

※产品特征:Features

Part No: FNT-305WRGB-FE

- 1.外型尺寸:14.50*5.15*mm
Outline Package: 14.50*5.15mm
- 2.角度: 120 度
View Angle: 120
- 3.发光颜色: 红绿蓝
Emitted Color: RGB
- 4.胶体颜色: 水清透明
Lens Appearance:Water Clear
- 5.适用于所有表面贴装技术组装生产
Sutiable for all SMT assembly methods
- 6.符合 ROHS 无铅焊接的标准
ROHS compliant lead-free soldering compatible

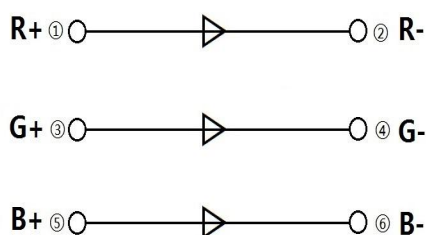
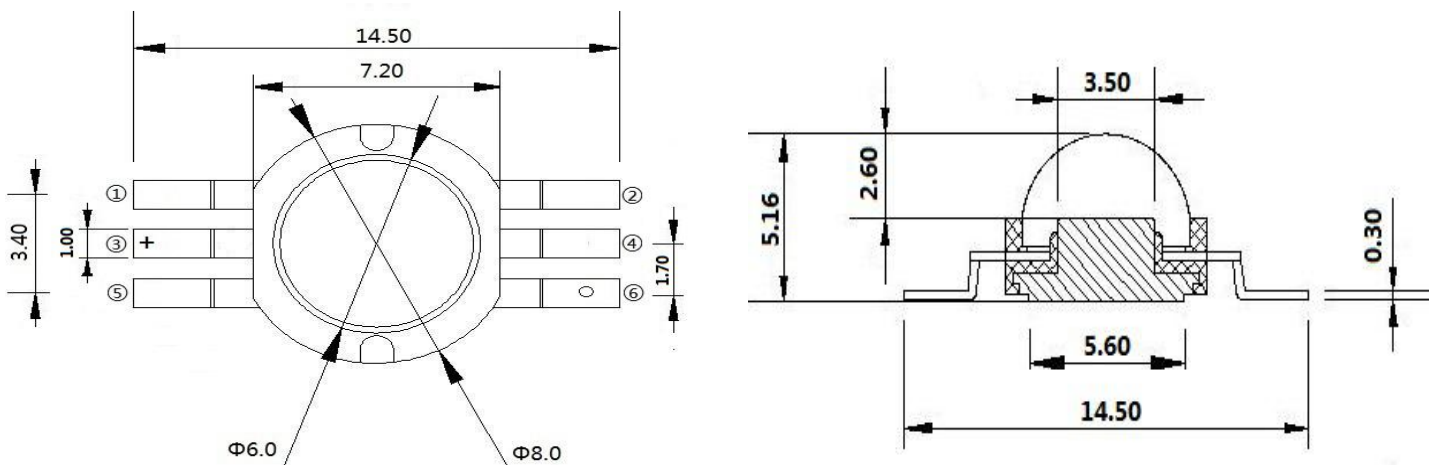
※产品图
Product figure



※应用领域:Application Fields

- | | |
|--|-------------------------------|
| 1.光学指示
Optical indicators | 2.装饰照明
Decorative lighting |
| 3.汽车内部照明
Interior automotive lighting | 4.背光
Backlighting |
| 5.室内室外显示屏
Indoor and outdoor displays | 6.其他适合的应用
General use |

※外型尺寸图:Package Outline Dimensions



Notes

1. All dimension units are millimeters(inches).
2. All dimension tolerance is ± 0.15 mm unless otherwise noted.
3. “+”为绿色正极.

