产品介绍product presentation

Bai lang type series of products with high ratio of solid-state semiconductor light source, suitable for large engineering indoor-outdoor lighting design application products; Structure performance to adapt to all kinds of lamps and lanterns, constant current drive, optical lens, radiator, and other accessories and has a good application compatibility; Light quality performance in color uniformity, color, lumen, light spot, has excellent performance, and in the combination of CCT and CRI provides design flexibility and high efficiency; In terms of the quality of products of material has a strict control, production products must pass the reliability test standards; And the series has a large number of applications in the street lamp, shoot the light, wash wall lights, buried lights and other lighting applications, has a natural Gao Liuming, environmental quality, long life, design outstanding advantages are widely accepted by the user.

产品特征product features

- 160lm/w 量产级大功率
- 高导热铜柱散热结构
- 聚光透镜出光
- 产品结构应用配套完善
- 通过 RoHs，LM-80 认证
- 30000 小时以上超长寿命
- CCT 和 CRI 参数灵活匹配
- 光色一致性
- SMT 焊接的通透性

应用领域application fields

- 高功率照明灯具
- 户外工程照明
- 室内商用照明
- 通用照明
- 路灯，射灯，洗墙灯
- 指向性照明
- 舞台灯光
- 亮化照明
- 交通信号灯

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参数特征parameter characteristic

特征feature	单位unit	最小值min	典型值typical	最大值max
外观尺寸external dimension L*W	mm		14.5*8.05	
发光面外直径Shiny surface outside diameter Φ	mm		5.5	
半强发光角度Half a strong light Angle 2θ1/2	deg.		120	
相关色温correlated colour temperature CCT	k	2600		25000
光效luminous efficacy of light source η	lm/w	90		160
显色指数 CRI	Ra	55		98
耗散功率 PD	W		1/3/5	
工作温度operating temperature Top	℃	-40		+60
储存温度 Tst	℃	-40		+85
测试点（光源测试点） Tc	℃			60
结温 Tj	℃			115
反向电流（Vr=5V） Ir	uA			10
相关热阻 Rj-c	℃/W		12/6	
静电击穿电压 ESD（HBM）	V			2000
回流焊接（无铅） ST	℃			180

实际参数actual parameter (Tc = 25℃)

颜色	色温（K）		显指 Ra	2.8-3.4V @350mA		3.2-4.0V @750mA	
	最小	最大		lm		lm	
暖白 warm white	2600	2900	/	1.110-120 2.120-130 3.140-150 4.150-160 5.160-170 6.170-180	1.	1.240-260 2.260-280 3.280-300 4.300-320	
			70	1.100-110 2.110-120 3.130-140 4.140-150 5.150-160 6.160-170		1.220-240 2.240-260 3.260-280 4.280-300	
			80	1. 90-110 2.100-110 3.120-130 4.130-140 5.140-150 6.150-160		1.200-220 2.220-240 3.240-260 4.260-280	
			90	1.100-110 2.110-120 3.120-130 4.130-140		1.180-200 2.200-220 3.220-240 4.240-260	
	2900	3200	/	1.110-120 2.120-130 3.140-150 4.150-160 5.160-170 6.170-180		1.240-260 2.260-280 3.280-300 4.300-320	
			70	1.100-110 2.110-120 3.130-140 4.140-150 5.150-160 6.160-170		1.220-240 2.240-260 3.260-280 4.280-300	
			80	1. 90-110 2.100-110 3.120-130 4.130-140 5.140-150 6.150-160		1.200-220 2.220-240 3.240-260 4.260-280	
			90	1.100-110 2.110-120 3.120-130 4.130-140		1.180-200 2.200-220 3.220-240 4.240-260	
中性白 neutral white	4000	4500	/	1.120-130 2.130-140 3.140-150 4.150-160 5.160-170 6.170-180		1.240-260 2.260-280 3.280-300 4.300-320	
			70	1.110-120 2.120-130 3.130-140 4.140-150 5.150-160 6.160-170		1.220-240 2.240-260 3.260-280 4.280-300	
			80	1.100-110 2.110-120 3.120-130 4.130-140 5.140-150 6.150-160		1.200-220 2.220-240 3.240-260 4.260-280	
			90	1.100-110 2.110-120 3.120-130 4.130-140		1.180-200 2.200-220 3.220-240 4.240-260	

