
| VF | Forward Voltage | V | White | 2.6 | - | 3.0 | IF=5mA |
| IR | Reverse Current | uA | - | - | - | 10 | VR=5V |
| Δ λ1/2 | Viewing Angle | ° | - | - | 130 | - | IF=5mA |
| Iv | LuminousIntensity | lm | White | 0.8 | - | 1.2 | IF=5mA |
| TC | colortemperature | K | White | 8000k | - | 10000k | IF=5mA |
| Ra | Color Rendering Index | - | White | 70 | - | - | IF=5mA |

## 3. Characteristic curve

Fig.1 正向电压与正向电流特性曲线

Forward Voltage vs. Forward Current

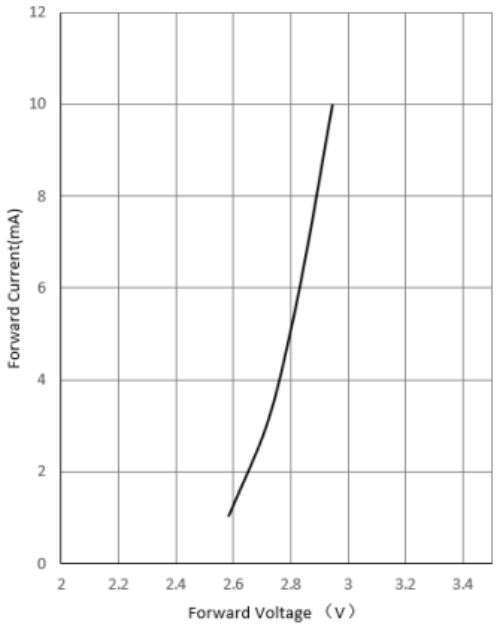



Fig.2 正向电流与相对光强特性曲线

Forward Current vs. Luminous Intensity

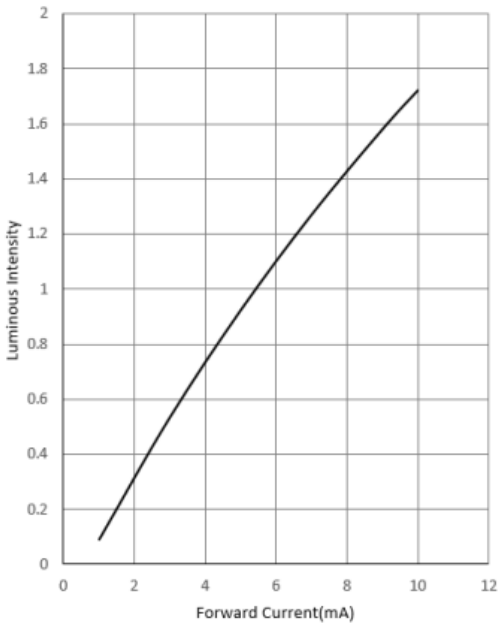



Fig.3 焊盘温度与正向电流特性曲线

Soldering Temperature vs. Forward Current

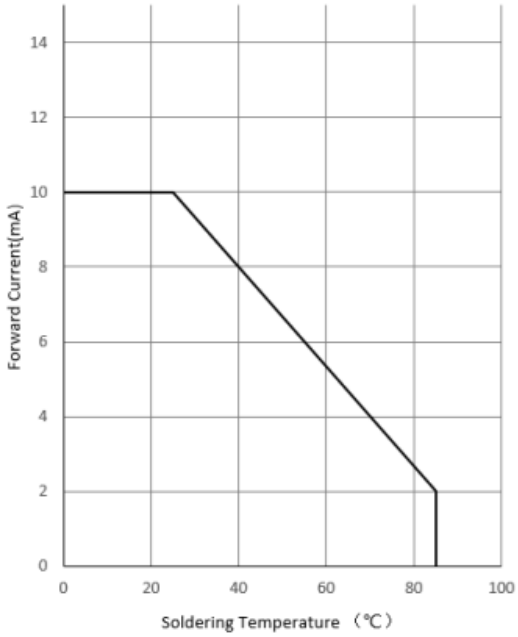



Fig.4 焊盘温度与相对光强特性曲线

Soldering Temperature vs. Luminous Intens

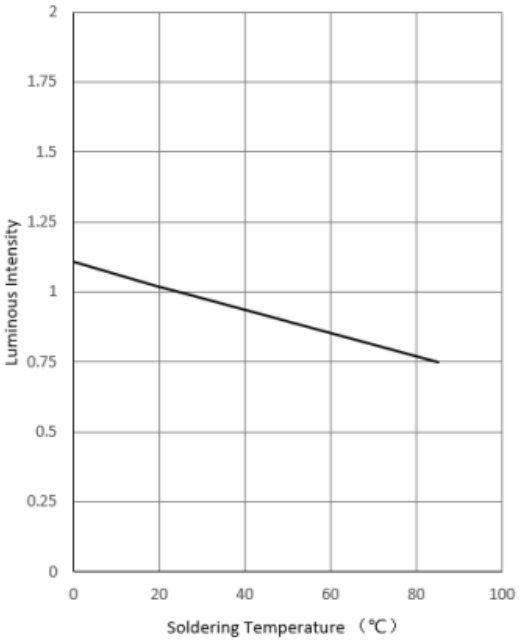


Fig.5 相对光谱分布曲线

Relative Intensity Vs. CIE Wavelength

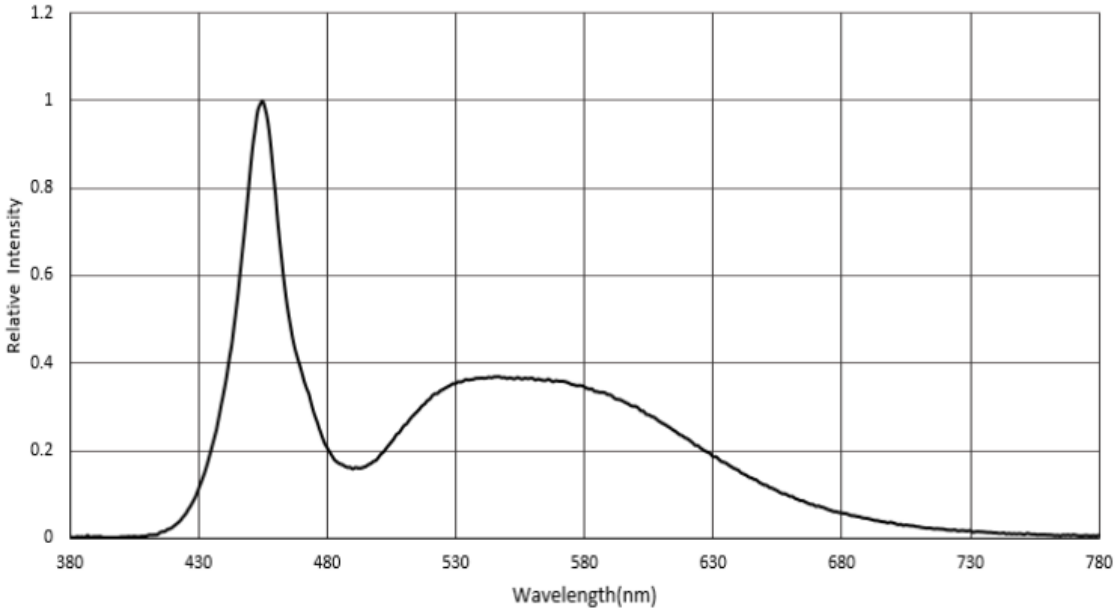
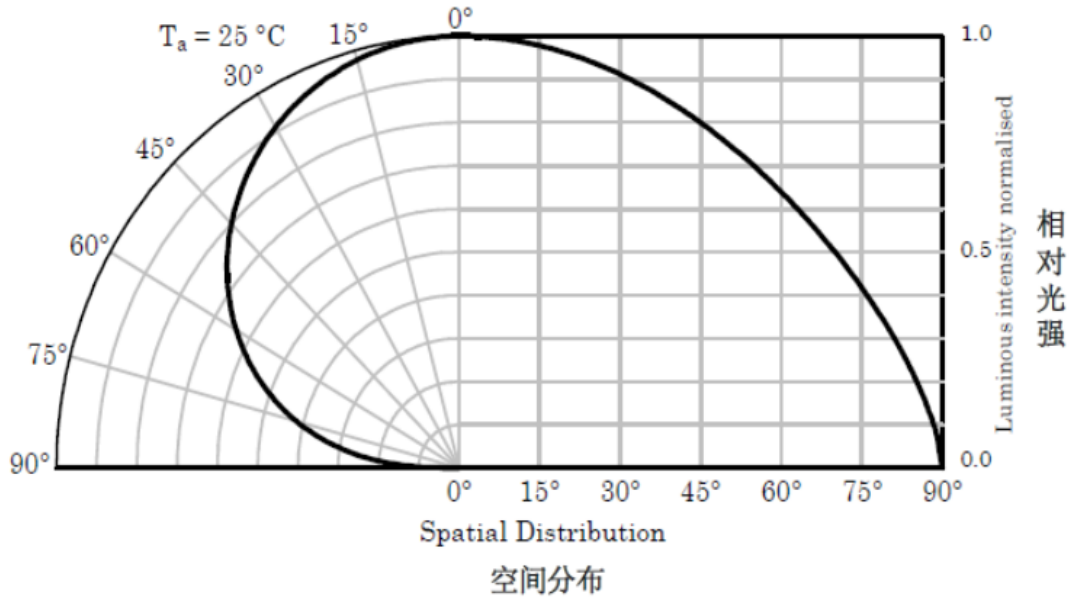