※最大绝对额定值 Absolute maximum ratings at Ta=25℃

Parameter 参数	Symbol 符号	Value 值		Unit 单位
功率耗损 Power dissipation	Pd	R	0.5	W
		G	0.5	
		B	0.5	
正向电流 Forward current	IF	150		mA
反向电压 Reverse voltage	VR	5		V
工作温度范围 Operating temperature range	Top	-20 ~+80		℃
贮存温度范围 Storage temperature range	Tstg	-30~+85		℃
最大脉冲电流 Peak pulsing current	Ifp	200		mA
抗静电能力 Electrostatic Discharge	ESD	2000(HBM)		V

IFP 条件: 脉冲持续时间 $\leq 10\text{msec}$, 占空因素 $\leq 1/10$ IFP Conditions: Pulse Width $\leq 10\text{msec}$. and Duty cycle $\leq 1/10$.

※电性光电特性 Electrical-optical characteristics at Ta=25℃

Parameter 参数	Test Condition 测试条件	Symbol 符号	Value 值			Unit 单位
			Min.	Typ.	Max.	
正向电压 Forward voltage	IF=150mA	VF/R	1.80	2.1	2.5	V
		VF/G	2.80	3.2	3.6	
		VF/B	2.80	3.2	3.6	
亮度 Luminous Flux	IF=150mA	IV/R	15.0	--	30.0	LM
		IV/G	30.0	--	50.0	
		IV/B	8.0	--	15.0	
波长范围 Wavelength range	IF=150mA	WL/R	620	625	630	nm
		WL/G	515	520	530	
		WL/B	455	460	470	
半功率角 Viewing angle at 50% Iv	IF=20mA	$2\theta_{1/2}$	--	120	--	Deg
反向电流 Reverse current	VR=5V	IR	--	--	10	μA

NOTE: 1. 发光强度公差为 $\pm 10\%$ Tolerance of luminous intensity is $\pm 10\%$ 2. 正向电压公差 $\pm 0.05\text{v}$ Tolerance of forward voltage is $\pm 0.05\text{V}$

