



产品规格承认书

Product Specification

产品名称/Product Name: LAMP ϕ 5mm 产品

文件编号/Document Number: PDS- P0513A-KP-H1B3-I0

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色容差/ SDCM : 无

机 差/Tolerance : () 无机差 () 有机差

产品应用/Product Application: _____

客户要求/Customer Requirement: 1. _____

2. _____ 3. _____

源磊 Runlite		客户 Customer	
制作 Prepared	林跃敏	工程 Engineering	客户代码:
审核 Checked	Fealty zhu	品质 Quality	
批准 Approved		批准 Approved	

注: 此页和最后一页也为签核部分, 请全部签核并盖章后回传到我司, 谢谢。

LAMP ϕ 5mm 单芯系列规格书

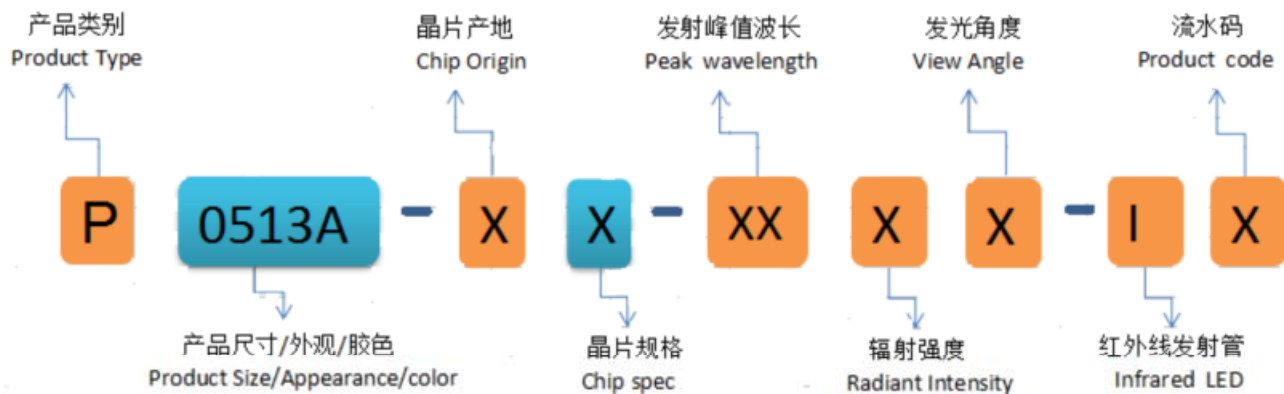
LAMP ϕ 5mm Single Chip Data Sheet

● 特性 Features

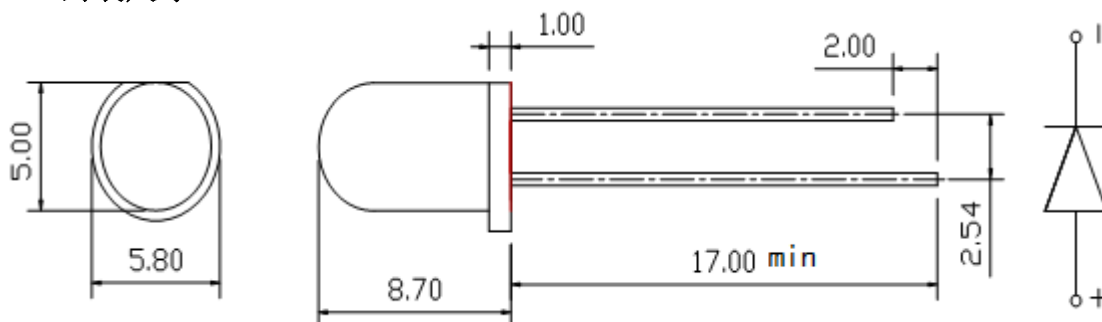
8.7mm长*5.0mm宽
 角度: 30°
 包装: 1000PCS 一包
 晶片材质: ALGaAs
 胶体颜色: 无色透明
 工作温度: -40~80度
 低功率
 可做不同的种类.
 胶水: 环氧胶
 反向电压 5V
 储存温度-40~+100度

8.7mm*5.0mm LAMP LED, Thickness.
 View Angle:30°
 Package: 1000PCS/Package
 Chip material: ALGaAs
 Lens color: water clean
 Operating Temperature:-40~+80°C
 Low Power Consumption
 Various Colors And Types Available.
 Resin(Mold):Epoxy resin
 Reverse Voltage:5V
 Storage Temperature:-40~+100°C

● 产品编码解说 Product Definition Code



● 封装尺寸 Dimension



Note:

图中所有尺寸均以毫米为单位 All dimensions are in millimeter
 所有的标示尺寸仅供参考, 除了有特别标注外, 尺寸公差为±0.25 毫米.
 All dimensions for reference only, dimensions are in mm tolerance is ±0.25mm unless otherwise noted.
 多胶不超过0.5 毫米. Burr around bottom of epoxy may be 0.5mm max.

