



ATTENTION
OBSERVE PRECAUTIONS
FOR HANDLING
ELECTROSTATIC
DISCHARGE
SENSITIVE
DEVICES

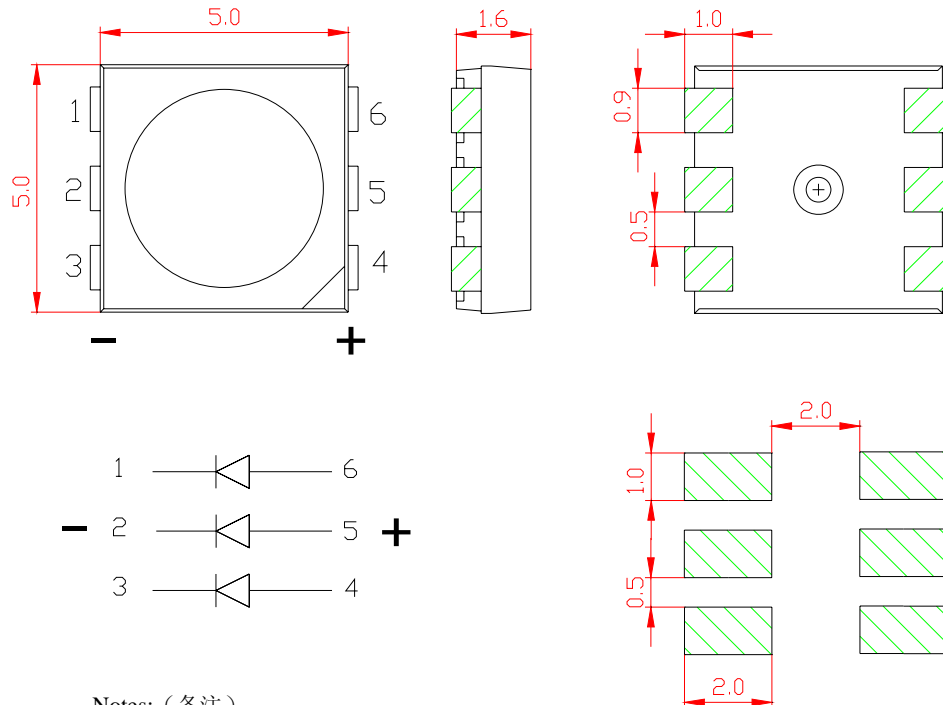
1、Features/特征:

- Emitting Color/发光颜色: Red /红色
- Lens Type/封装特性: Water clear/透明
- Device Outline/外形特征: 5.5×5.0×1.6 (unit:mm)
- RoHS compliant/符合 RoHS 标准

2、Applications/应用:

- Backlight for Mobile, Machine Vision, LCD Display/手机、电话、显示屏背光源
- Backlight in Dashboard and switch of Automive/汽车仪表盘、记程器背光源

3、Outline Dimensions/产品外形尺寸 (units:mm) :



Notes: (备注)
Tolerance is $\pm 0.1\text{mm}$ (公差 $\pm 0.1\text{mm}$)

参考焊盘尺寸



4、Absolute maximum ratings/极限参数 (Ta = 25°C):

Parameter 参数	Color 颜色	Symbol 符号	Values 数值	Unit 单位
Power Dissipation 损耗功率	red	Pd	60	mW
			60	
			60	
Reverse Voltage 反向电压	red	VR	7	V
			7	
			7	
Pulse Current 正向峰值电流 ^[1]	red	IFp	100	mA
			100	
			100	
Forward Current 正向工作电流	red	IFm	25	mA
			25	
			25	
Operating Temperature 工作温度范围	red	Topr	- 40 ~ +85	°C
Storage Temperature 储存温度范围	red	Tstr	- 40 ~ +100	°C

Notes/备注: [1]. 0.1ms pulse width, 1/10 Duty. / [1] 脉冲宽度0.1ms, 占空比1/10。



5、Electrical and optical characteristics/光电参数 (Ta = 25°C):

