SPECIFICATION

Model. P/N NO：IE-2727RGB-SB-BBO-A1

S/N NO：

Document. NO：

REV NO：V1.0

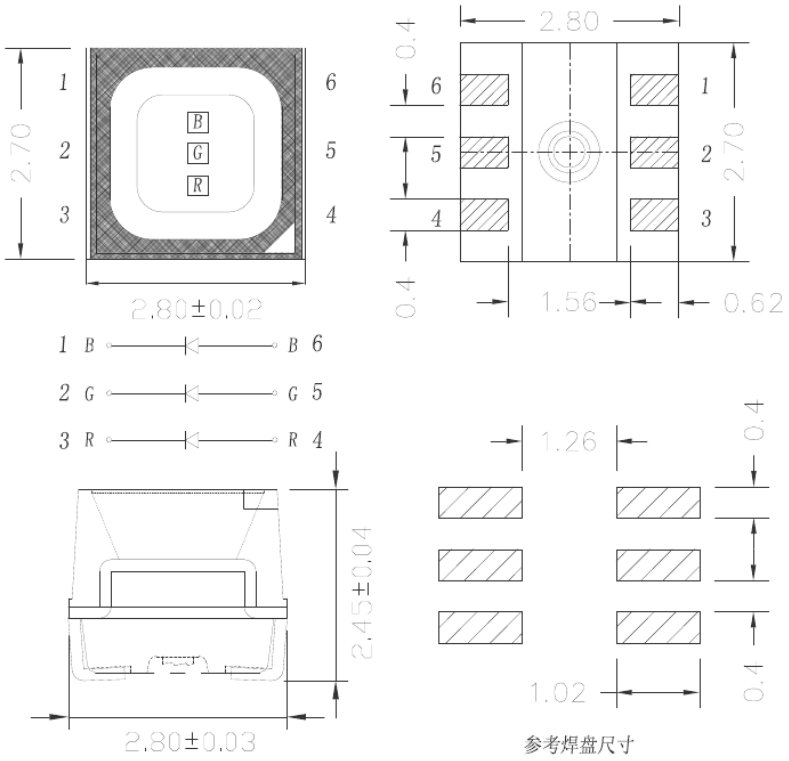
Description:

- 2.7×2.8mm Top SMD
- Colloid Color: 雾状 White diffused
- Emission Color: 全彩 Full Color
- Viewing Angle :120°

晶台光电				客户承认（加盖公章）	
技术部		品保部	市场部	公司名称：	
制作	审核	QA	业务员	客户技术部门	客户采购部门

1. Dimensions

(Units): (mm)



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

2. Electrical / Optical characteristics

(1) Absolute Maximum Ratings (TA=25±5°C)

项目 Item	符号 Symbol	最大额定值 Absolute Maximum Rating			单位 Unit
		Blue	Green	Red	
正向电流 Forward Current	IF	30	30	30	mA
正向峰值电流 Pulse Forward Current	IFP	90	90	90	mA
功率消耗 Power Dissipation	PD	96	96	60	mW
反向电压 Reverse Voltage	VR	9			V
工作温度 Operating Temperature	Topr	-30°C To +85°C			° C
贮藏温度 Storage Temperature	Tstg	-40°C To +85°C			° C
焊接温度 Soldering Temperature	Tsld	Reflow Soldering: 260°C Hand Soldering : 350°C			for 10sec. for 3sec.

1/10周期, 0.1 msec脉宽

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

(2) Initial Electrical/Optical Characteristics (TA=25±5°C)

符号 Symbol	项目 Item	单位 Units	发光颜色 Device	最小值 Min.	规格值 Typ.	最大值 Max.	测试条件 Test Conditions
VF	正向电压 Forward Voltage	V	Red	1.8		2.3	IF=20mA
			Green	2.6		3.2	IF=15mA
			Blue	2.6		3.2	IF=10mA
IR	反向电流 Reverse Current	uA	-	-	-	10	VR=9V
Δλ1/2	发光角度 Viewing Angle	°	-	-	120	-	IF=20/15/10mA
Iv	发光强度 Luminous Intensity	Mcd	Red	600		900	IF=20mA
			Green	850		1250	IF=15mA
			Blue	130		240	IF=10mA
λD	主波长 Dominate Wavelength	Nm	Red	620		625	IF=20mA
			Green	516		530	IF=15mA
			Blue	465		475	IF=10mA

Tolerance of measurement of Vf is ±0.05 V..

Luminous Intensity Measurement allowance is ± 10%.