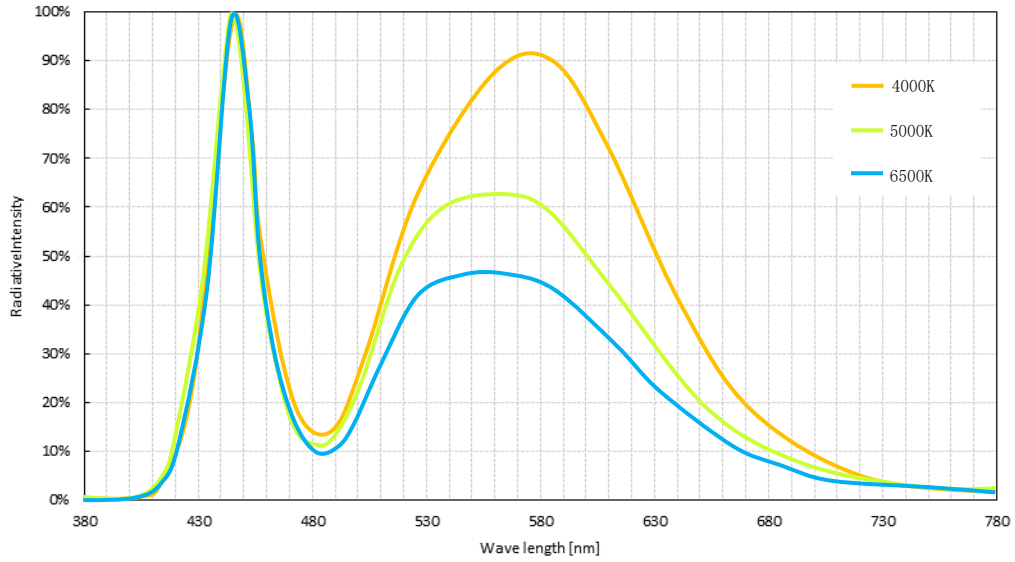
实际参数actual parameter (Tc = 25℃)

颜色	色温（K）		显指 Ra	2.8-3.4V @350mA		3.2-4.0V @750mA	
	最小	最大		lm		lm	
白光 white light	5000	5500	/	1.120-130 2.130-140 3.140-150 4.150-160 5.160-170 6.170-180		1.240-260 2.260-280 3.280-300 4.300-320	
			70	1.110-120 2.120-130 3.130-140 4.140-150 5.150-160 6.160-170		1.220-240 2.240-260 3.260-280 4.280-300	
			80	1.100-110 2.110-120 3.120-130 4.130-140 5.140-150 6.150-160		1.200-220 2.220-240 3.240-260 4.260-280	
	5500	6000	70	1.120-130 2.130-140 3.140-150 4.150-160 5.160-170		1.240-260 2.260-280 3.280-300	
			80	1.110-120 2.120-130 3.130-140 4.140-150 5.150-160 6.160-170		1.220-240 2.240-260 3.260-280 4.280-300	
正白 pure white	6000	6500	70	1.120-130 2.130-140 3.140-150 4.150-160 5.160-170 6.170-180		1.240-260 2.260-280 3.280-300 4.300-320	
			80	1.110-120 2.120-130 3.130-140 4.140-150 5.150-160 6.160-170		1.220-240 2.240-260 3.260-280 4.280-300	

