

承認書

SPECIFICATION FOR APPROVAL

● 客戶名称	
● Customer	
● 客戶品號	
● Customer Part No.	
● 产品品號	HC-1010RGB -共阳
● Brightek Part No.	
● 产品規格描述	1010RGB 共阳极
● 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，体现光的价值。

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

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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

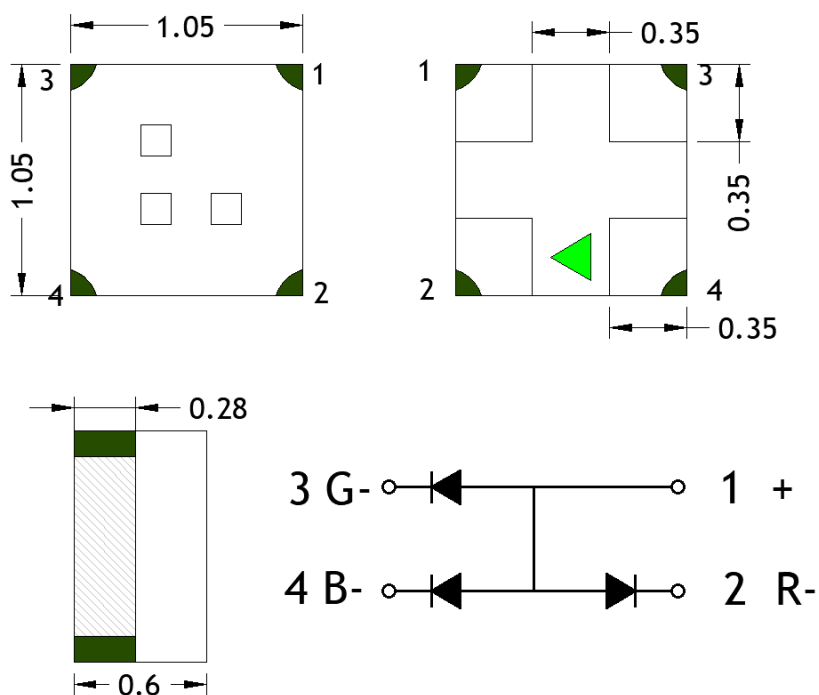
※ Features (产品特征)

1. Outline Package: 1.05*1.05*0.6mm
外型尺寸: 1.05*1.05*0.6mm
2. Emitted Color: Red and Green and Blue
发光颜色: 红绿蓝三色
3. Lens Appearance: Water Clear
胶体颜色: 无色透明
3. Comply with RoHS
完全符合 ROHS 指令
4. PACKAGE:4000PCS / REEL.
编带包装: 4000PCS/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 参数	Symbol 符号	Value 值		Unit 单位
Power dissipation 功率耗损	Pd	Red	69	mW
		Green	102	
		Blue	102	
Forward current 正向电流	If	30		mA
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 参数	Test Condition 测试条件	Symbol 符号	Value 值			Unit 单位
			Min.	Typ.	Max.	
Forward voltage 正向电压	IF =20mA	Red	1.7	---	2.3	V
		Green	2.7	---	3.4	
		Blue	2.7	---	3.4	
Reverse current 反向电流	VR =5V		---	---	10	μ A
Dominate Wavelength (主波长)	IF =20mA	Red	615	---	630	nm
		Green	515	---	530	
		Blue	464	---	473	
Luminous intensity 发光强度	IF =20mA	Red	80	---	200	mcd
		Green	500	---	1000	
		Blue	120	---	250	
Viewing angle at 50% Iv 半功率角	IF =20mA		---	120	---	DDB