Color Coordinates Measurement allowance is ± 0.5nm.

Above are the reference for minimum and maximum of luminous intensity which rank in the rate of 1:1.3 in the process of light splitting when manufacturing massively

Above are the reference for minimum and maximum of wavelength, while it ranks as:R:5nm/G:3nm/B:3nm. when light splitting in mass manufacturing.

3. Characteristic curve

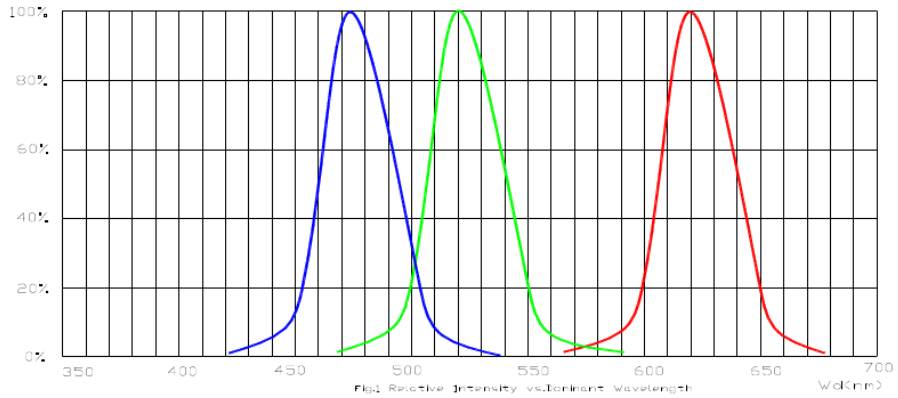
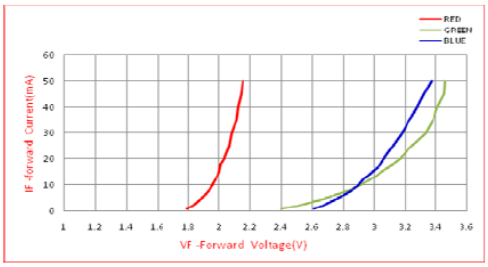
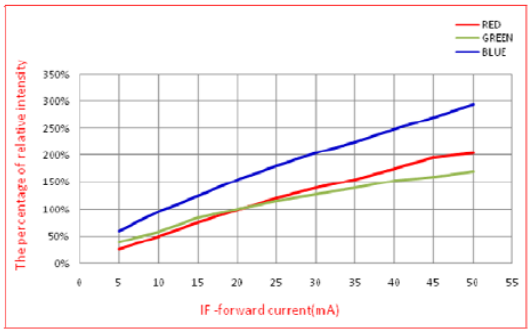
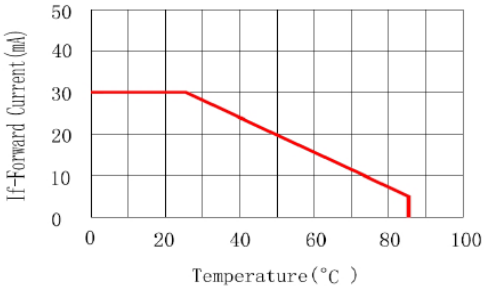
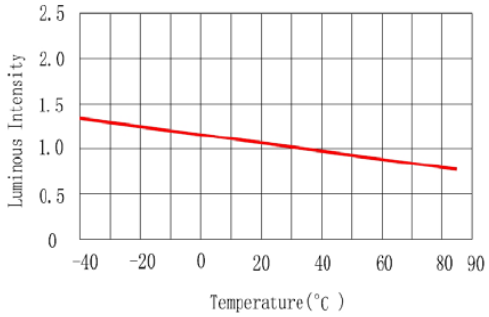


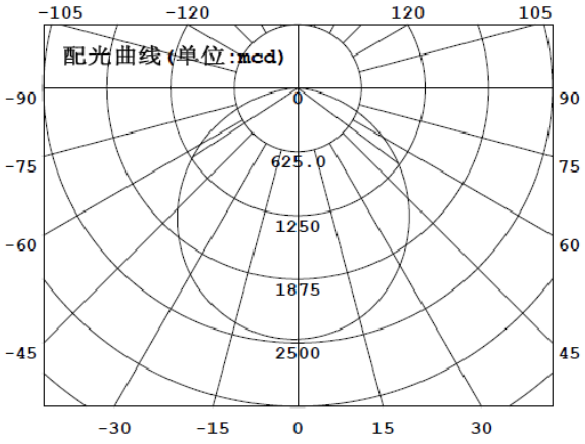
Fig.1 Relative Intensity vs.Dominant Wavelength