Parameter 参数	Color 颜色	Symbol 符号	Test Condition 测试条件	Value 参数 ^[2]			Unit 单位
				Min	Typ	Max	
Forward Voltage 正向电压	red	V _F	I _F = 60mA	1.8	---	2.6	V
Reverse Current 反向电流	red	I _R	V _R = 7V	---	---	30	μ A
	red			---	---	30	
	red			---	---	30	
Luminous Intensity 发光强度	red	I _v	I _F = 60mA	1520	2000	---	mcd
Dominate Wavelength 主波长	red	λ _d	I _F = 60mA	619	624	629	nm
Peak Wavelength 峰值波长	red	λ _p	I _F = 60mA	---	632	---	nm
Viewing Angle 发光指向角	red	2 θ 1/2	I _F = 60mA	---	120	---	Deg.
Luminous Flux 光通量 ^[1]	red	φ	I _F = 60mA	---	5.7	---	lm

Notes/备注: [1] The test standard is the luminous intensity, and the luminous flux is for your reference only./[1] 本公司以发光强度为分档标准, 光通量仅供参考。[2] Tolerance 误差: V_F: ±0.10V, I_v/Flux: ±15%, 其它: ±5%



6、Product Rank/产品分档

Luminous Intensity / 发光强度 (mcd)

(Ta=25°C)

Rank	U1	U2	V1
lv	1520~1900	1900~2130	2130-2550

Wavelength / 波长 (nm)

(Ta=25°C)

Rank	R1	R2	R3	R4	R5
WLD	618-621	621-624	624-627	627-630	630-633

Voltage / 电压 (V)

(Ta=25°C)

Rank	V7	V8	V9	V10	V11
Vf	1.6-1.8	1.8-2.0	2.0-2.2	2.2-2.4	2.4-2.6

Notes/备注: Rank error/分档误差: lv: $\pm 15\%$, λd : $\pm 1\text{nm}$, Vf: $\pm 0.10\text{v}$



7、Typical electrical/optical characteristic curves/光电特性曲线:

Fig.1 正向电流 Vs. 正向电压

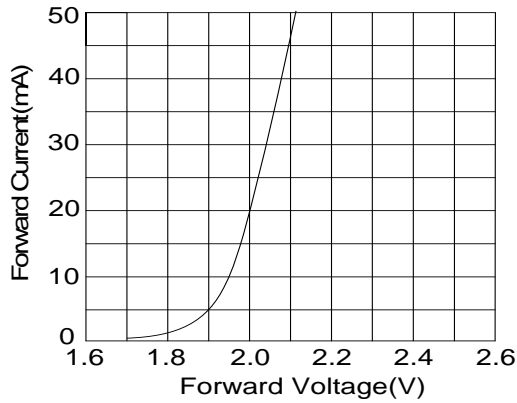


Fig.2 相对亮度 Vs. 正向电流

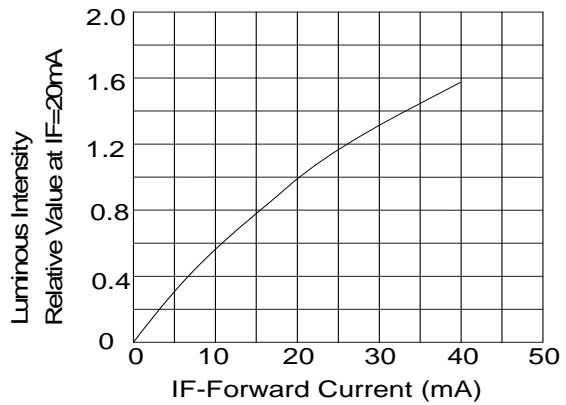


Fig.3 正向电流 Vs. 环境温度

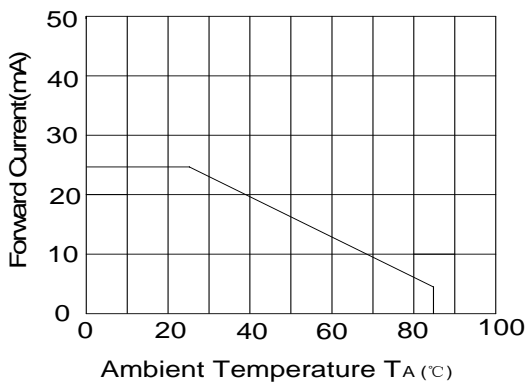


Fig.4 相对亮度 Vs. 环境温度

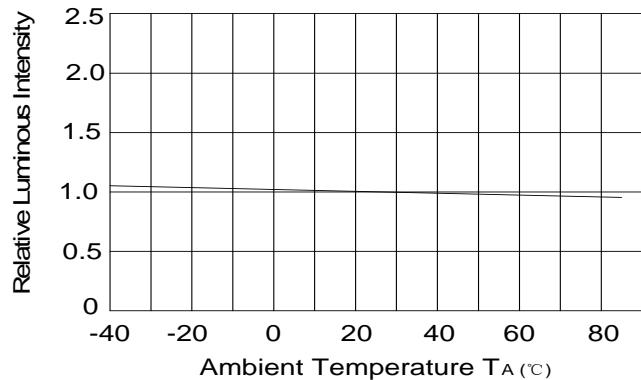
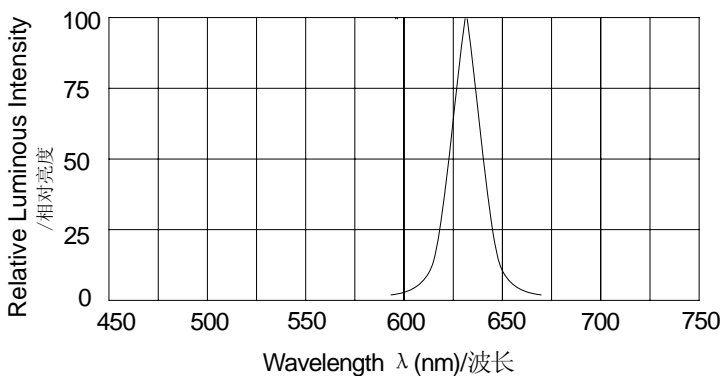
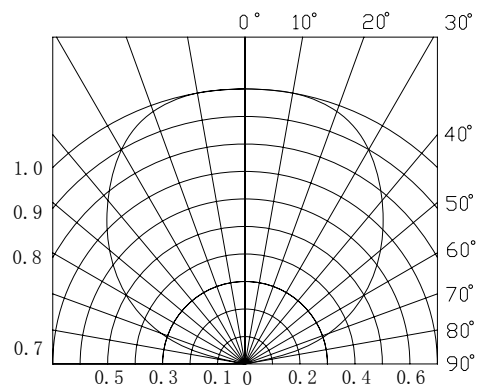


Fig.5 相对亮度 Vs. 波长



SPATIAL DISTRIBUTION





8、Relibility Analysis/可靠性试验

8.1 Test Items And Results/测试项目和判据

No.	Item/项目	Test Condition/测试条件	Spec. / 引用标准	Q'ty/数量	Time/时间	Standard/判定
1	IR Reflow (Reflow Soldering) 回流焊接	Tsld=220°C, 10sec	GB/T 4937, II, 2.2	20	2times	ALL PASS
2	Solder ability 可焊性	Tsld=235±5°C, 3sec	GB/T 4937, II, 2.1	20	1times Over 95%	ALL PASS
3	Temperature Cycle 高低温循环	-40°C—— 100°C 30min ~ 30min The cut is not more than 5 min	GB/T 4937, III, 1	20	50cycles	ALL PASS
4	Moisture Resistance Cyclic 湿热循环	25°C/12hr~ 55°C/12hr 95%RH	GB/T 4937, III, 4	20	6cycles	ALL PASS
5	High Temperature Storage 高温储存	Ta=100°C	GB/T 4937, III, 2	20	1000hrs	ALL PASS
6	Low Temperature Storage 低温储存	Ta=-40°C	GB/T 4937, III, 2	20	1000hrs	ALL PASS
7	Steady State perating Life 电耐久性	IF=60mA Ta=25°C	GB/T 18904.3 Part A	20	1000hrs	ALL PASS

8.2 Criteria For Judging Damage/判断标准

Item/项目	Symbol/符号	Test conditions /测试条件	Criteria for Judgement /判断标准	
			Min./最小值	Max./最大值
Luminous Intensity/亮度	Iv	IF=60mA	L.S.L *0.7	/
Forward Voltage/正向电压	VF	IF=60mA	/	U.S.L*1.1
Reverse current/反向电流	IR	VR=7v	/	U.S.L*2

*U.S.L.: Upper Standard Level / 上限

*L.S.L.: Lower Standard Level / 下限