

# 承 認 書

## SPECIFICATION FOR APPROVAL

|                     |                          |
|---------------------|--------------------------|
| ● 客戶名称              |                          |
| ● Customer          |                          |
| ● 客戶品號              |                          |
| ● Customer Part No. |                          |
| ● 产品品號              | HC-1204GW00-J4H3JYD0N-B0 |
| ● Brightek Part No. |                          |
| ● 产品規格描述            | 1204侧发翠绿白双色              |
| ● Specification     |                          |
| ● 製錶人               | 王清                       |
| ● Prepared By       |                          |
| ● 審 核               | 李东平                      |
| ● Checkedy          |                          |
| ● 客 戶 回 簽           |                          |
| ● Customer          |                          |
| ● 送样日期:             |                          |
| ● Deliver date:     |                          |

說明：一、謹致執事者：茲提供敝公司產品之有關詳細規格及圖面資料，敬請給予辦理測試認定手續。

同時敬請 送返一份附有貴公司簽認之測試認定後之樣品認定書。

We are sending you our specification and drawings for your approval. Please return to us one copy "For Approval" with your approved signatures.

二、客戶意見欄 Customer' S Proposal

☐ Approve 承認 (請於認可欄中簽名)

☐ Disagree 不同意

Reason 原因:

光宇集团 中高端光电元件定制企业，20多年封装经验，品质稳定，值得信赖，体现光的价

光宇集团国际（香港）有限公司

GTU Group International (HK) Co., Limited

广东光宇半导体科技有限公司

工厂地址：东莞市寮步镇松湖智谷 A2 栋 3 楼

东莞市弘呈光电有限公司

DongGuan Hong cheng Optoelectronics Co., Ltd.

工厂地址：广东省东莞市樟木头镇莞樟路樟木头段 15 号 15 栋 2108 号

ADD: Room 2108, No. 1 building, Wanhui Garden, East Guanzhang Road, Zhangmutou, Dongguan, Guangdong, China

TEL: 0769-87797616 87182291 Fax: 0769-82337396 [www.hc-led168.com](http://www.hc-led168.com)

业务联系人：李顺阳 13925714318 (微信同号) 销售总监

企业邮箱: [sales@led-hc.com](mailto:sales@led-hc.com)



