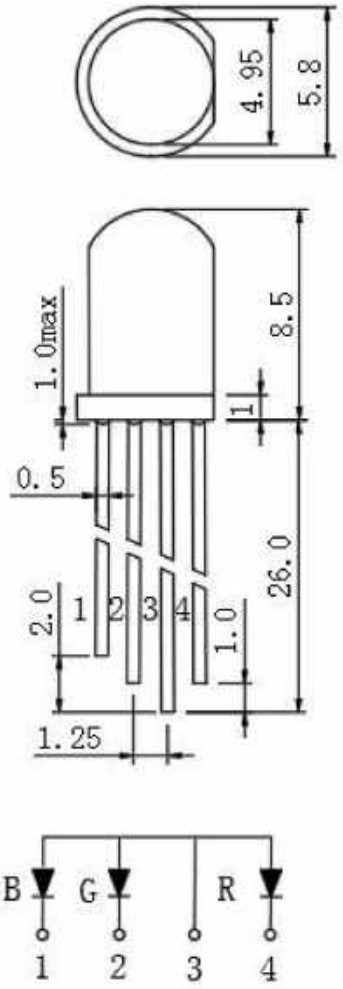
1. 产品描述：Product Description

- ●外观尺寸(L/W/H) ： Appearance Dimensions 4.95*8.5 mm
- ●防静电袋包装：Anti-static bag packaging
- ●环保产品，符合ROHS要求：Eco-products,Compliance With ROHS Requirments
- ●适用于波峰焊制程：Suitable for wave soldering process

2. 产品主要应用：Product Applications

- ☐背光 Backlight
- ☐照明 Lighting
- ☑发光指示灯 Indicator light
- ☐红外应用系统 Infrared Applicationgs systems
- ☑其他 Others

3. 外观尺寸及建议焊盘尺寸：Size of Appearance & Suggested Soldering PAD



注：Note

1.单位：毫米（mm） 1.Dimensions are in millimeters;

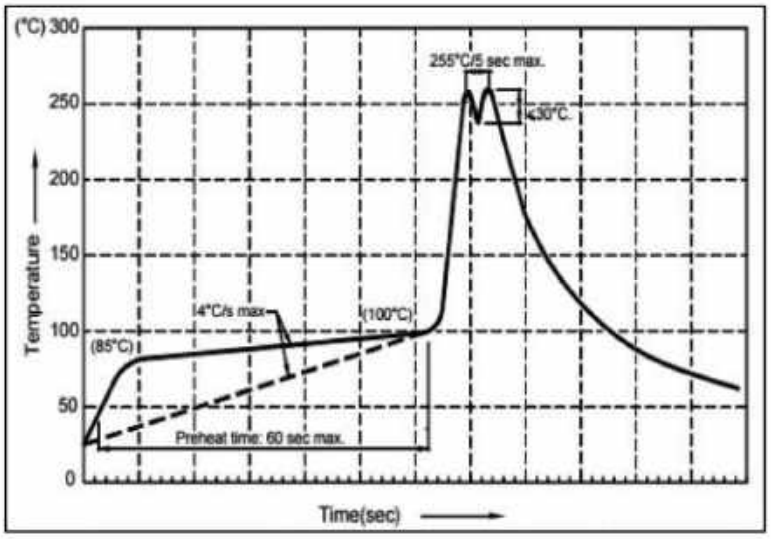
2.公差：如无特别标注则为± 0.25mm； 2.Tolerances unless mentioned are±0.25mm;

3.支架长度误差范围 1.0mm； 3.Length error range of bracket1.0mm;

4.多胶不可超过 1.0mm。 4.No more than1.0mm.