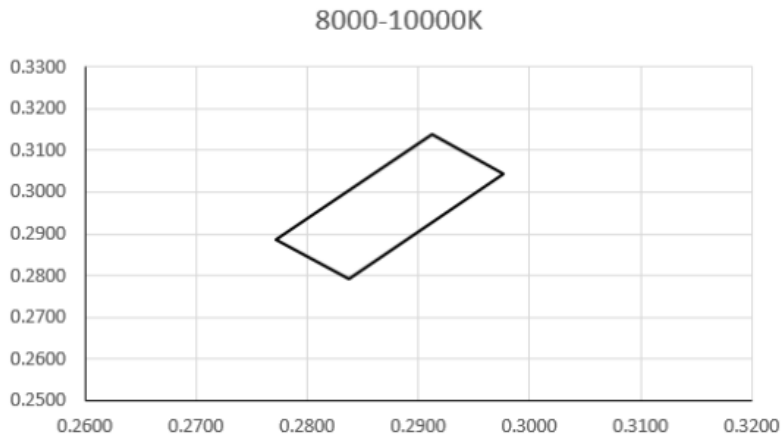

Fig.6 相对光强分布特性曲线

The intensity distribution curve



4.

Chromaticity coordinate specification(Tolerance range±0.005@If=5mA)




| Groups | 色区代码 | x1 | y1 | x2 | y2 | x3 | y3 | x4 | y4 |
|---|---|---|---|---|---|---|---|---|---|
| 8000-10000K | - | 0.2772 | 0.2886 | 0.2912 | 0.3138 | 0.2977 | 0.3043 | 0.2837 | 0.2791 |
| | | | | | | | | | |

## 分 BIN 表
## Sorting Bins

(1)正向电压组 IF=5mA
**Forward Voltage Groups IF=5mA**

| Groups | Forward Voltage (V) | |
|---|---|---|
| | $Vf_{MIN}$ | $Vf_{MAX}$ |
| VA | 2.6 | 2.7 |
| VB | 2.7 | 2.8 |
| VC | 2.8 | 2.9 |
| VD | 2.9 | 3.0 |

(2)亮度组 IF=5mA
**Brightness Groups IF=5mA**

| Groups | FLUX (lm) | |
|---|---|---|
| | $Iv_{MIN}$ | $Iv_{MAX}$ |
| F5 | 0.8 | 1.2 |
| | | |