ISO 14001  
环境管理  
体系认证



ISO 9001  
环境管理  
体系认证



| 版本/版次 | 修改日期 | 修改内容 |
|-------|------|------|
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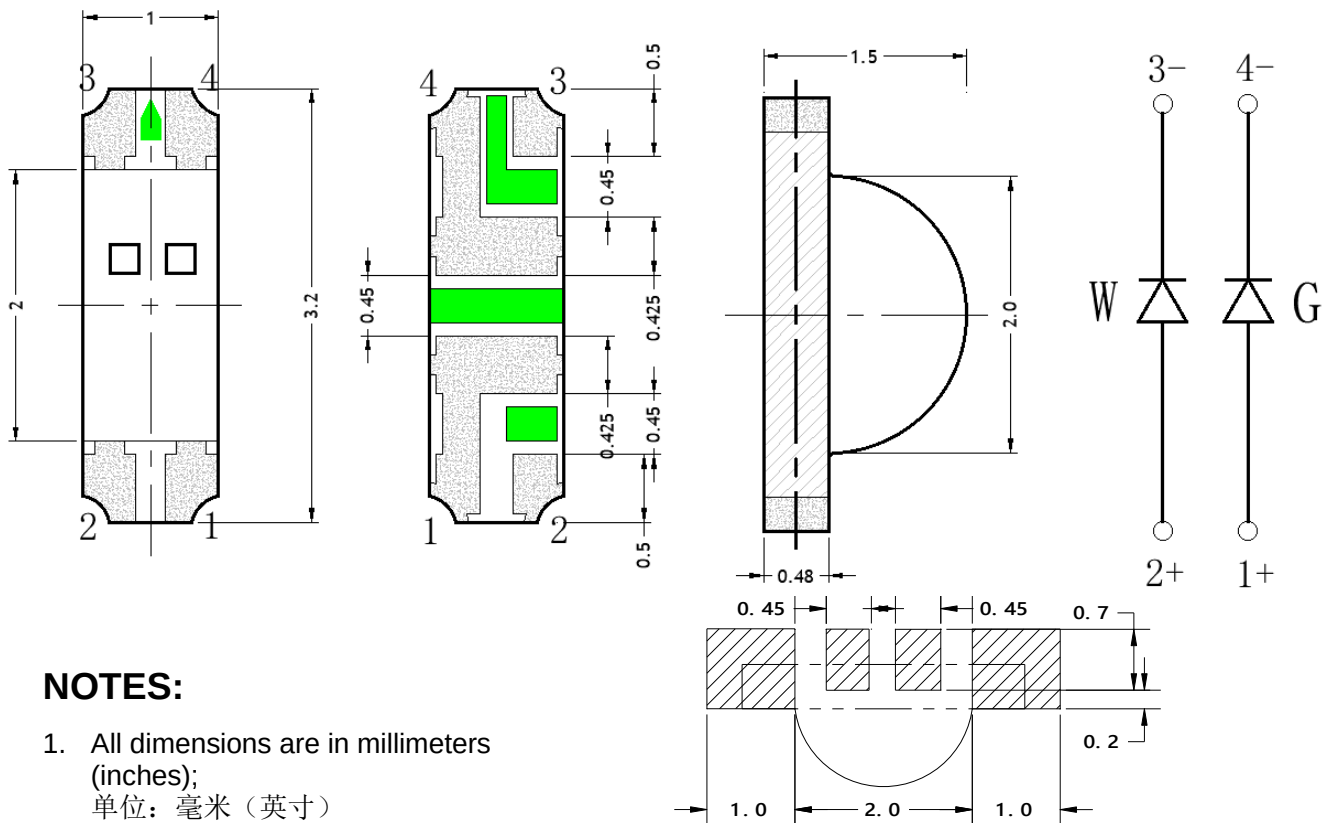
### ※ Features (产品特征)

1. Outline Package: 3.2\*1.0\*1.5mm  
外型尺寸: 3.2\*1.0\*1.5mm
2. Emitted Color: Green and White  
发光颜色: 翠绿白双色
3. Lens Appearance: Yellow Disffuser  
胶体颜色: 黄色不透明
3. Comply with RoHS  
完全符合 ROHS 指令
4. PACKAGE:3000PCS / REEL.  
编带包装: 3000PCS/卷

### ※ Applications (产品应用)

1. Optical indicators 光学指示
2. LCD Backlighting 背光显示
3. mobile telephone keypad lights 手机按键灯

### ※ Package Outline Dimensions 外型尺寸图



### NOTES:

1. All dimensions are in millimeters (inches);  
单位: 毫米 (英寸)
2. Tolerances are  $\pm 0.2\text{mm}$  (0.008inch) unless otherwise noted.  
未标公差处公差为 0.2mm(0.008 寸)

**Absolute maximum ratings at Ta=25°C 最大绝对额定值**

| Parameter<br>参数                    | Symbol<br>符号 | Value<br>值               |    | Unit<br>单位 |
|------------------------------------|--------------|--------------------------|----|------------|
| Power dissipation 功率耗损             | Pd           | Green                    | 87 | mW         |
|                                    |              | White                    | 60 |            |
| Forward current 正向电流               | If           | Green                    | 30 | mA         |
|                                    |              | White                    | 20 |            |
| Reverse voltage 反向电压               | Vr           | 5                        |    | V          |
| Operating temperature range 工作温度范围 | Top          | -40 ~+85                 |    | °C         |
| Storage temperature range 贮存温度范围   | Tstg         | -40~+100                 |    | °C         |
| Soldering Temperature 焊接温度         | Tsol         | Max.260°C for 3 sec Max. |    |            |
| Peak pulsing current 最大脉冲电流        | Ifp          | 50                       |    | mA         |
| Electrostatic Discharge 抗静电能力      | ESD          | 2000(HBM)                |    | V          |

NOTE: IFP Conditions: Pulse Width ≤10msec. and Duty cycle ≤1/10.