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

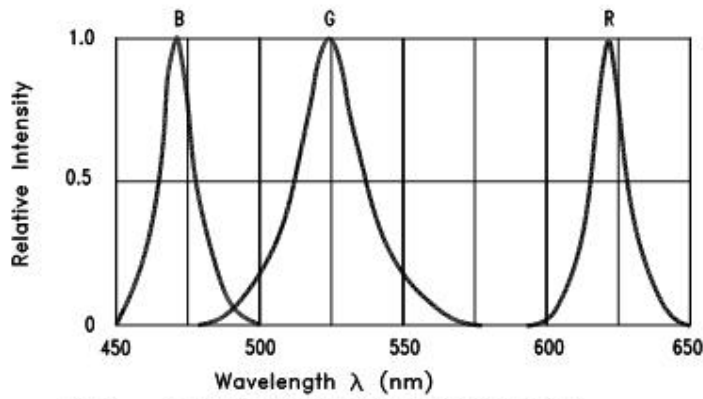


Fig.1 RELATIVE INTENSITY VS. WAVELENGTH

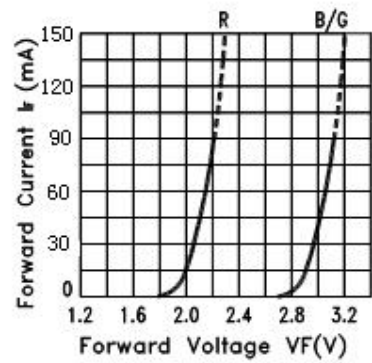


Fig.2 FORWARD CURRENT VS. FORWARD VOLTAGE

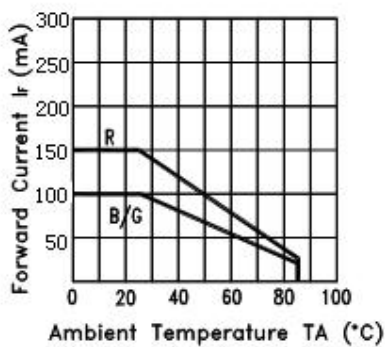


Fig.3 FORWARD CURRENT DERATING CURVE

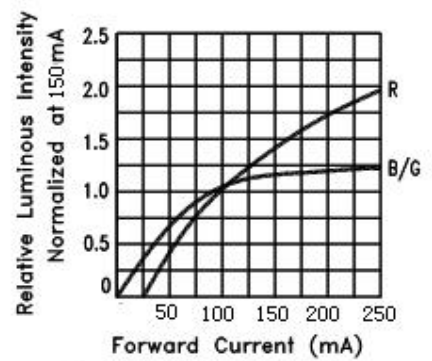


Fig.4 RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT

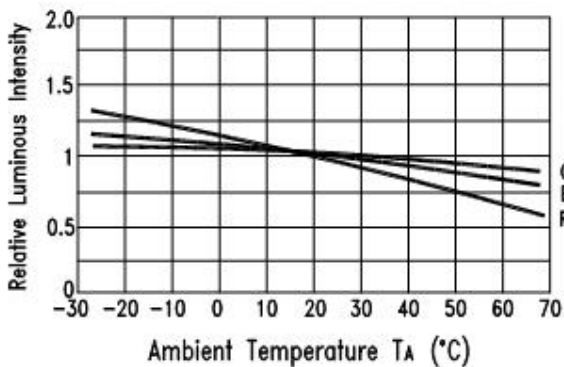


Fig.5 Luminous Intensity vs. Ambient Temperature

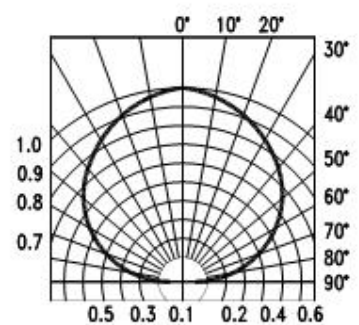
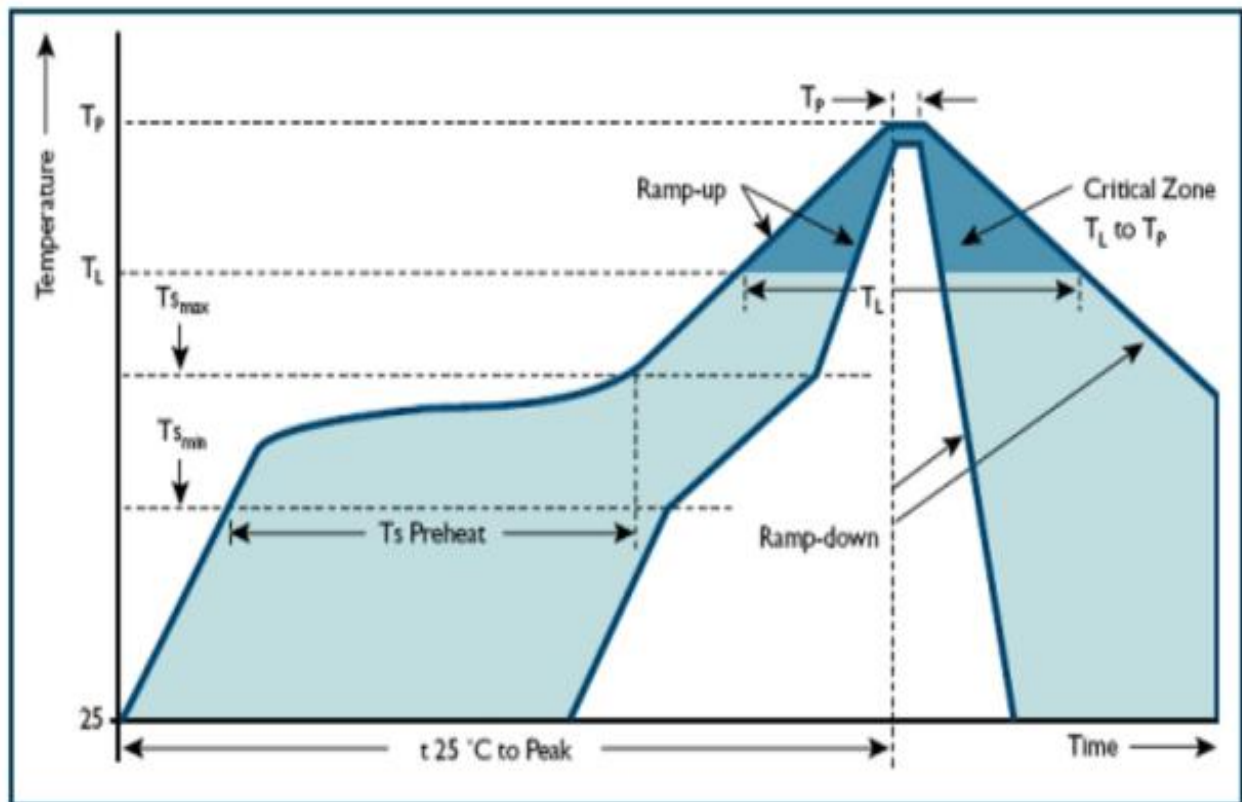