# 5. RELIABILITY

(1) Test Items and Results

| Symbol | Item | Guideline | Test conditions | Duration | Sample QTY | A poor amount/ sampling |
|---|---|---|---|---|---|---|
| 1 | Temperature cycle | JEITA ED-4701 | -40℃～25℃～100℃～25℃<br>30 minutes 5 minutes 30 minutes5 minutes | cycle 100 round | 50 | 0/50 |
| 2 | Thermal shock | MIL-STD-202G | -40℃～100℃<br>15 minutes 15 minutes | cycle 200 round | 50 | 0/50 |
| 3 | High temperature storage | JEITA ED-4701 200 201 | Ta=100℃ | 100 hours | 50 | 0/50 |
| 4 | Low temperature storage | JEITA ED-4701 200 201 | Ta=-40℃ | 1000 hours | 50 | 0/50 |
| 5 | Normal temperature test | | Ta=25±5℃ | 1000 hours | 50 | 0/50 |
| 6 | High temperature and humidity test | | Ta=60℃ RH=85% | 1000 hours | 50 | 0/50 |
| 7 | Solderability ( reflow soldering)) | JEITA ED-4701 300 303 | Tsol=235℃±5℃,<br>5 seconds use flux | Solder once, 5 seconds | 10 | 0/10 |
| 8 | Solder resistance ( reflow soldering)) | JEITA ED-4701 300 301 | Tsol=250℃,10 seconds<br>Pretreatment: 35℃ 95% RH 96 Hour | welding two times , every time10 seconds | 10 | 0/10 |

The above test items such as differences or special customer specific requirements according to the actual situation in accordance with the requirements of customers to try the requirements with the customer, the customer is not required by our test standard test. Different products using different current test

Recommendation: use blue light or white light for a long time, the current use conditions are designed below 5MA, to extend the decay life

# 6. Cautions

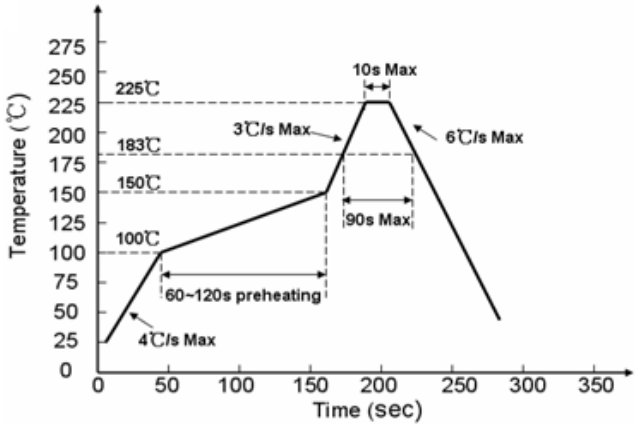
(1) Soldering Conditions

Number of reflow process shall be less than 2 times and cooling process to normal temperature is required between first and Second soldering process.

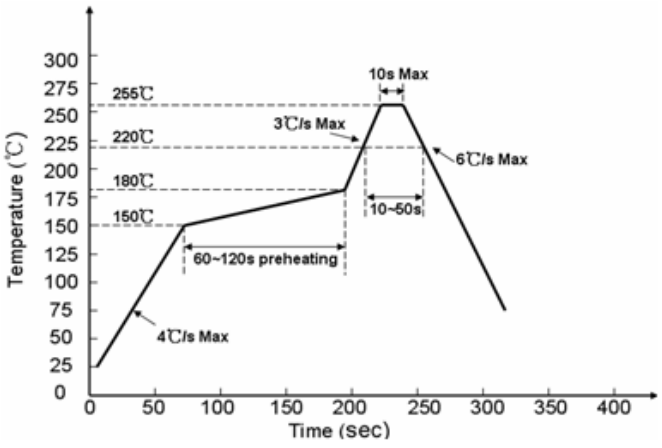
(Recommended soldering conditions)

| Reflow soldering | | | Hand welding | |
|---|---|---|---|---|
| | Lead Solder | Lead-free Solder | Temperature | 350° C Max. |
| Pre-heat | 140 ~ 160° C | 180 ~ 200° C | Soldering time | 3 sec. Max. (onetime only) |
| Pre-heat time | 120 sec. Max. | 120 sec. Max. | | |
| Peak temperature | 230° C Max. | 260° C Max. | | |
| Soldering time | 10 sec. Max. | 10 sec. Max. | | |
| Condition | Refer to the picture below | Refer to the picture below | | |

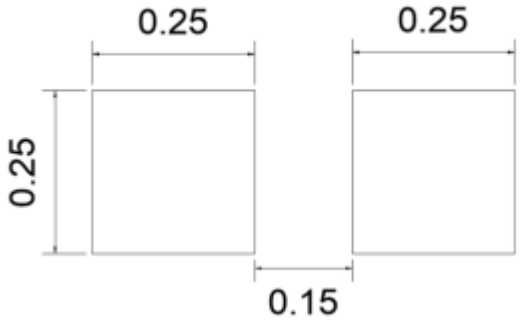
(Lead Solder)




(Lead-Free Solder)




(Recommended Soldering Pattern) ( Units:mm)



(2) Static Electricity

It is recommended that a wrist band or an anti-electrostatic glove be used when handling the LEDs.