4. RELIABILITY

(1) Test Items and Results

序号	试验项目	参考标准	试验条件	持续时间	取样数	接收水准（不合格数量/抽样总数）
1	冷热冲击保存	EIAJ ED-4701 300 307	-40℃～100℃ 15 分钟 15 分钟	循环 500 回合	22	0/22
2	常温寿命试验	EIAJ ED-4701 100 101	T_a=25±5℃ I_F=10mA	1000 小时	22	0/22
3	高温高湿寿命试验	EIAJ ED-4701 100 102	T_a=85℃ RH=85% I_F=10mA	1000 小时	22	0/22
4	防潮等级 1	IPC/JEDEC J-STD-020D.1	除潮 125℃/24H 受潮 T_a=85℃ /RH=85%/168H	260℃/30S/ 3 次	22	0/22
5	可焊性（回流焊）	EIAJ ED-4701 300 303	T_{sol}=245℃±5℃,5 秒 使用助焊剂	焊接一次,5 秒	22	0/22
6	耐焊性（回流焊）	EIAJ ED-4701 300 301	T_{sol}=260℃,10 秒 预处理：35℃ 95%RH 96 小时	焊接三次，每次 10 秒	22	0/22
备准	以上试验项目如与客户试验要求存在差异的或者特殊客户特殊要求的可根据实际情况按照客户的要求进行试作,客户未要求的按我司试验标准试作.不同产品使用不同电流进行测试					

5. Cautions

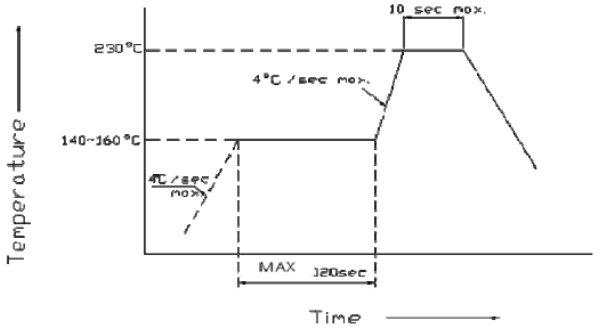
(1) Soldering Conditions

Number of reflow process shall be less than 3 times and cooling process to normal temperature is required between first and Second soldering process.

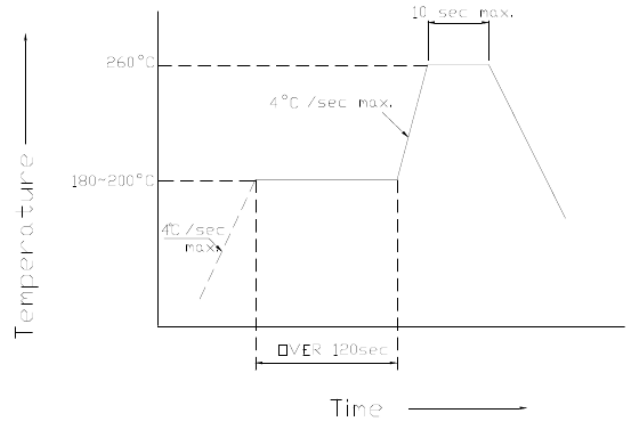
(Recommended soldering conditions)

Reflow Soldering				
	Lead Solder	Lead-free Solder	Temperature Soldering time	350° C Max. 3 sec. Max. (one time only)
Pre-heat Pre-heat time Peak temperature Soldering time	140 ~ 160° C 120 sec. Max. 230° C Max. 10 sec. Max.	180 ~ 200° C 120 sec. Max. 260° C Max. 10 sec. Max.		

(Lead Solder)



(Lead-Free Solder)



(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 : (IR<1uA at VR=10V)

(3) Moisture Proof Package

It is recommended that moisture proof package be used .

(4)

Cautions:

4. In order to reduce the effect of moisture on adhesiveness of Internal Structure inside the LED light while high-temperature welding, and ensure the reliability of products. Users must observe the following terms:

4.1.1 Please check if there is air leak before opening the package, if so, please return the goods back to take drying process for later using.