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

发光强度公差为±10%

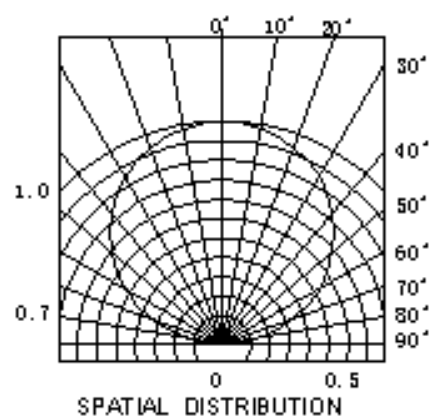
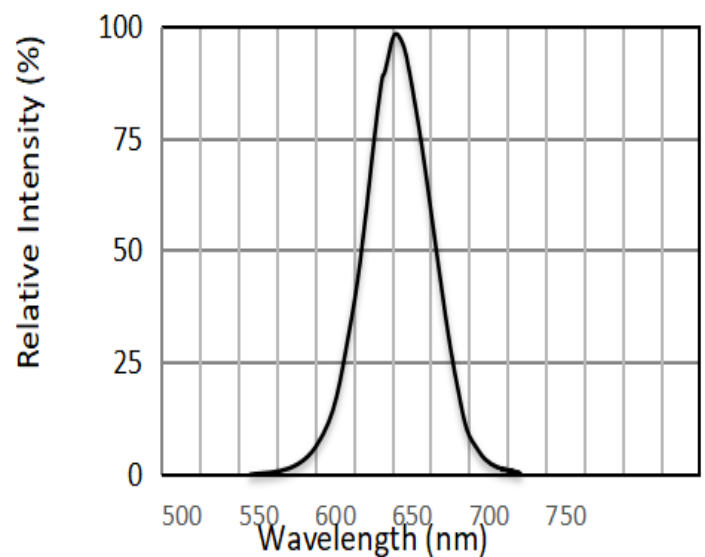
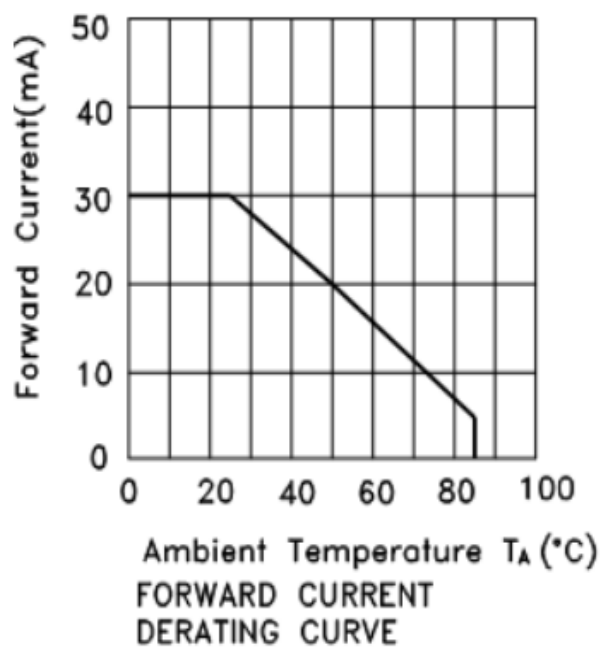
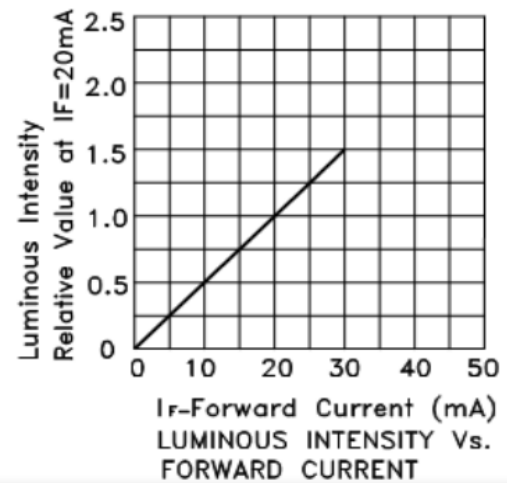
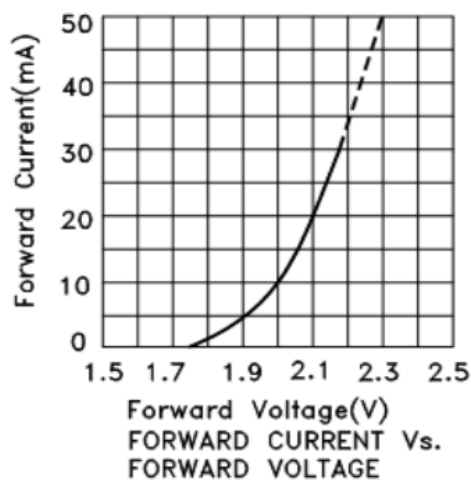
2. Tolerance of forward voltage is ±0.05V

