SPECIFICATION

产品规格书

CUSTOMER :_____

（客户）

PART NO. :_____

（产品型号）

SPEC NO. :_____

（规格书编号）

DATE :_____

（日期）

CUSTOMER AFFIRM （客户确认）		
波长范围（nm）	光通量（LM）	电压（V）

FOR **AFFIRM** （供方确认）		
AFFIRM (核准)	CHECKED （审核）	PREPARED （制定）
		刘小龙

Product Name

产品命名规则

AAA-BB C D E F J H I-J

a b c d e f g h i j

a: Company Name(公司名称缩写)

b: Shine Color(发光颜色)

c: Chip Ratings(芯片等级)

d: Power(功率)

e: Angle of View(发光角度)

f: Mucilage Color(胶体颜色)

g: Package Type(包装类型)

h: Luminous flux Seope(光通量范围)

i: Wavelength Scope(波长范围)

j: Voltage Scope(电压范围)

■Features/特征

Highest Luminous Flux /高光通量

Super energy efficiency /高能效

Long Operating Life (up to 50000hours) /使用寿命长（可达5万小时）

Superior UV Resistance /优异的UV抵抗

Water Clear Type /无色透明型

vironmental protection, lead free and RoHS compliant, no IR & UV radiation
/环保，无铅和RoHS标准，无红外线和紫外线辐射

Quick and easy installation /安装简单快速

■Applications/应用

Traffic signaling/Beacons /交通信号/灯塔

High Power Led Floodlights /大功率泛光灯

High Power Led Street Light /大功率led路灯

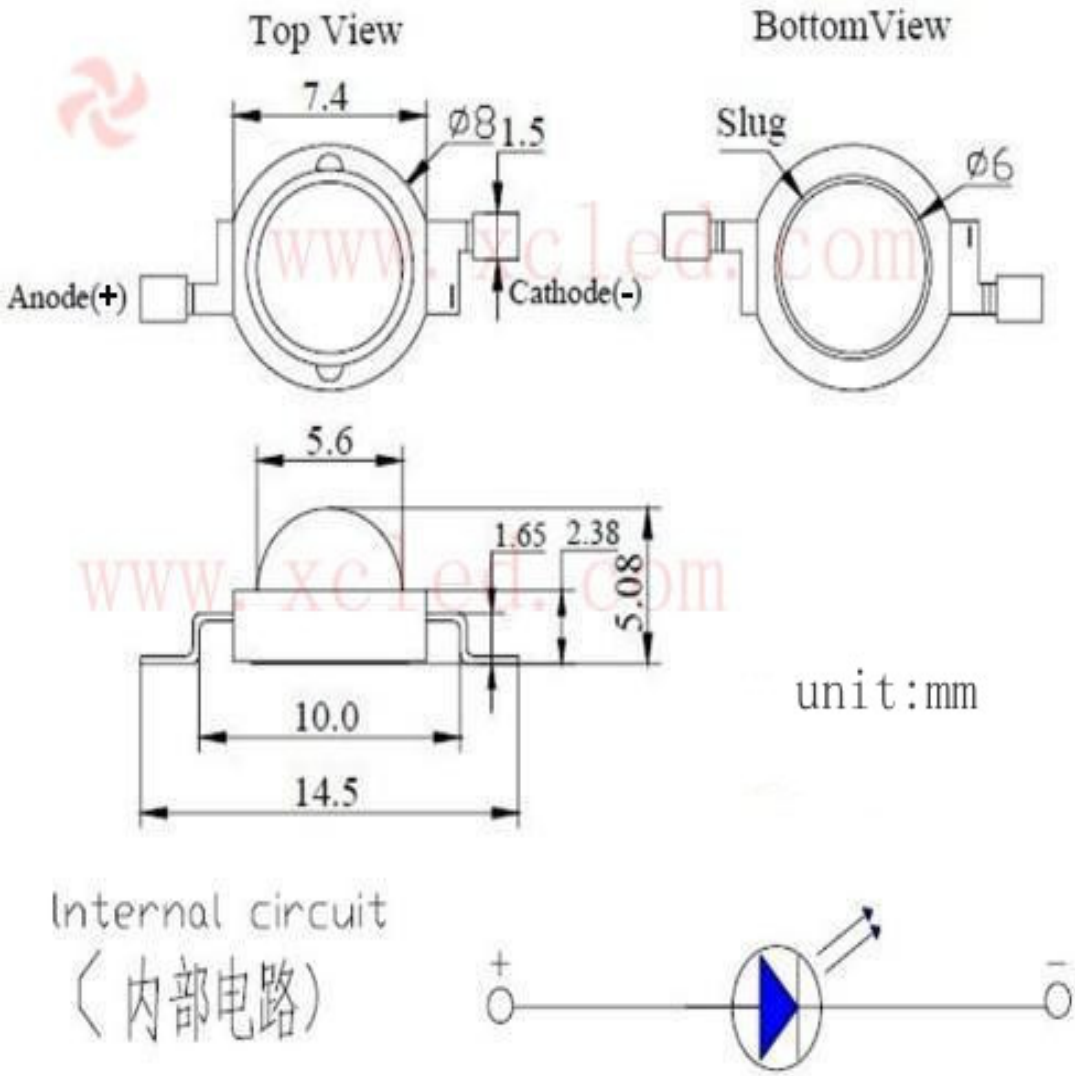
Indoor/Outdoor Commercial lights/ 室内/户外 商业灯