IFP 条件: 脉冲持续时间 ≤10msec, 占空因素 ≤1/10

**※ Electrical-optical characteristics at Ta=25°C 电性光电特性**

| Parameter<br>参数                 | Test Condition<br>测试条件 | Symbol<br>符号 | Value 值 |               |      | Unit<br>单位 |
|---------------------------------|------------------------|--------------|---------|---------------|------|------------|
|                                 |                        |              | Min.    | Typ.          | Max. |            |
| Forward voltage<br>正向电压         | IF =5mA                | Green        | 2.5     | ---           | 2.9  | V          |
|                                 |                        | White        | 2.6     | ---           | 3.0  |            |
| Reverse current<br>反向电流         | VR =5V                 |              | ---     | ---           | 1    | μA         |
| Dominant Wavelength<br>(主波长)    | If=5mA                 | Green        | 525     | ---           | 534  | nm         |
| Chromatic Coordinates<br>色座标    |                        | White/XY     | ---     | 0.28,<br>0.29 | ---  |            |
| colour temperature              |                        | White/TC     | ---     | 9000          | ---  | K          |
| Luminous intensity<br>发光强度      | IF =5mA                | Green        | 110     | ---           | 200  | mcd        |
|                                 |                        | White        | 120     | ---           | 220  |            |
| Viewing angle at 50% Iv<br>半功率角 | IF =5mA                |              | ---     | 120           | ---  | DDB        |