● Applications /应用:

Smoke detectors / 烟雾探测器

Monitoring camera / 监控摄像头

Burglar alarm syetem / 防盗报警系统

● 极限参数 (温度=25°C) Absolute maximum ratings at Ta=25°C

项目 Item	符号 Symbol	极限参数 Absolute Maximum Rating	单位 Unit
正向电流 Forward Current	I _F	50	mA
正向脉冲电流 Pulse Forward Current	I _{FP}	200	mA
反向电压 Reverse Voltage	V _R	5	V
功耗 Power Dissipation	P _D	75	mW
操作温度 Operating Temperature	T _{opr}	-40~80	°C
储存温度 Storage Temperature	T _{stg}	-30~100	°C

注: IFP 脉冲条件为脉冲宽度≤100 us 和周期≤1%

Notes: IFP conditions—Pluse width ≤ 100 us and Duty ≤1%

● 光电参数 (温度=25°C) Optical-Electrical Characteristics at Ta=25°C

参数名称 Parameter	符号 Symbol	数值 Value			单位 Unit	测试条件 Test condition
		Min.	Typ.	Max.		
发光强度 Radiant Intensity	I _e	-	19	-	mW/sr	I _F =20mA
		-	45	-	mW/sr	I _F =50mA
峰值波长 Peak Wavelength	λ _p	-	850	-	nm	I _F =20mA
半波宽 Spectral Bandwidth	Δλ	-	50	-	nm	I _F =20mA
正向电压 Forward Voltage	V _F	-	1.40	1.55	V	I _F =20mA
		-	1.45	1.65	V	I _F =50mA
反向电流 Reverse Current	I _R	-	-	10	uA	V _R =5V
全视角 View Angle	2θ 1/2	-	30	-	Deg	I _F =20mA

此项以客户下采购合同要求光电参数规格为准

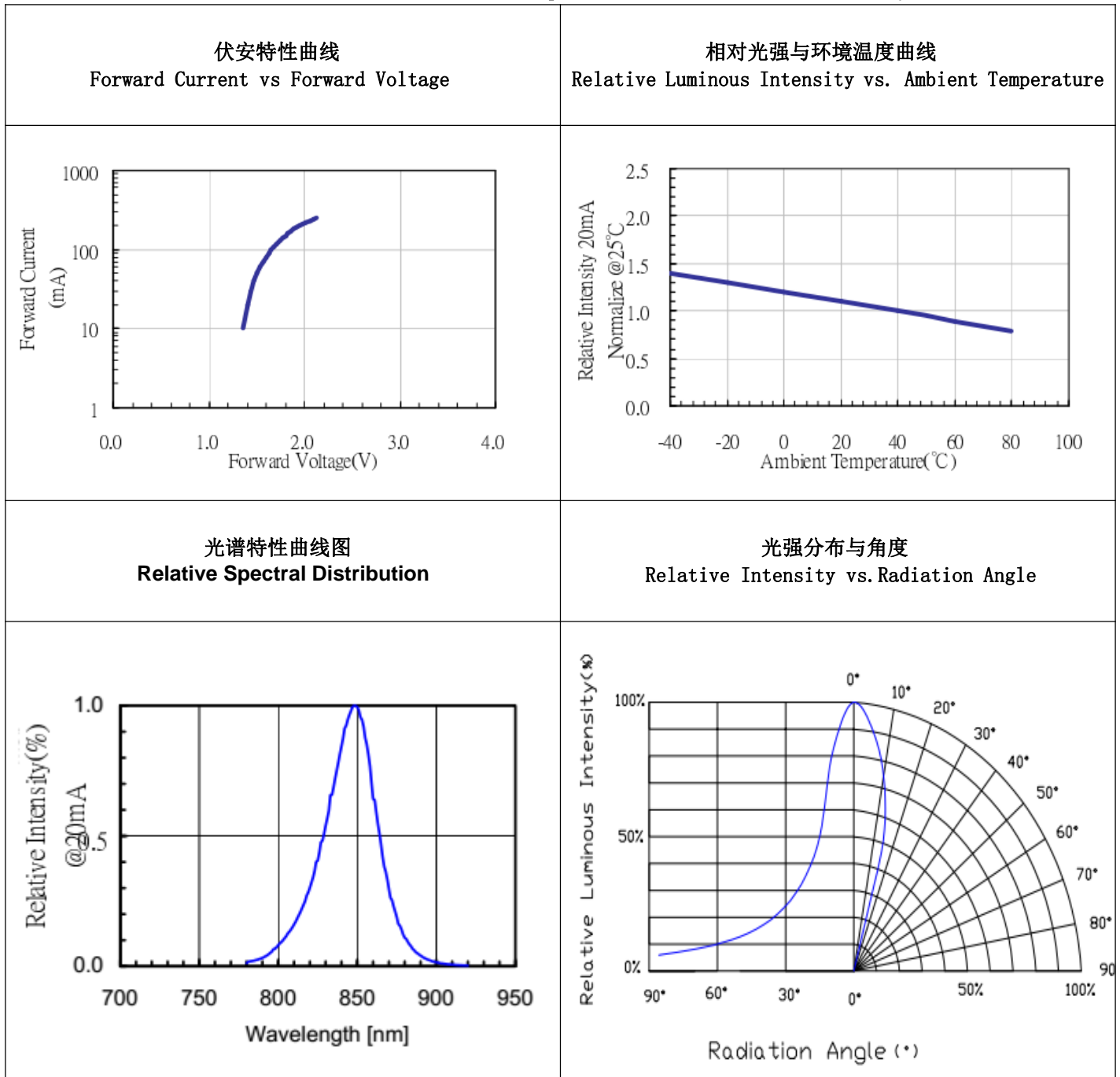
The customer requirements under the purchase contract photoelectric parameter specifications