正向电压公差±0.05v

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

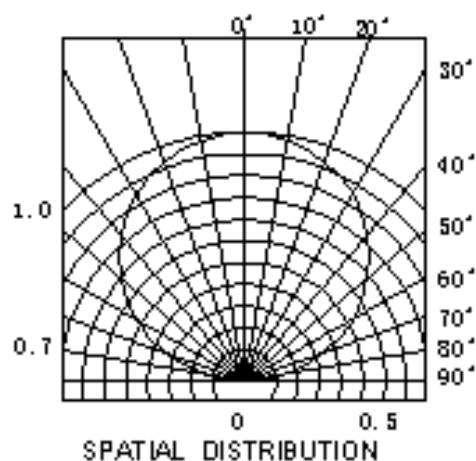
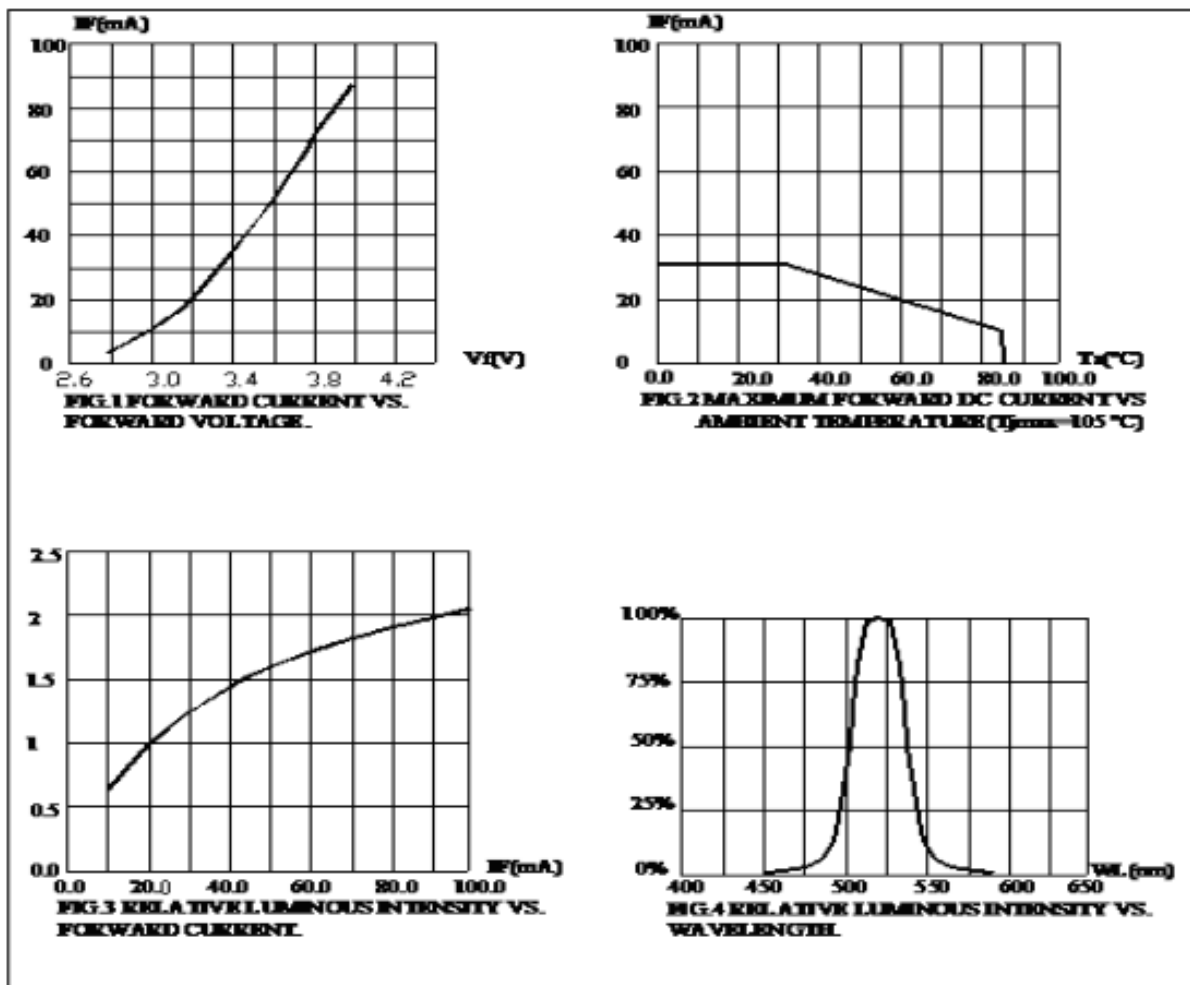
主波长公差±1nm.