4. 建议焊接温度曲线：Recommended Wave Soldering Temperature Curve

无铅焊接：（Lead-free Soldering）



注：Note

1. 灯珠在温度较高时不要施加外力在灯珠上；

1.Don't cause syress to LEDs while it is exposed to high temperature;

2. 波峰焊是建议的焊接加工方式，其它焊接方式请咨询我司；

2.wave soldering is recommended, other soldering metoods please consult us;

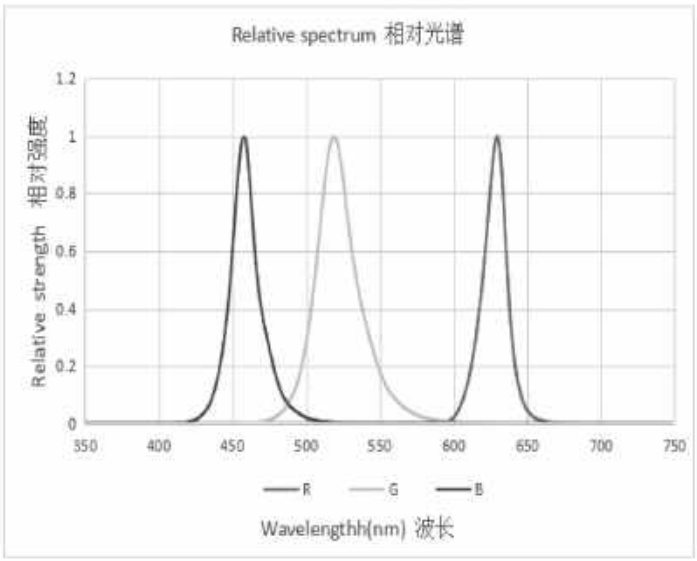
5. 最大绝对额定值： Absolute Maximum Ratings（Ta=25℃）

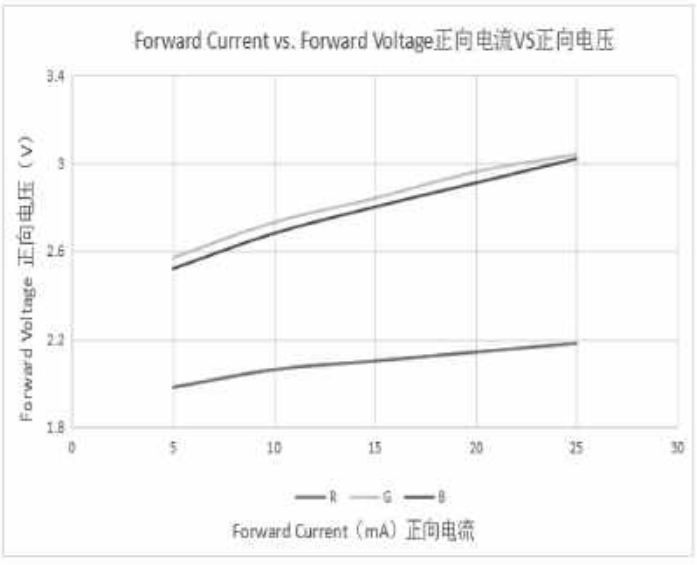
参数 Parameter	符号 Symbol	数值 Value	单位 Unit
消耗功率 **Power Dissipation**	**Pd**	**R:60 G/B:90**	**mW**
最大脉冲电流* **Max Pulse Current**	**I_{FP}**	**100**	**mA**
正向直流工作电流 **DC Forward Current**	**I_F**	**30**	**mA**
反向电压 **Reverse breakdown Voltage**	**V_R**	**5**	**V**
抗静电能力（人体模式） **Electrostatic Discharge Threshold (HBM)**	**ESD**	**R:2500 G/B:2000**	**V**
工作环境温度 **Operating Temperature**	**Topr**	**-40 to 85℃**	**℃**
储存环境温度 **Storage Temperature**	**Tstg**	**-40 to 85℃**	**℃**
焊接温度 **Soldering Temperature**	**Tsol**	波峰焊：Wave soldering 265℃/5S 手工焊接：Hands soldering 320℃/3S	℃