Fig.6 SPATIAL DISTRIBUTION

※应用及回流焊要求: Requirements for application and reflow soldering



Reflow soldering curve 回流焊曲线图

(Product is highest resistant to 220°C reflow but suggested the highest temperature of 180°C within)

(产品最高可耐 220°C 回流焊，但建议最高温度设为 180°C)

焊接剂: 中低温锡膏

温度上升斜率 T_{s_max} to $T_p = 4^\circ\text{C}/\text{s}$ max

预热温度 $T_{s_min} = 100^\circ\text{C} - 150^\circ\text{C}$

预热时间 T_{s_min} to $T_{s_max} = 100\text{s}$ max

温度下降斜率 $6^\circ\text{C}/\text{s}$ max

峰值温区温度 220°C max

在峰值温度 $\pm 5^\circ\text{C}$ 时 时间不能超过 10s

超过 180°C 的温度时间不能超过 80s max

※回流焊注意事项: Notes for reflow soldering

1. 回流焊的次数应小于两次. 建议使用中温或低温锡膏.

No more than twice for reflow soldering. Medium or low temperature solder paste is recommended.

2. 为保证 LED 质量及可靠性, 焊接加热过程中, 不可施加压力在 LED 表面.

To ensure the quality of our LEDs, please do not put pressure on the LEDs.

3. LED 为静电敏感产品, 使用时请佩带防静电手环, 工作台做好防静电处理, 机台设备等保证接地.

Please put on the antistatic hand loop during the use. The worktable should be with antistatic finish.

The equipments must be contacted with ground.

※手工焊接 Handwork Soldering

1. 手工焊接时，要保持电烙铁温度在 300℃ 以下，并且焊接时间小于 3 秒，电烙铁不可接触胶体。
During the soldering the electronic soldering iron must be kept under the temperature of 300℃ and the soldering time must not be beyond 3 seconds. No touch between the electronic soldering iron And colloid.
2. 手工焊接只可进行一次，重复焊接不保证产品是否完好。
Handwork soldering is only allowed once. We won't take responsibility for more than that.
3. 避免使用尖锐的物体直接接触产品胶体部分。
Avoid using sharp objects to compress products Colloidal Part directly.

NOTE:

此类灯珠不建议使用回流焊接, 因灯珠头部 PC 透镜一般不能承受 230 度以上的高温; 若温度过高, 则灯珠内部之填充胶在高温下会热胀冷缩, 有可能导致灯珠内部金线拉断, 从而损坏灯珠.

Reflow soldering is not recommended for such led lamp , because the PC lens at the head of the lamp generally cannot withstand high temperatures above 230 degrees. If the temperature is too high, the filling glue inside the lamp will expand and contract under high temperature, which may lead to the breaking of the gold wire inside the lamp and damage the lamp.