Billboard/Square/Sports venues /广告牌/广场/体育场所

■Outline Dimension/外形尺寸

Notes

1. All dimensions are in millimeters.
2. Tolerance is ±0.25mm unless otherwise noted.
3. Protruded resin under flange is 1.0mm max.
4. Lead spacing is measured where the leads emerge from the package.
5. Specifications are subject to change without notice.



■ Electrical/Optical Characteristics(At T_A =25℃）工作光电参数

Parameter (参数)	Symbol (符号)	Conditions (测试条件)	Min (最小值)	Avg (平均值)	Max (最大值)	Units (单位)
Luminous Intensity (光通量)	¢	$I_{F=700mA}$	70		90	lm
Wavelength （波长）	λD	$I_{F=700mA}$	585		595	nm
Forward Voltage (正向压降)	V_F	$I_{F=700mA}$	2.2		2.6	V
Color Rendering index (显色指数)	Ra	$I_{F=700mA}$	--		--	%
Thermal Resistance Junction To Board (热阻)	$R\odot_{J-B}$	$I_{F=700mA}$	6		8	℃/W
Temperature Coefficient of Forward Voltage (正向压降之温度系数)	$\triangle V_F/\triangle T$	$I_{F=700mA}$		-2		Mv/℃
Reverse Current (反向漏电流)	I_R	$V_{R=5V}$			5	uA

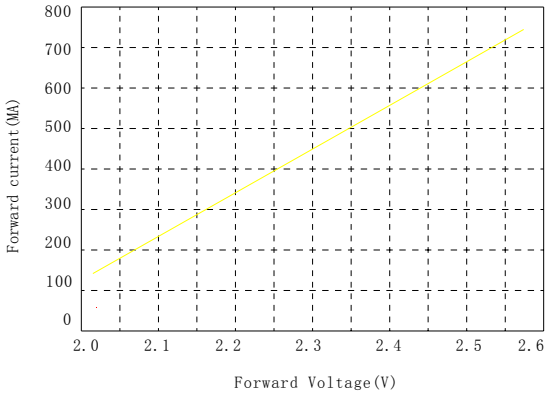
■ Absolute Maximum Rating(At T_A =25℃）极限光电参数

Parameter (参数)	Symboi (符号)	Ratings (数值)	Units (单位)
Power (功率)	P	1.82	W
Continuous Foaward Current (正向输入电流)	I_F	700	mA
Peak Forward Current (顺向脉冲电流)	I_F（Peak）	1000	mA
LED Junction Temperature (结点温度)	T_J	125	℃
Reverse Voltage (反向电压)	V_R	5	V
Operating Temperature Range (工作温度)	T_{opr}	-40℃T0+85℃	
Storage Temperature Range (储存温度)	T_{stg}	-40℃T0+90℃	
Manual Soldering Temperature (手工焊接温度)	T_{sol}	340℃° ±20℃For 3 Seconds	
ESD Sensitivity (抗静电能力)	ESD	2000V HBM	