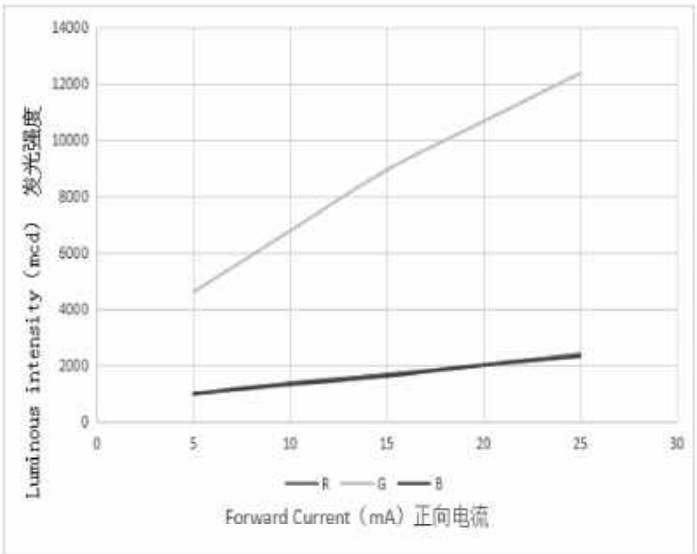
6. 光电特性参数：Electro-Optical Characteristics（Ta=25℃）

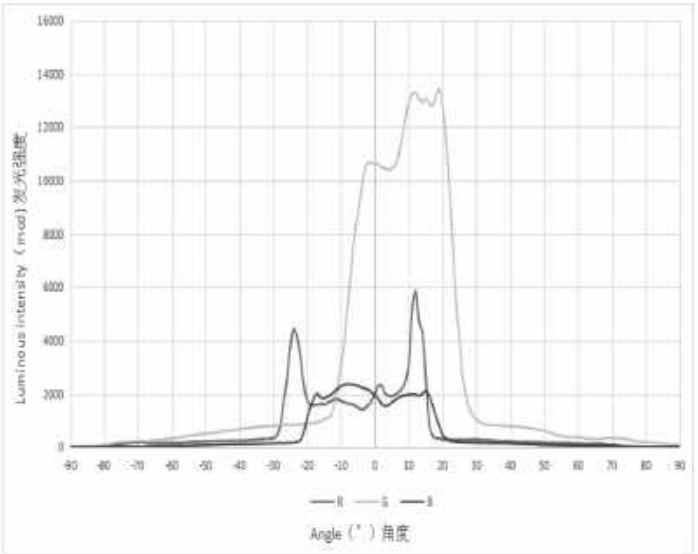
参数 Parameter	符号 Symbol	颜色 Color	最小值 Min	典型值 Typ	最大值 Max	单位 Unit	测试条件 Test condition
亮度 Luminous Intensity	IV	R	1500	---	3000	mcd	IF=20mA
		G	9000	---	12000		
		B	1500	---	3000		
主波长 Dominant Wavelength	λd	R	620	---	625	nm	IF=20mA
		G	522	---	527		
		B	460	---	465		
正向电压 Forward Voltage	VF	R	1.9	2.1	2.4	V	IF=20mA
		G	2.8	3.0	3.4		
		B	2.8	2.9	3.2		
反向漏电流 Reverse Current	IR		---	---	10	uA	VR=5V
半功率视角 Half Power View	2θ1/2		---	30	---	deg	IF=20mA