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

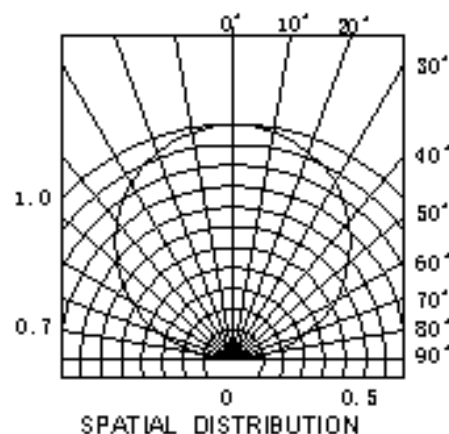
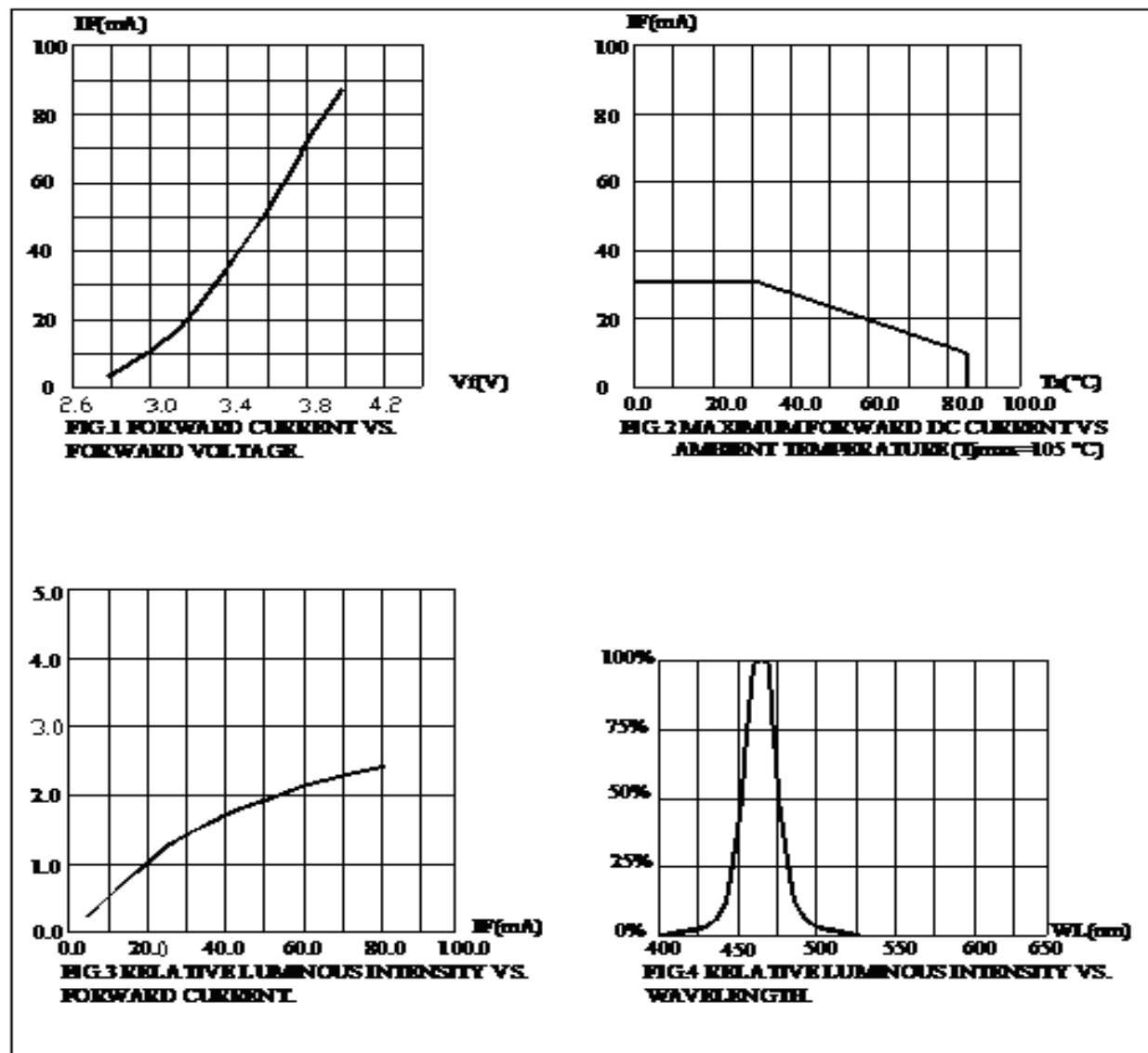