NOTE: 1. Tolerance of luminous intensity is ±10%

发光强度公差为±10%

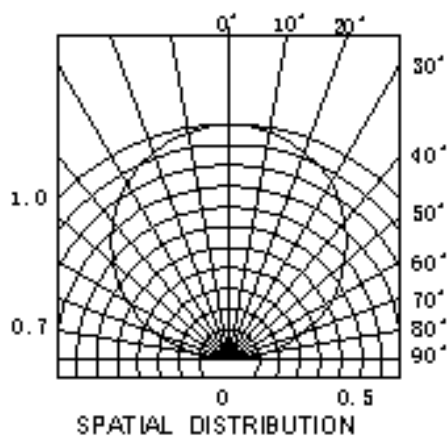
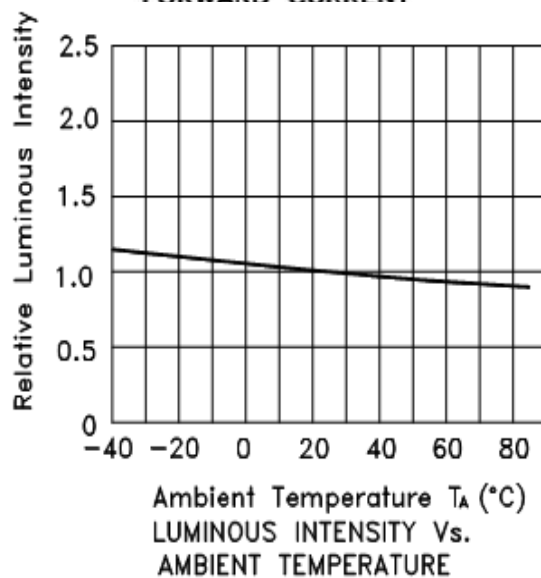
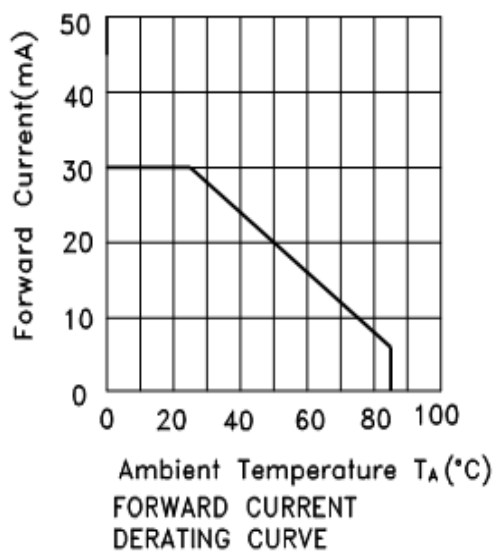
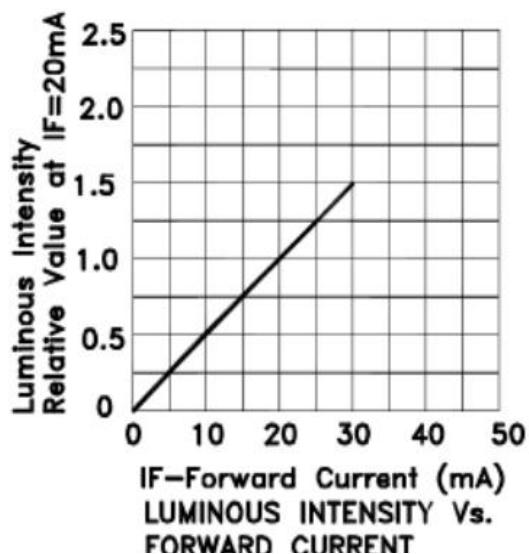
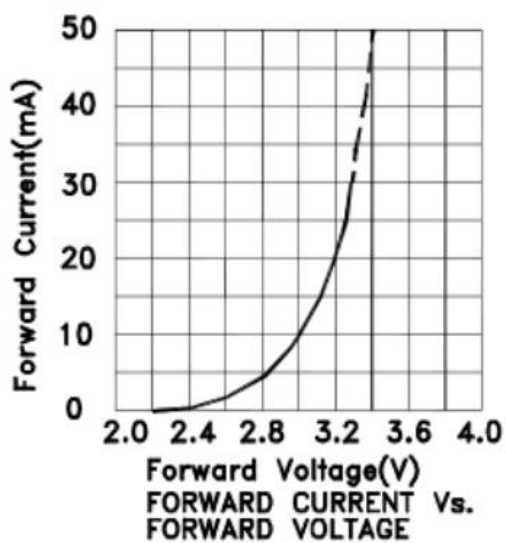
2. Tolerance of forward voltage is ±0.05V