All devices, equipment and machinery must be properly grounded.
Damaged LEDs will show some unusual characteristics such as the forward voltage becomes lower, or the LEDs do not light at the low current. Criteria : (VF > 2.0V at IF=0.5mA)

(3Moisture Proof Package
It is recommended that moisture proof package be used .

(4)Storage

Before opening the package ,The LEDs should be kept at 30° C or less and 70%RH or less.
The LEDs should be used within a year.

(5)
After opening the package, The LEDs should be soldered within 24 hours (1days) after opening the package. If unused LEDs remain, they should be stored in moisture proof packages, such as sealed containers with packages of moisture absorbent material (silica gel).

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 : more than 12 hours at 60 ± 5° C.

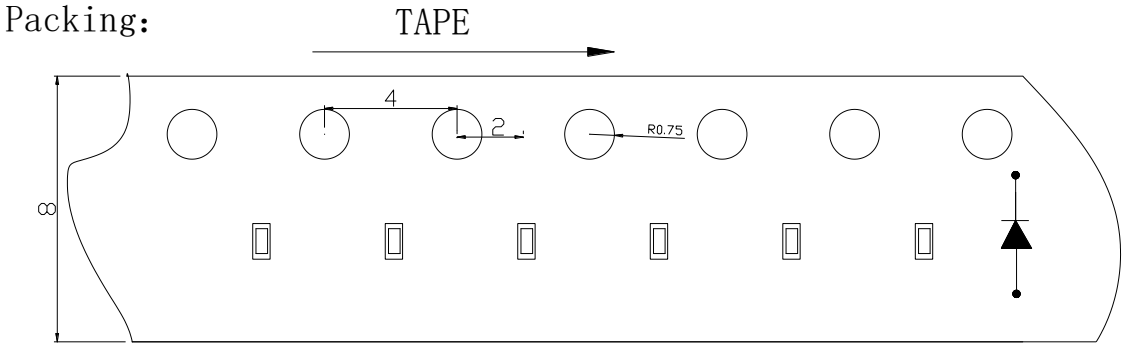
## 7. PACKAGING

(1) The LEDs are packed in cardboard boxes after taping.

(2) Taping Specifications (Units:mm)