4.2 Products can be used within 15days after packaging, after that, they must be:

4.2.1 Soldered within 24 hrs

4.2.2 Used in the condition: 30℃ within and 60%RH below

4.2.3 Stored in 30%RH for moisture below.

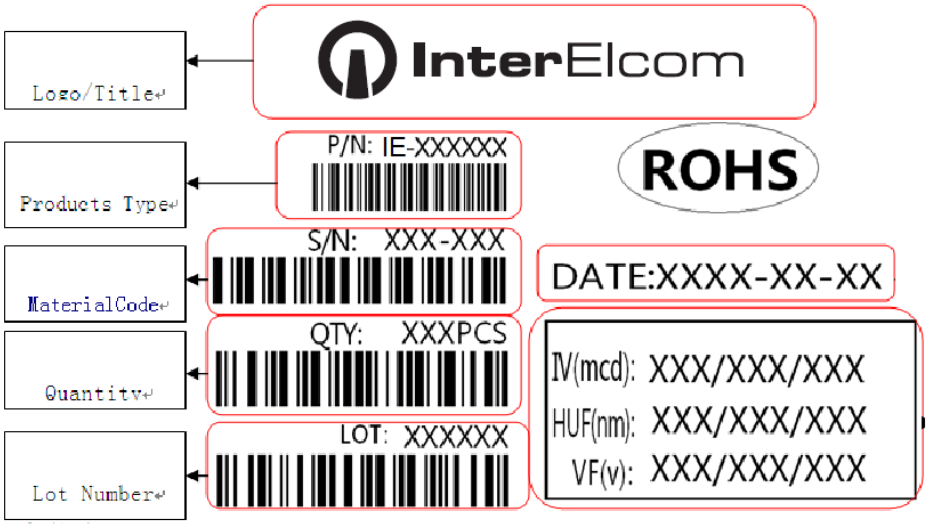
4.3. Products cannot be used for and over 15days after being packaged unless opening the package and take drying our process in 85℃/6H.

4.4. Products not be used for or over 60days after being packaged please return back to take drying out and packaging process for forward using.

4.5. Products not be used after opening the package need to be dried out for 85℃/6H

4.6 This product is suitable for outdoor or half outdoor display.

Label details:



Notes of Label:

① Please make sure the type of our smd products, different types cannot be mixed when using.

② Products in different lot number cannot be used in one display panel together ,even with the same type and parameter.

③ Different type of products with same parameter cannot be mixed and used.

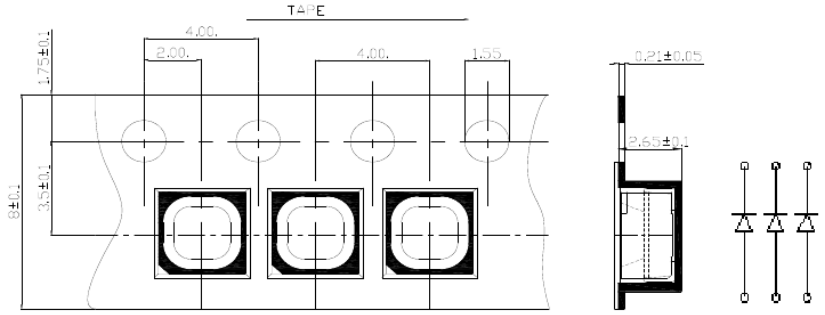
(1) If necessary, please use leaded soldering as more as possble.

(2) High temperature cause serious heat damage to LED products, make sure the temperature of the soldering area is below 230℃.

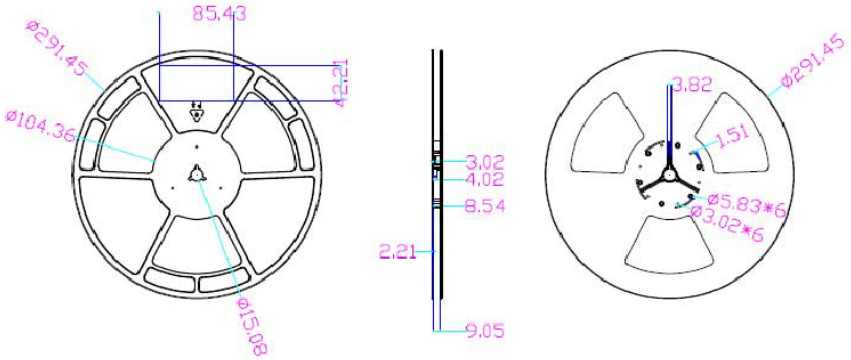
6. PACKAGING

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

(2) Taping Specifications (Units:mm)



(3) Reel Dimension



PACKAGE:5000Pcs/Reel

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

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

(6) 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.