正向电压公差±0.05V

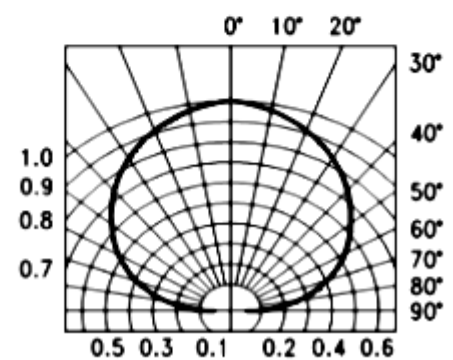
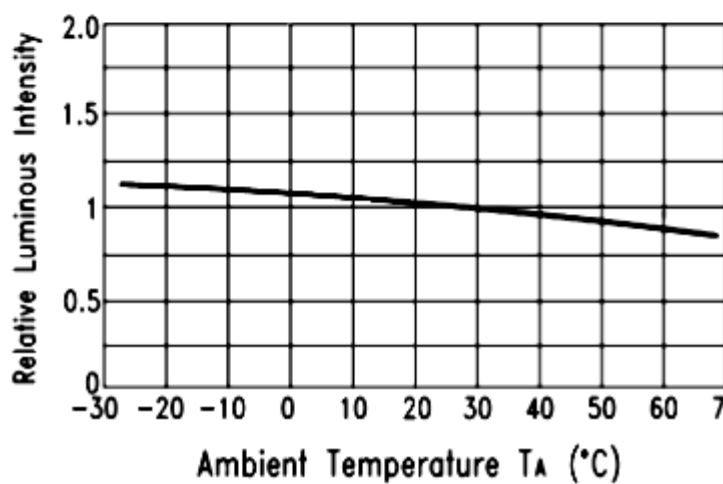
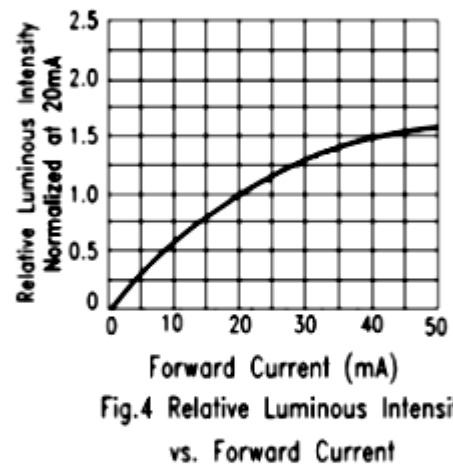
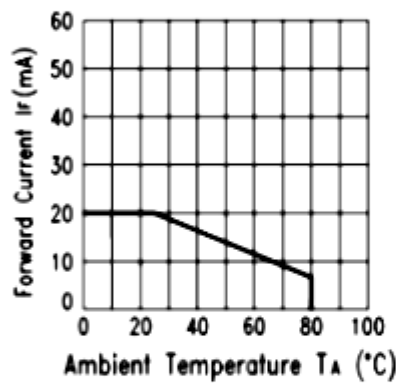
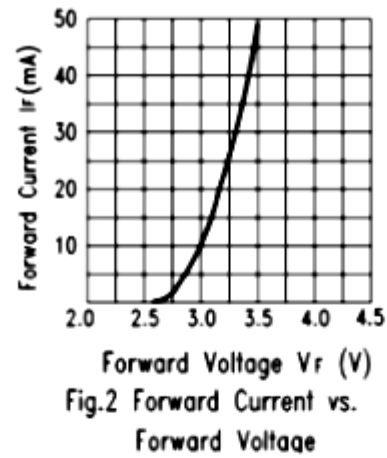
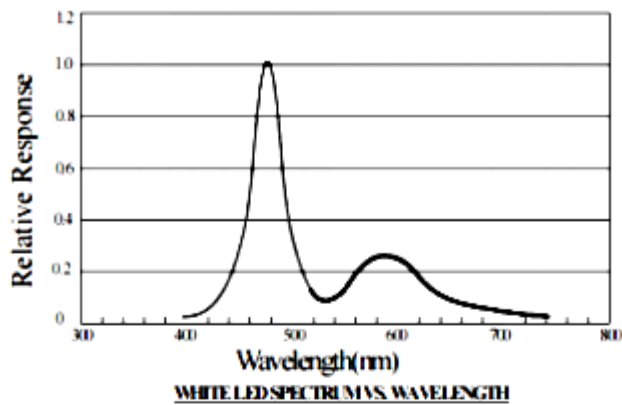
3. Tolerance of measurement of dominant wavelength is ±1nm.

主波长公差±1nm.