Notes: 发光强度(I_e)±10% Radiant Intensity Tolerance ±10%

● Recommended soldering conditions 推荐焊接条件

焊接模式 Mode		Fixed form 固定形式
Hand Soldering 手工焊接	Temperature .at tip of iron 电烙铁温度	300°CMax. (30WMax.) 最高温度300°C (功率不超过30 瓦)
	Soldering time 焊接时间	3 sec Max. 时间不超过3 秒
	Distance 焊接位置	3mm Min. (From solder joint to case) 大于3 毫米 (从焊点到胶体)
DIP Soldering 锡炉焊接	Preheat temperature 预热温度	100°C Max. (60 sec Max.) 最高温度100°C (不超过60 秒)
	Soldering temperature 浸焊温度	260°C Max 最高260°C
	Soldering time 浸焊时间	3 sec Max. 不超过3 秒
	Distance 浸焊位置	2mm Min 大于2 毫米
Wave Soldering 波峰焊接	Preheat temperature 预热温度	100°C Max. (60 sec Max.) 最高温度100°C (不超过60 秒)
	Soldering temperature 浸焊温度	260°C Max. 最高260°C
	Soldering time 焊接时间	5 sec Max. 不超过5 秒

● 典型光电特性曲线 Typical Optical-Electrical Characteristics curves
环境参数 Environment Parameter: 温度 Temperature=25°C, 湿度 Humidity=60%



● 信赖性测试项目及标准 Test items and results of reliability

测试项目 Test Item	测试条件 Test Conditions	持续周期 Duration/Cycle	数量 Quantity	接收/拒收 Ac/Re
温度循环 Temperature	-40°C 30min ↑ ↓ 25°C (2min) 100°C 30min	循环 100 次 100 times	22pcs	0/1
冷热冲击 Thermal Shock	-40°C 30min ↑ ↓ 5sec 100°C 30min	循环 100 次 100 times	22pcs	0/1
高温储存 High Temperature Storage	Ta=100°C	1000 小时 1000 hours	22pcs	0/1
高温高湿 Humidity Heat Storage	Ta=85°C RH=85%	1000 小时 1000 hours	22pcs	0/1
低温储存 Low Temperature Storage	Ta=-40°C	1000 小时 1000 hours	22pcs	0/1
常温老化 Room Temperature Test	Ta=25°C If=20mA	1000 小时 1000 hours	22pcs	0/1
高温高湿老化 High Humidity Heat Test	60°C RH=90% If=20mA	1000 小时 1000 hours	22pcs	0/1
低温老化 Low Temperature Test	Ta=-40°C If=20mA	1000 小时 1000 hours	22pcs	0/1