Optical properties（光电特性）

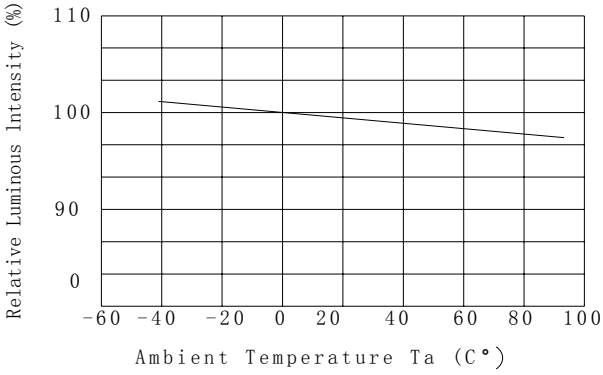
Foward current-Forward Voltage

（正向电流-电压曲线图）



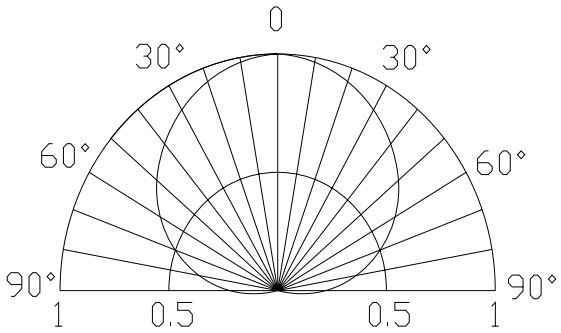
Relative Luminous Intensity VS Ambient Temperature

（温度-光通量曲线图）



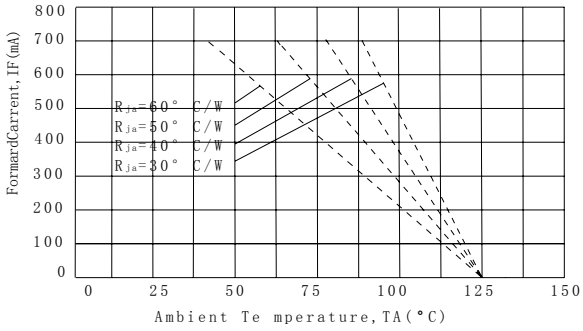
Radiation Diagram

(角度图)