※ Typical optical characteristics curves 典型光电特性曲线( GREEN)



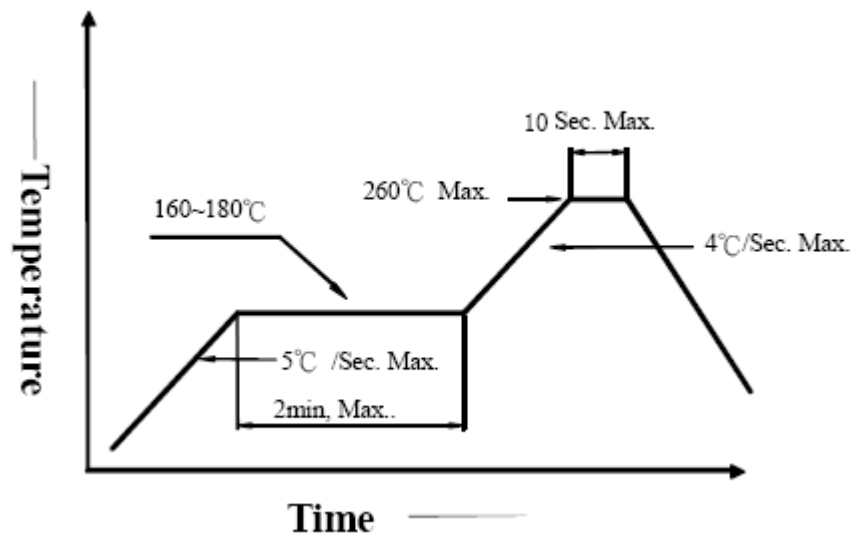
※ Typical optical characteristics curves 典型光电特性曲线(WHITE)



## ※ Precautions for use 使用规范

### Reflow Profile 回流焊规范

Pb-free Solder temperature Profile 无铅产品回流焊温度条件曲线规范



Note: a)Reflow soldering should not be done more than two times.

材料焊接次数不超过 2 次。

b)Do not put stress on the LEDs when soldering.

焊接时请不要重压 LED 灯。

c)Do not warp the circuit board before it have been returned to normal ambient conditions after soldering.

焊接后温度未回降到常温时请勿扭曲线路板。

### Hand Soldering Profile 手工焊接规范

The temperature of the iron should be lower than 300°C and soldering within 3sec per solder-pad is to be observed.

手工焊接时，烙铁温度不高于 300°C，每个焊脚焊接时间不超过 3 秒

### Storage Profile 储存规范

1. Do not open the moisture proof bag before ready to use the LEDs

请在未准备使用 LED 之前不要打开防静电袋子。

2. The LEDs should be kept at 30°C or less and 60%RH or less before opening the package.

The max. storage period before opening the package is 1 year.

LED 在未开封之前应保存在 30°C 以下，湿度在 60% 以下的环境中，最长保存期为 1 年。

3. After opening the package, the LEDs should be kept at 30°C/40%RH or less, and it should be used within 7 days

打开包装袋后，LED 需保存在 30°C/40% 湿度以下的条件，且必须在 7 天内使用完。

4. If the LEDs be kept over the condition of 3, baking is required before mounting. Baking condition as below: 60±5°C for 24 hours