※ Typical optical characteristics curves 典型光电特性曲线(GREEN)

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



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



※ Precautions for use 使用规范

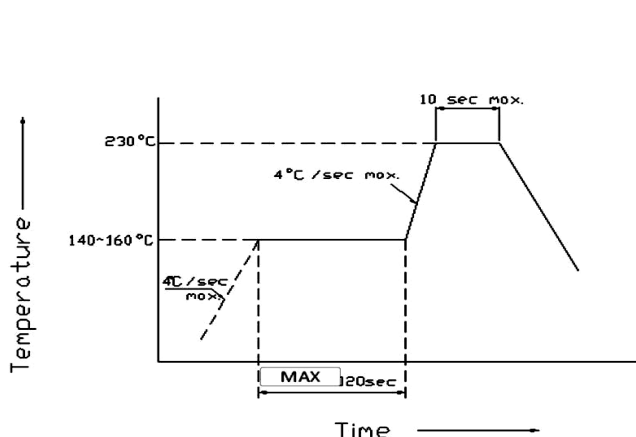
Reflow Profile 回流焊规范

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

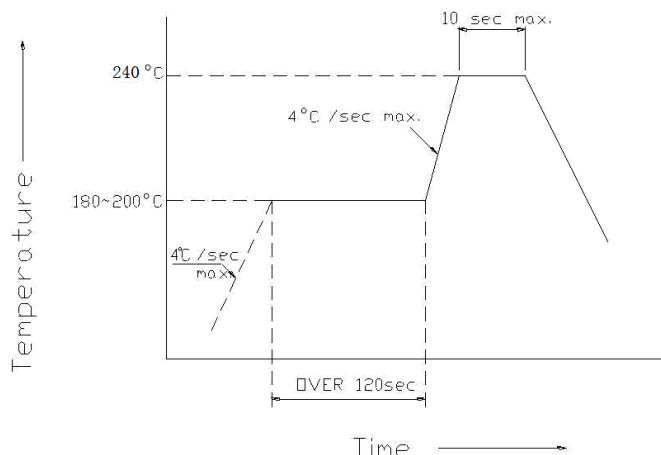
推荐焊接条件(Recommended soldering conditions)

回流焊接 Reflow Soldering			手工焊接	
预热温度 Pre-heat	有铅 Lead Solder	无铅 Lead-free Solder	温度 Temperature	350° C Max.
预热时间 Pre-heat time	140 ~ 160° C 120 sec. Max.	180 ~ 200° C 120 sec. Max.	焊接时间 Soldering time	3 sec. Max. (one time only)
峰值温度 Peak temperature	230° C Max. 10 sec. Max.	240° C Max. 10 sec. Max.		
焊接时间 Soldering time	参考下图	参考下图		
条件Condition				

有铅回焊 (Lead Solder)

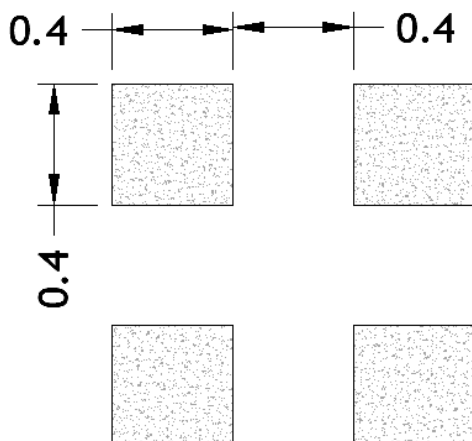


无铅回焊 (Lead-Free Solder)



Recommended Soldering Pattern

(Units : mm)



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℃ and soldering within 3sec per solder-pad is to be observed.