● 失效判断标准 Criteria for judging the Damage

项目 Item	符号 Symbol	条件 Condition	失效判断标准 Criteria for Judgement	
			下限 MIN	上限 MAX
顺向电压 Forward Voltage	VF	If=20mA	---	USL×1.1
反向电流 Reverse Current	Ir	If=5V	---	10uA
发光强度 Radiant Intensity	Ie	If=20mA	LSL×0.7	---

备注[Note]:

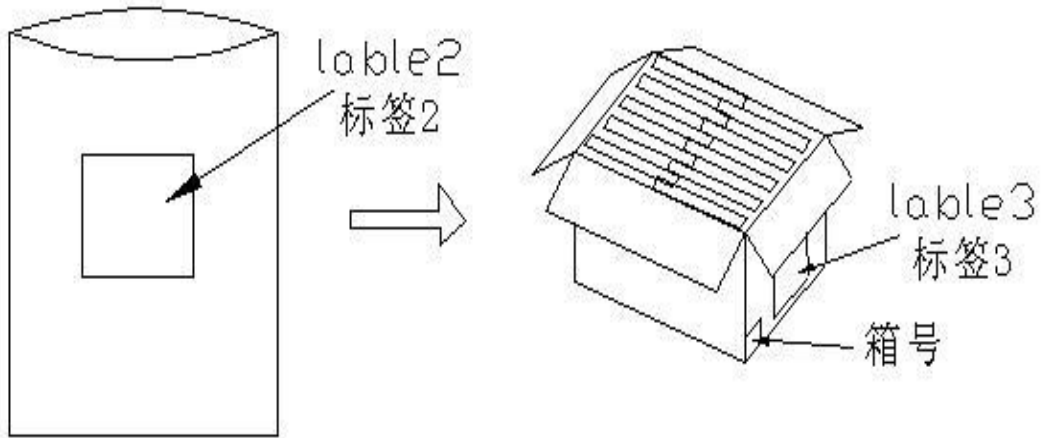
*1 USL:标准上限值

Uper Specification Level

*2 LSL:标准下限值

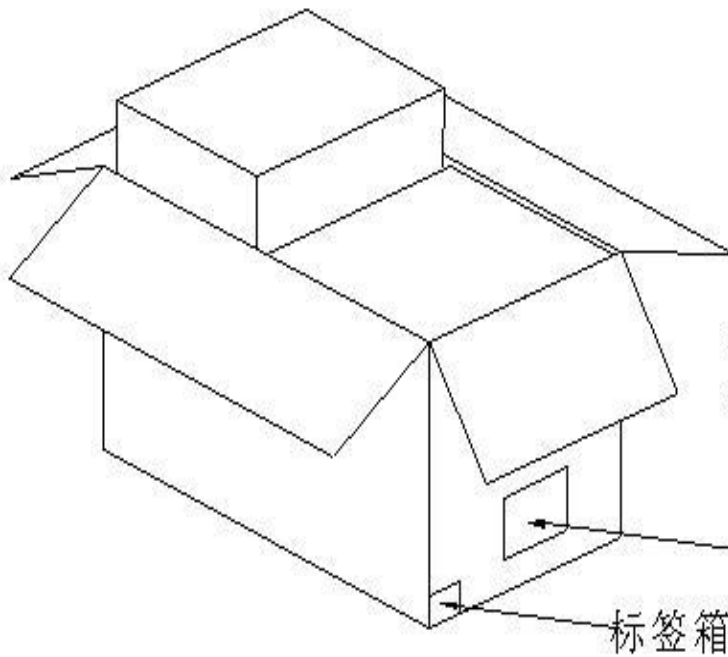
Lower Specification Level

● 包装规格 Packaging



防静电袋:150*225mm

内中箱尺寸: 340*235*165mm



外中箱尺寸: 340*323*328mm

外大箱尺寸: 495*358*357mm

● 注意事项/ Caution

- 1、 After open the package, the LED should be kept at 25°C, 65 % RH environment or less.
打开包装后请在温度 25±3 °C 湿度 65±5% 的环境下使用。
- 2、 10°C-26°C, 40%-65% RH. Store the product in sealed package.
湿度 10°C~26°C, 湿度 40%~65%, 包装袋密封保存。
- 3、 The LED should be soldered within 48 hours (2 days) after opening the package.
打开包装后请在 24 小时内作焊接。
- 4、 It is recommended to use a wrist band or an antistatic glove when handling the LEDs. Operation tables must be earthed, and in order to avoid the oxidizing of the Lamp leads make sure you will seal the package soon after it is opened.
接触 LED 时需戴手套或手指套, 工作台面要接地, 包装袋开口后及时封口, 防止脚位氧化
- 5、 The LAMP LED is an ESD sensitive device. All the equipment and machine must be properly grounded.
LED 是静电敏感器件, 使用时所有设备、机械都需有适当的接地导电措施。
- 6、 when make use of it, please use static-free container, operator should wear antistatic clothes and rope-satic-ring also should make effective ground.
使用时请使用防静电的盛装容器, 作业人员应穿著防静电服装及佩带有绳之静电环并作有效接地。
- 7、 Damaged device will appear some symptoms, lower forward voltage, higher leak current, or even short circuit
受静电与突波破坏之 LED 的电性特性上, 会有明显的漏电流, 或驱动电压明显变低, 甚至是短路现象。
- 8、 when shaped pin should used tong or by professional staff , keep 3mm at least between lens and bend pin, the pin should be shaped before soldering..
引脚成形必须使用夹具或由专业人员来完成, 离胶体最少 3mm 才能弯折引脚, 并请在焊接前完成引脚成形。
- 9、 the pin can't not be press in high temperature, cut pin in room temperature because in high temperature LED may fail
高温时, 不可对引脚施压, 请在室温时裁切引脚, 高温时裁切可能会造成 LED 失效。
- 10、 after shape , pin space should keep in line with the PCB board space
引脚成形后必须保证引脚间距和线路板上的一致。
- 11、 LED is one-way continuity, please check electrode before mount, if amount wrong , the LED chip will damage or fail when LED applied voltage