如果 LED 超出了第 3 点要求，则 LED 必须经过烘烤才能使用，烘烤条件为：60±5°C，24 个小时

### ESD 静电防护

LED（特别是 InGaN 结构的蓝色、翠绿色、紫色、白色、粉红色 LED）是静电敏感元件，静电或者电流过载会破坏

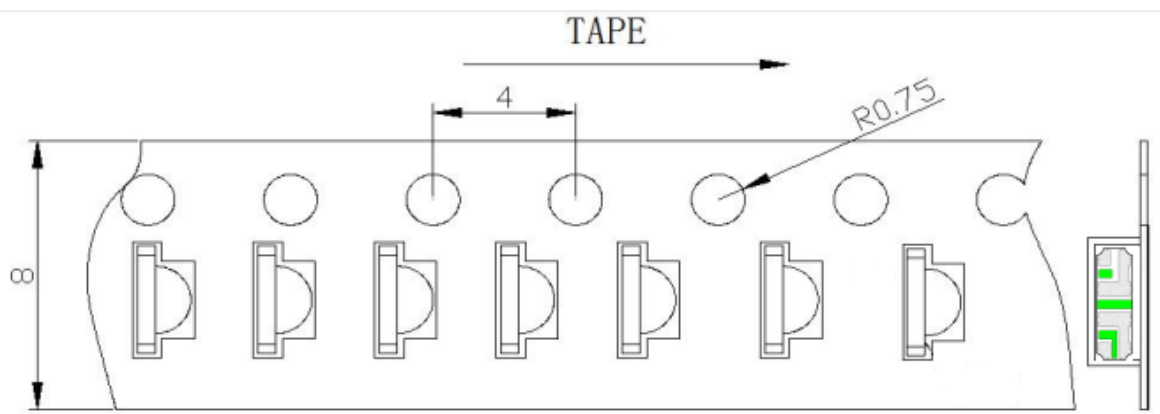
LED 结构。LED 受到静电伤害或电流过载可能会导致性能异常,比如漏电流过大,V<sub>F</sub> 变低,或者无法点亮等等。  
所以

请注意以下事项:

1. 接触 LED 时应佩戴防静电腕带或者防静电手套。
2. 所有的机器设备、工制具、工作桌、料架等等,应该做适当的接地保护。
3. 储存或搬运 LED 应使用防静电料袋、防静电盒以及防静电周转箱,严禁使用普通塑料制品。
4. 建议在作业过程中,使用离子风扇来压制静电的产生。
5. 距离 LED 元件 1 英尺距离的环境范围内静电场电压小于 100V。

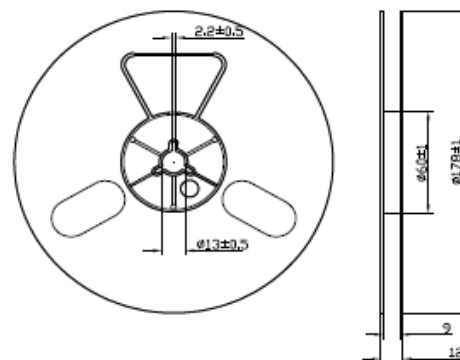
## 包装 PACKAGING

LEDs 在装带之后纸箱包装. The LEDs are packed in cardboard boxes after taping.

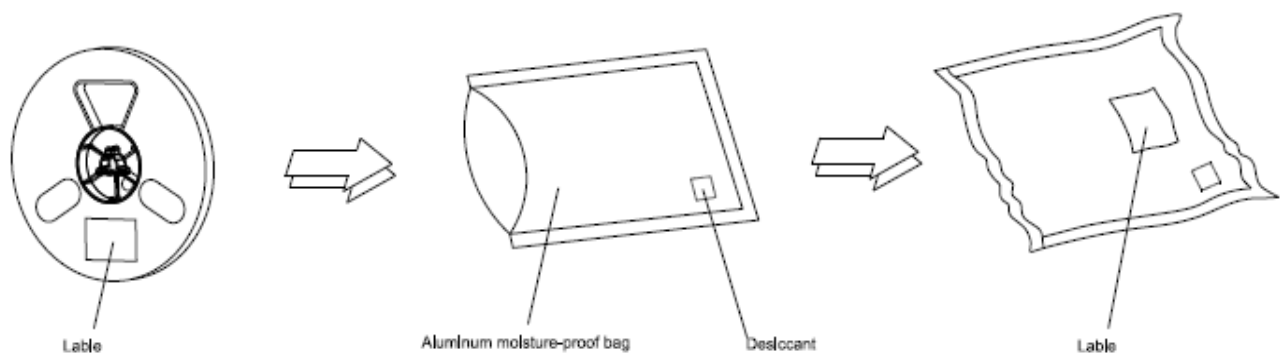


## Reel Dimensions

卷轴尺寸



## Moisture Resistant Packaging 防潮带包装



Note: The tolerances unless mentioned is  $\pm 0.1\text{mm}$ , Unit: mm 注: 标注公差为  $\pm 0.1\text{mm}$ , 单位: mm