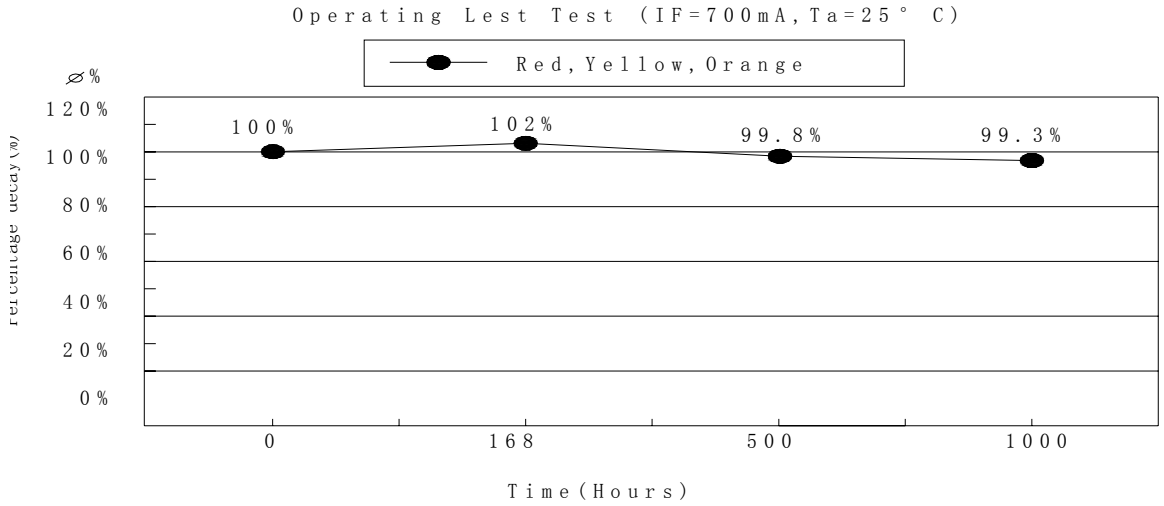


Current Derating Curves

（电流与结温关系）



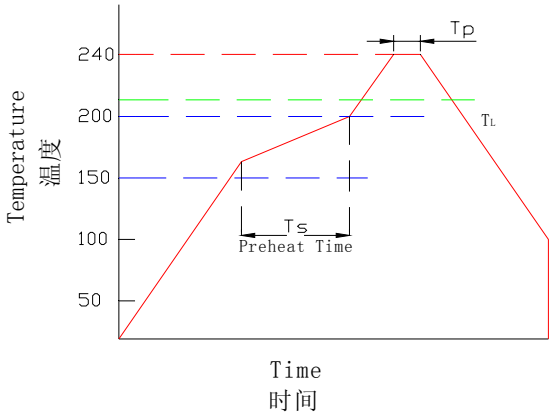
OPERATION LIFE TEST LUMINANCE RATE CURVE



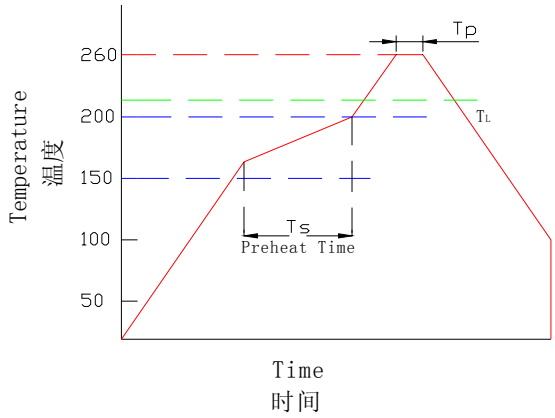
Reflow Soldering Characteristics

（回流焊特性）

Lead Solder



Lead-free Solder



Soldering Condition
（焊接条件）

Reflow Soldering 回流焊接			Hand Soldering 手工焊接	
	Lead Solder	Lead-free Sol		
Profile Feature 平均升温速度	2-3℃/s	2-3℃/s	Temperature 温度	350℃ Max
Pre-heat(Ts) 预热	120-150℃	150-180℃		
Perheat time(Ts) 预热时间	60-120s	120s Max		
Temperature(TL) 温度	217℃	217℃		
Time Maintained above 高于 TL 温度的时间	60-90s	60-90s		
Peak Temperature(Tp) 峰值温度	240±5℃	260℃	Time 焊接时间	3 sec （一次性完成）
Perk Time（Tp） 实际峰值温度内的时间	20s	20s		
Soldering Time Condition 焊接时间条件	5sec Max	5sec Max		
Ramp-Down Rate 降温速度	3-5℃/s	3-5℃/s		

Recommend The use of environmentally friendly **Lead-free Solder**
建议使用对环境无害的无铅焊料

Note the use of high-power LED

Product Protection

LED is the electrostatic sensitive devices, so the product storage, transportation, application process, paying particular attention to static electricity, electromagnetic waves, and together with the necessary anti-static measures

Safety Precautions

Harmful substances such devices include GaAs, GaAs dust and fumes are toxic, this product can not be broken, cutting or grinding, not with chemicals to dissolve.

Design and Application

1. in the ratings to be used within the operating LED current limit function of the resistor. How much resistance will have to refer to the specific product specifications required to calculate the rated current plus that.
2. LED to be used in parallel mode, each LED channel by adding resistors are required, must not be led directly to multiple parallel.
3. circuits shall be designed to note: When the LED goes out to prohibit reverse voltage.
4. circuitry required to design note: the lights, turn off the lights when you prevent the instantaneous voltage.
5. solder direction (electrode direction) to be orthogonal with the direction of PCB.
6. high temperature will reduce its performance and reliability, please stay away from heat sources.