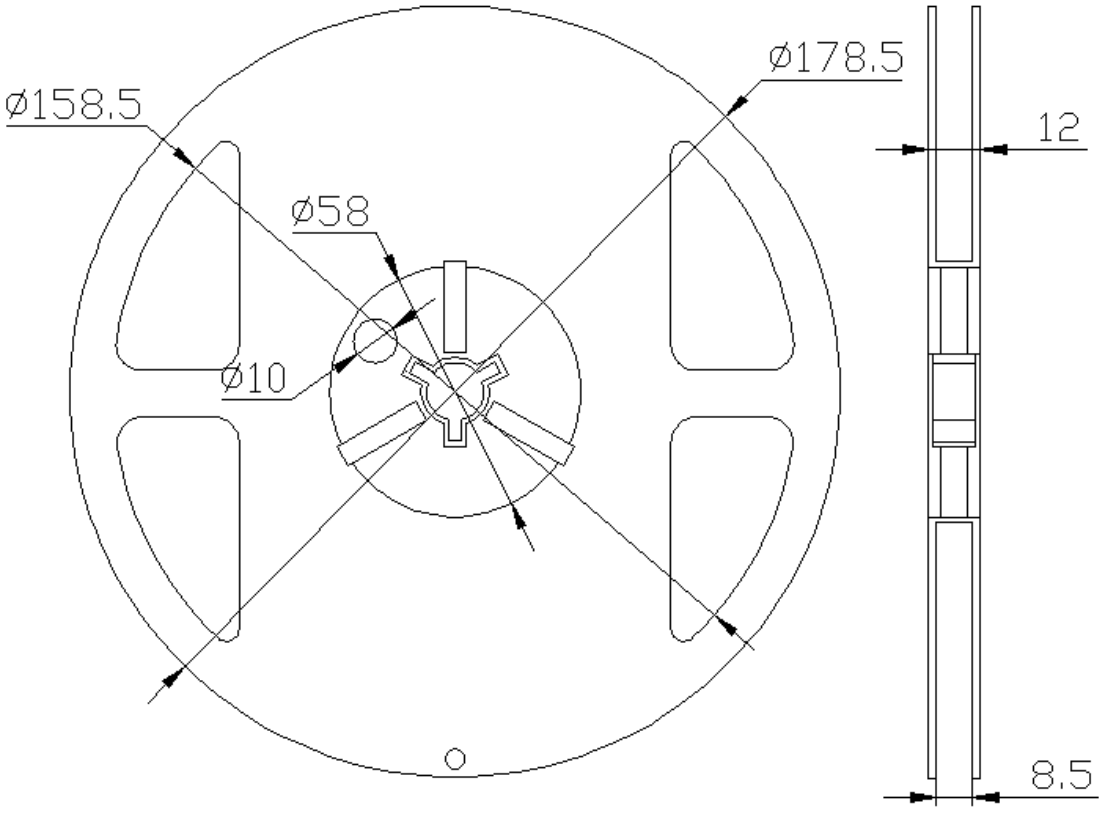
(3) Manner of packing

Packing:




Package:5000PCS/reel

(4)Reel Dimensions




Note: The quantity of each reel is 3000pcs/roll PACKAGE: 3000Pcs/Reel

(5)

The label on the minimum packing unit shows ; Part Number, Lot Number, Ranking, Quantity.

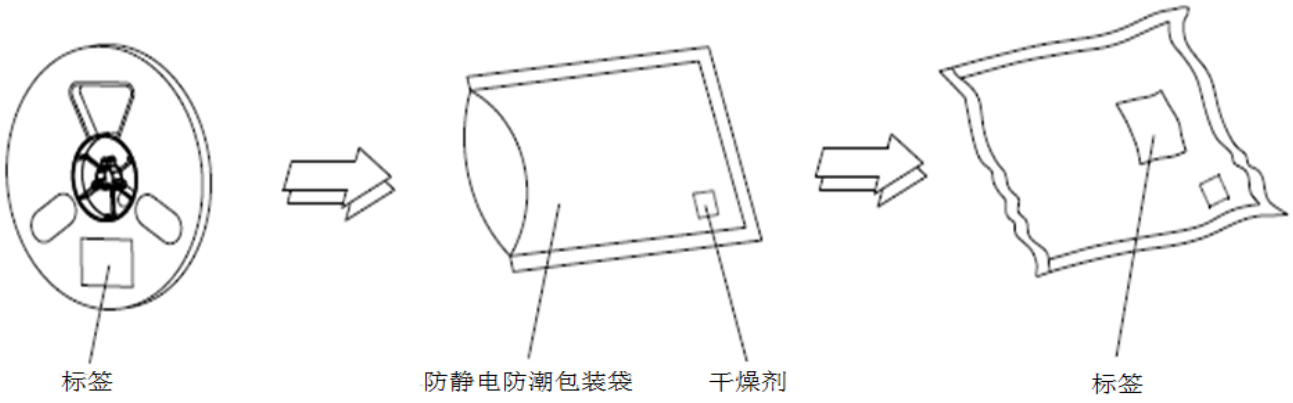
(6)

Keep away from water, moisture in order to protect the LEDs.

(7)

The LEDS may be damaged if the boxes are dropped or receive a strong impact against them. so precautions must be taken to prevent any damage.

## 8.
## Moisture Resistant Packaging




Note:The tolerances unless mentioned is ±0.1mm,Unit:mm

Surface mount LED is packed in reels, LED is packed in plain or antistatic bags and then packed in cartons. Cartons are used to protect the LED from mechanical shocks during shipping. Cartons are not waterproof, so please be waterproof