7．光电参数代表值特征曲线：Typical Optical-Electronic Characteristic Curves









9. 信赖性实验：Reliability Test

类别 Classification	测试项目 Test Item	试验条件 test conditionsstandards	参考标 Reference Standard	测试时间 testing time	接收水准 Receiving level
环境测试 Environmental Test	温度循环 temperature cycle	-40℃ ~25℃ ~100℃ ~25℃ 30mins 5mins 30mins 5mins	JEITA ED-4701 100 105	循环 100 回合	0/100
	冷热冲击 Hot and cold impact	-40℃ ~ 100℃ 15mins 15mins	MIL-STD-202G	循环300回合	0/100
	高湿热循环 High Moisture Heat Cycle	30℃ ~ 65℃ RH=90% 24H/1回合	JEITA ED-4701 200 203	循环50回合	0/100
	低温储存 Low Temperature Storage	Ta = -40℃	JEITA ED-4701 200 203	1000H	0/100
	高温储存 high-temperature storage	Ta= 100℃	JEITA ED-4701 200 202	1000H	0/100
	高温高湿储存 High temperature and high humidity storage	Ta = 60℃ RH=90%	JEITA ED-4701 100 103	1000H	0/100
寿命测试 Life Test	常温寿命测试 Normal temperature life test	Ta = 25℃ IF=30mA(R,G,Y)/20mA(W,B)	/	1000H	0/100
	高温高湿寿命测试 High temperature and high humidity life test	Ta = 60℃ RH=90% IF=20mA(R,G,Y)/15mA(W,B)	/	1000H	0/100
	低温寿命测试 Low temperature life test	Ta = 30℃ IF=20mA(R,G,Y)/15mA(W,B)	/	1000H	0/100
破坏性测试 Destructive testing	耐焊性 soldering resistance	T.sol= 260 ± 5℃, 10S, 离胶体 3mm 距离 Distance mm colloid 3	JEITA ED-4701 300 302	焊接一次 Welding once	0/20
	可焊性 weldability	T.sol= 235 ± 5℃, 5S 使用助焊剂 Use of flux aids	JEITA ED-4701 300 303	焊接一次 Welding once	0/20
静电 Destructive testing	静电放电测试 Electrostatic discharge test	人体放电模式 1000V Human discharge mode 1000 V	JEITA ED-4701 300 304	正反向各 3 次 3 positive and negative	0/10
机械测试 Mechanical testing	振动测试 Vibration test	20G 20-2000HZ 4 分钟 X, Y, Z 三个方向	JEITA ED-4701 400 403	每个方向循环 4 次 4 cycles per direction	0/10
	跌落测试 drop test	75CM	/	3 次	0/10

判定标准： requirement

项目 item	标示 marking	测试条件 test condition	判定标准 requirement
正向电压 forward voltage	VF	IF=20mA	初始值±10% 10%± initial value
反压电流 Backward current	IR	VR=5V	≦10μA
光强 light intensity	IV	IF=20mA	单颗衰减≦50%，并且平均衰减≦30% Single attenuation ≦50%, and average attenuation ≦30%; and
可焊性 weldability			浸锡面积达95%以上 More than 95% area of tin leaching
振动测试 Vibration test		IF=20mA	没有死灯及明显损坏 No dead lights and apparent damage
跌落测试 drop test		IF=20mA	没有死灯及明显损坏 No dead lights and apparent damage

10. 使用注意事项：Application

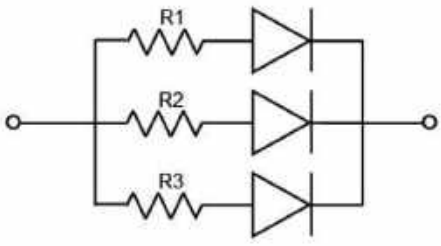
a. 使用： use

1. LED 是电流驱动元件，电压的细微变化会产生较大的电流波动,导致元件遭到破坏。客户应使用电阻串联作限流保护。

1.A LED is a current-operated device. The slight shift of voltage will cause big change of current, which will damage LEDs. Customer should use resistors in series for the Over-Current-Proof.

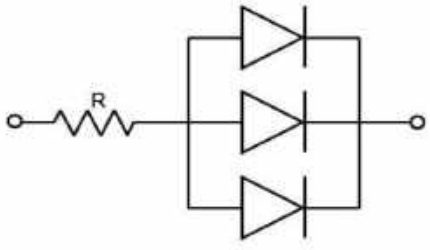
2. 为了确保多颗 LED 并联使用时光色一致，建议每条支路使用单独电阻,如下图模式 A 所示；
如采用下图模式 B 所示电路，LED 光色可能因每一颗 LED 不同的伏安特性而造成光色差异。

2. In order to ensure intensity uniformity on multiple LEDs connected in parallel in an application, it is recommended to use individual resistor separately, as shown in Circuit A below. The brightness of each LED shown in Circuit B might appear difference due to the differences in the I-V characteristics of those.



电路模式 A

Circuit model A



电路模式 B

Circuit model B