Cleaning

1. avoid the use of non-designated chemical solvents to clean the LED. For example: trichloroethene, chlorosilanes, acetone, difluoro esters.
2. If necessary cleaning carried out at room temperature, and not more than 1 minute.
3. When using any cleaning a chemical solvent to be especially careful, because some chemical solvents will damage the gel surface.
4. recommend the use of isopropyl alcohol or pure water (not tap water) for cleaning.
5. If using pure water, then immediately after cleaning dehumidifying, forced drying.

Save

1. before unpacking, LED should be stored in 30 ℃ / 90% RH or less environment. After opening the package, LED should be placed in 30 ℃ / 70% RH or below the environment

2. effective use for 1 year, after opening in 168H (7 days) of the exhausted.
3. If the use of desiccant fade or expired, the need to dry and roast: 60 ± 6 ℃ / 24H.
4.LED James Gray lens easily, you need to do a good job related to dust control measures

Pick and place
Grasping LED can only touch on the body frame, tweezers, a tool can not put pressure on the lens, not to stamp. stab or push the lens.

Heat treatment
When the LED current drive is too large the Tj (junction temperature) will exceed its limit, which can cause serious shorten the life of LED, the heat treatment measures to effectively reduce the thermal resistance applications. More common practice is to install the LED package device PCB board in the metal matrix. 1WLED products require heat the metal substrate surface area of at least 30 ㎠ (3W products recommended above 80 ㎠), and its thermal conductivity is higher than 2.0W/mK.LED and thermal conductivity of metal substrate by a better combination of thermal plastic, thermal requirements Coefficient is higher than 1.0W/mK. thickness of less than 100um.

大功率 LED 使用注意事项

产品防护

LED 是静电敏感器件，因此产品储藏，运输，应用等过程中，要特别注意静电，电磁波，并且加上必要的防静电措施。

安全注意事项

此种元件内含有害物质 GaAs，GaAs 灰尘及其烟雾是有毒的，此产品不可折断、切割或研磨，不可用化学药品溶解。

设计与应用

1. 在额定值内操作ＬＥＤ时须用到限制电流功能的电阻器。具体阻值多少则要参考产品规格书所规定额定电流再加以计算得知。
2. LED 须采用并联的方式时，每个 LED 通道上均需加入电阻器，切不可将多个 led 直接并联使用。
3. 电路须设计注意：当熄灭 LED 时禁止反向电压。
4. 电路须设计注意：在开灯、关灯时防止瞬时电压。
5. 焊锡方向（电极方向）须与ＰＣＢ方向正交。
6. 高温会降低其性能及可靠性，请远离发热源。

清洗

1. 避免使用非指定化学溶剂清洗 LED。比如：三氯乙烯、氯硅烷、丙酮、二氟酯。
2. 若有必要清洗，请在室温下进行，且不可超过 1 分钟。
3. 当使用任何一种化学溶剂进行清洗时须特别小心，因为有些化学溶剂会损伤胶体表面。
4. 建议使用异丙基、酒精或纯净水（非自来水）进行清洗。
5. 若用纯净水清洗，则在清洗过后须立即除湿，强行干燥。

保存

1.在打开包装前，LED 应存放在 30℃/90%RH 或以下环境中。打开包装后，LED 应置于 30℃/70%RH 或以下环境中

2.有效使用期为 1 年，开封后要在 168H（7 天）之内用完。

3.若干燥剂退色或过期使用时，需干燥烘烤：60±6℃/24H。

4.LED 的透镜易沾灰，需要做好相关防尘措施。

取放

夹取 LED 时只能触及支架体，镊子之类的工具不能对透镜施压，更不能戳.刺或推透镜。

热量处理

在过大电流驱动时 LED 的 Tj（结温）会超过其限制值，这会导致 LED 的寿命严重缩短，热量处理措施要有效地减小应用产品的热阻。比较通用的做法是把 LED 封装器件安装在金属基质的 PCB 板上。1WLED 产品要求金属基板的表面散热面积至少 30C ㎡（3W 产品建议 80 C ㎡以上），且其导热系数要高于 2.0W/mK.LED 和金属基板结合靠导热性较好的导热胶，要求导热系数要高于 1.0W/mK.厚度小于 100um。