



承认书

Specification for Approval

客户名称 (Customer Name): _____

产品编号 (Product ID): IE-5RGB-C2-P

产品型号 (Product Model): 5mm Round Red Green Blue Color Recycle Blinking LED

产品规格 (Product Specifications): _____

送样日期 (Date): _____

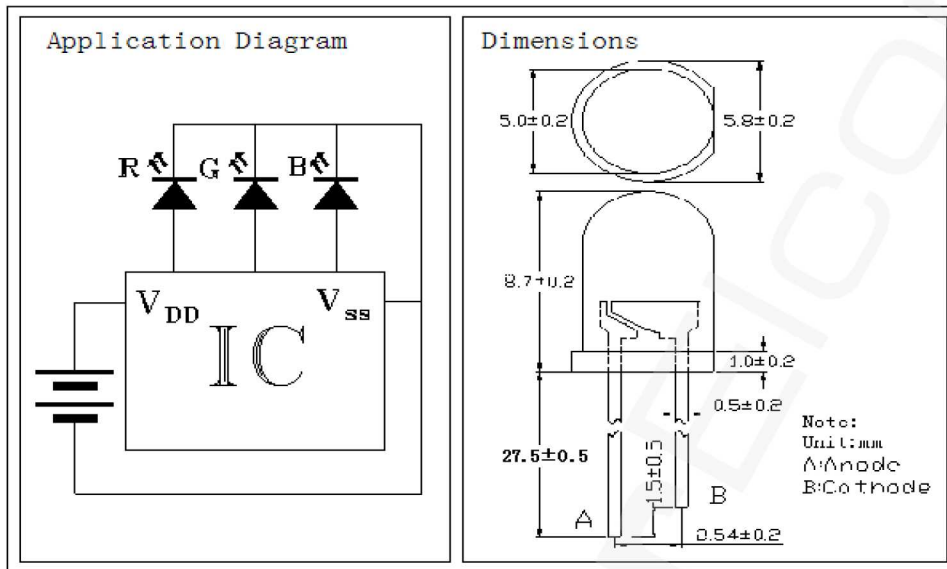
客户确认 (Customer acknowledges that)			鹏远光电 (Peng Yuan Optoelectronics)		
核准	审核	确认	业务	工程	制作
Approved	Audit	Confirm	Business	Engineering	Make
			Becky Yan	Wu	Tian

客户确认 (Customer acknowledges that): 合格 Qualified 不合格 Failure

客户意见 (Customer feedback):

产品型号 Product Model:

Dimensional drawing/尺寸图 27.5±0.5



All dimensions are in millimeter/图中所有尺寸均以毫米为单位

Tolerance is ± 0.25 mm (0.10") unless otherwise noted/若无特别标注，图中尺寸公差为 ± 0.25 mm

Shape Specification /外观要求

No. 序號	ITEM 項目	SPEC OR DESCRIPTION 規格要求描述
1	Lens 胶体	<ul style="list-style-type: none"> ◆ No change color/不可有胶体变色 ◆ No Disrepair/不可有破损 ◆ Scratch/刮伤 (length ≤ 2.0mm, Width ≤ 0.25mm) ◆ macula/黑点、异物 (≤ 0.25mm and $\leq 2EA$ in Encapsulation reverse) ◆ bubble/气泡 (≤ 0.3mm and $\leq 2EA$ Encapsulation reverse)
2	PIN PIN 脚	<ul style="list-style-type: none"> ◆ No bottom crook/PIN 尖不可有弯脚 ◆ No oxidation/不可有氧化 ◆ No electropolar reverse/不可有切反 (极性反)
3	Configuration 结构	<ul style="list-style-type: none"> ◆ No Encapsulation reverse/不可封反 ◆ No PIN loosen/PIN 脚不可松动
4	Surface preparation 表面处理	<ul style="list-style-type: none"> ◆ Cut needn't electroplate /切处无需作电镀
5	Lens color 胶体颜色	<ul style="list-style-type: none"> ◆ Water Clear 水清

产品型号 Product Model:

■ Absolute maximum ratings/最大绝对额定值

Parameter 参数	Symbol 符号	Value 数值	Unit 单位
Forward Current 正向电流	I _f	20	mA
Reverse Voltage 反向电压	V _r	5	V
Operating Temperature 工作温度	T _{opr}	-25~+85	°C
Storage Temperature 储存温度	T _{stg}	-35~+85	°C
Soldering temperature 焊接温度	T _{sol}	260±5°C (for4sec)	°C
Power Dissipation 功率消耗	P _d	60	mW
Pulse Current 脉冲电流	I _{FP}	100	mA

产品型号 Product Model:

■ Opto-Electrical Specification/光电参数规格

Parameter 参数	Symbol 符号	Value			Unit 单位	Tolerance 误差值	Test Conditions 测试条件
		Min	Typ	Max			
Forward Voltage 正向电压	Vf	R:1.8	--	2.6	V	± 0.05V	IF/ 正向电流 =20mA Test Temperature 测试温度=25℃
		G:2.8	--	3.6			
		B:2.8	--	3.6			
Luminous Intensity 发光强度	IV	R:600	--	800	mcd	± 10%	
		G:1000	--	1800			
		B:600	--	800			
Dominant Wavelength 主波长	WL	R:620	--	625	nm	±1nm	
		G:520	--	525			
		B:465	--	470			
Lighting Angle 发光角度	θ	--	25	--	deg	±3	
Reverse Current 反向电流	IR	--	--	10	A	±1 A	Vr=5V

Direct Current Characteristics

Parameter	Symbol	Min	Typ.	Max	Unit	Remarks
Operating voltage	VDD	2.0	4.5	5.5	V	❖
Driver Current	Iol	❖	50	❖	mA	@V _{DS} =1.2V
Power Consumption	Po	❖	225	❖	mW	V _{DD} =4.5V
Flash Frequency	Ftet	❖	14	❖	Hz	External ± 30%

产品型号 Product Model:

■ Opto-Electrical Characteristics / 光电特性

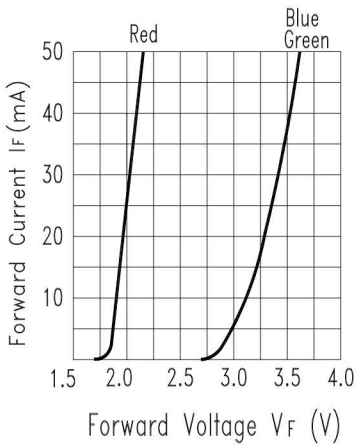
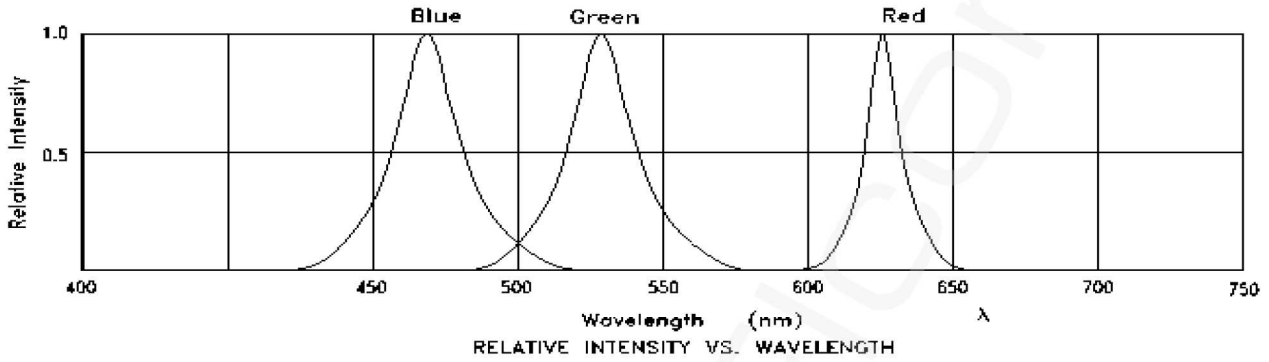