单向导通性, 安装前确认极性, 若装反, 在施加电压时容易造成 LED 晶片损伤或失效。
- 12、 ordinary our LED the long pin is anode , short pin is cathode, lens without gap is anode , with gap is cathode. unless other special require and note
通常在无特别要求或提示下, 我们提供的 LAMP LED 的长脚为正极, 短脚为负极。胶体无缺口的一端为正极, 有缺口的一端为负极。
- 13、 please design the PCB board to keep a distance between LED and other emit heat component
线路设计时, 请不要将 LED 与发热元件靠得过近。
- 14、 strongly recommend design the board according setting current other than setting voltage . if you are really need setting voltage type please consider there may cause influence arise by difference voltage of difference LED
电路设计上, 建议以定电流设计, 若为定电压设计, 请考虑 LED 之间不同正向电压所可能造成之影响。
- 15、 the outer voltage change will bring the current index change . unsuitable design and current control, easy cause LED fail . for example excess current will cause LED life short or even burn down , too little electricity will cause lacking light
LED 之外加电压变化, 会造成电流指数级变化, 不当之设计与电流控制, 易造成 LED 失效, 如电流过大引起寿命问题甚至烧毁,

电流过小引起亮度不足。

16、If you need make difference BIN LED in the one module .please confirm whether it can meet the electric and optics characteristic require such as the current balance, emitting and brightness consistency.

不同BIN号之LED需安装在同一个组件时，请先确认是否可满足相关电流及光学之特性要求，如电流是否均衡，光色、亮度的一致性。

17、To protect your eyes, please don't watch the product directly when the LEDs lighten.
请不要直视点亮的LED，以免伤害眼睛。

18、It's unsuitable for circumfluence soldering
本产品不适宜回流焊接。

19、ferrochromium soldering :power keep no more than 30W,tip temperature should not pass 280°C, soldering time within 3 second, welding position and lens should keep 3mm distance at least

烙铁焊接时烙铁功率不要超过30W，尖端温度不要超过280°C，焊接时间不要超过3秒，焊接位置最少与胶体保持3mm距离。

20、wave-soldering: temperature should not pass 265°C, soldering time within 5 second, welding position and lens should keep 3mm distance at least

波峰焊接时温度不超过265°C，焊接时间不要超过5秒，焊接位置最少与胶体保持3mm距离。

21、After soldering the LED should keep out off any shake or outer force before it come to normal temperture
在焊接温度回到正常以前，必须避免使LED受到任何震动或外力。

源磊/Runlite		客户/Customer	
制作/Prepared	林跃敏	工程/Engineering	
审核/Checked	Fealty zhu	品质/Quality	
批准/Approved		批准/Approved	