手工焊接时，烙铁温度不高于 300℃，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℃ 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℃ 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℃/40%RH or less, and it should be used within 7 days

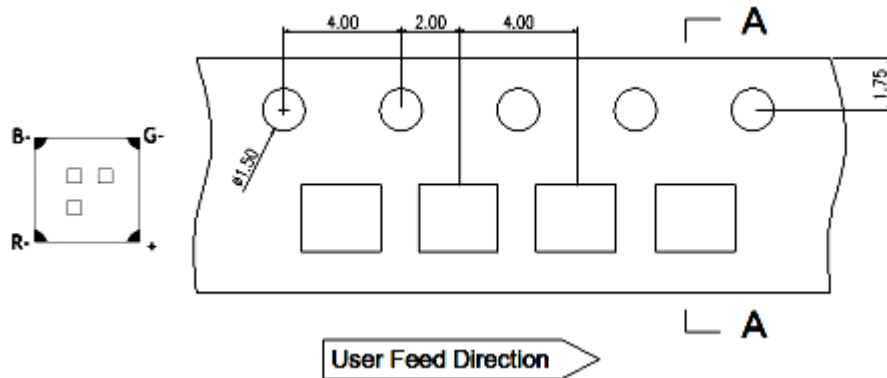
打开包装袋后，LED 需保存在 30℃/40%湿度以下的条件，且必须在 7 天内使用完。

4. If the LEDs be kept over the condition of 3, baking is required before mounting. Baking condition as below: 60±5℃ 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℃，24 个小时

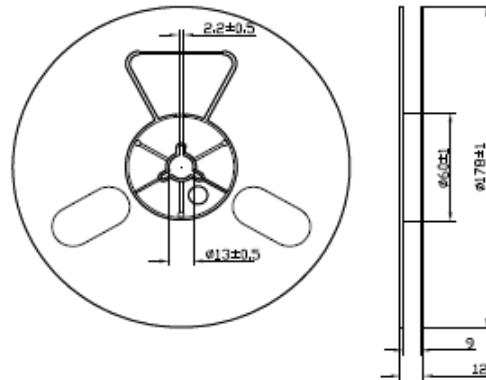
包装 PACKAGING

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

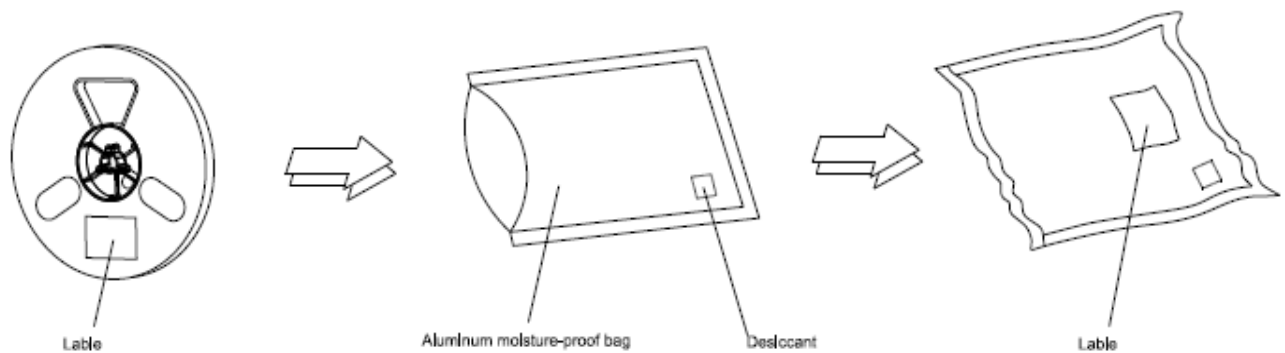


Reel Dimensions

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