Fig.2 Forward Current vs. Forward Voltage

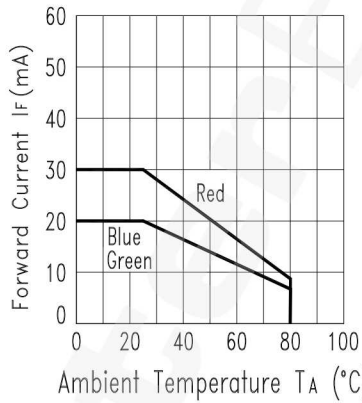


Fig.3 Forward Current Derating Curve

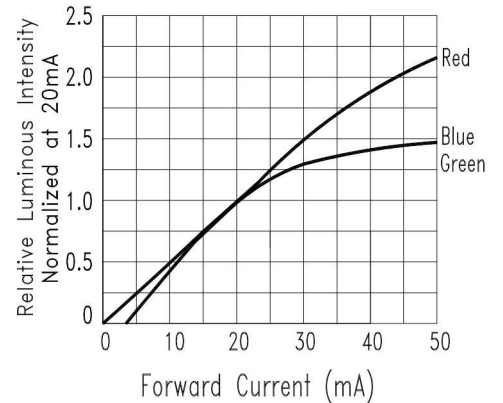


Fig.4 Relative Luminous Intensity vs. Forward Current

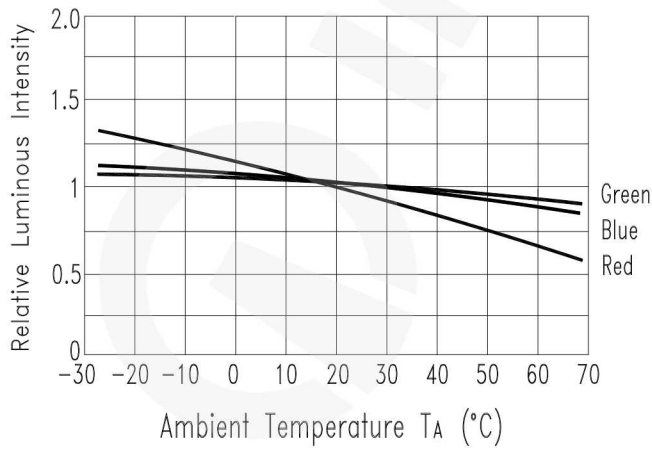


Fig.5 Luminous Intensity vs. Ambient Temperature

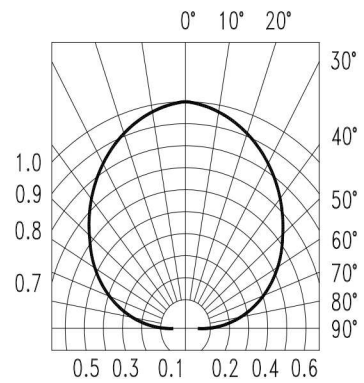


Fig.6 Spatial Distribution

Reliability Test Items/可靠度測試項目

No.	Item 測度項目	Condition 測試條件	Time/Cycle 測試時間或周期	Number of Damaged 不良數/測試數
1.	Soldering Heat Test 焊接試驗	260±5 °C	10 sec	0/60
2	Thermal Shock 熱沖擊	0 °C (15sec) ~ 100 °C(15sec)	20 cycle	0/60
3	High Temp. Storage 高溫儲存	100 °C	1000Hrs	0/60
4	Low Temp. Storage 低溫儲存	-40 °C	1000Hrs	0/60
5	Temperature Cycle Test 高低溫循環	-40 °C ~ 80 °C	100 Cycles, 200 Hrs	0/60
6	High Temp. High Humidity Test 高溫高濕	60 °C, 90 % RH	1000 Hrs	0/60
7	Operation Life Test 1 常溫老化	Room Temp., 20mA	1000 Hrs	0/60
8	Operation Life Test 2 常溫老化	Room Temp., 30mA	500 Hrs	0/60
9	High Temp. Operation Life Test 高溫老化	85 °C , 5mA	1000 Hrs	0/60
10	Low Temp. Operation Life Test 低溫老化	-30 °C , 20mA	1000 Hrs	0/60

Judgment Criteria/判定標準：

Item 項目	Symbol	Test Conditions	Judgment Criteria
Forward Voltage 正向電壓	V _f	I _F = 20 mA	Δ% < 10 %
Leakage Current 反向漏電流	I _r	V _r = 5V	< 10 uA
Luminous Intensity 發光強度	I _v	I _F = 20 mA	Δ% < 20 %
Luminous Flux 光通量	I _m	I _F = 20 mA	Δ% < 20 %