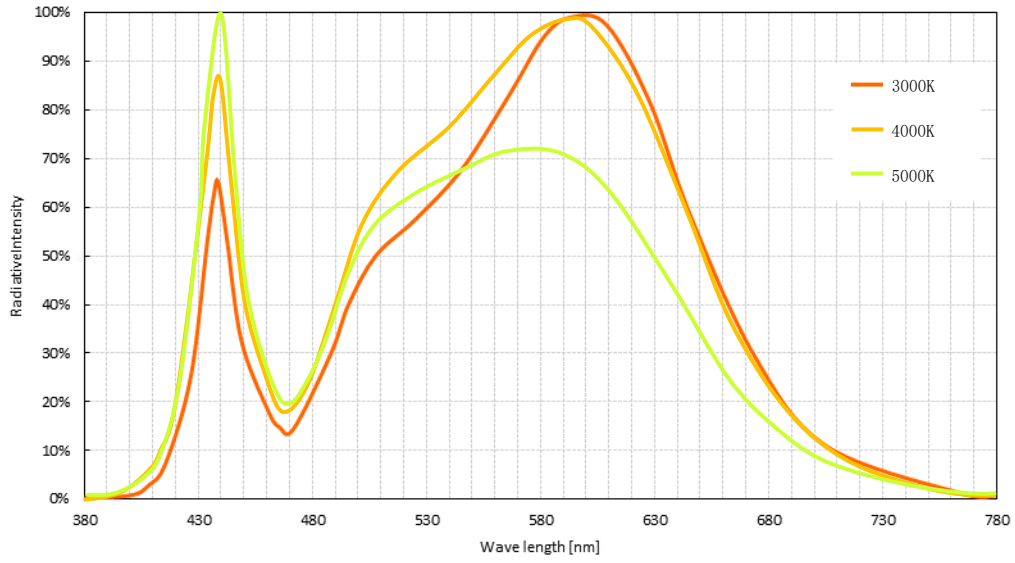
以上实际参数提供了朗柏型系列的白光编号，在采购该产品系列时，应按型号进行选购，在特殊性能，定制产品时，该产品不在列表范围， 应及时跟销售人员进行沟通；或咨询客服人员。（说明：机器光通量测试误差3%）Above the white light of the actual parameters provides lang cypress type series number, when purchasing the products shall be carried out according to the type of choose and buy, in the special performance, custom products, this product is not on the list, should be timely communication with the sales staff; Or consulting the personnel of the service. (note: the machine flux test error of 3%)

相对光谱 relative spectral(Tc = 25℃)

CRI(Ra) 70Min

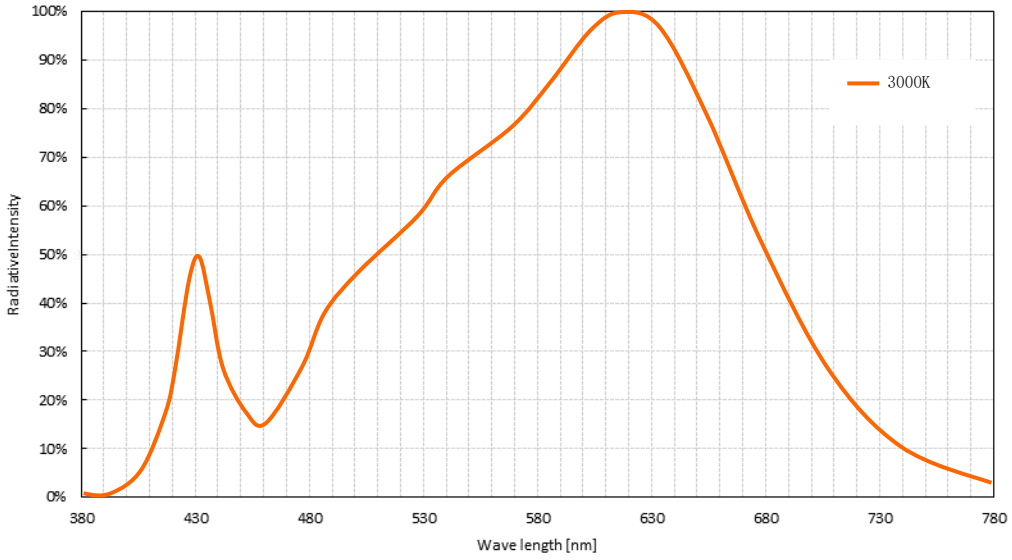


CRI(Ra) 80Min

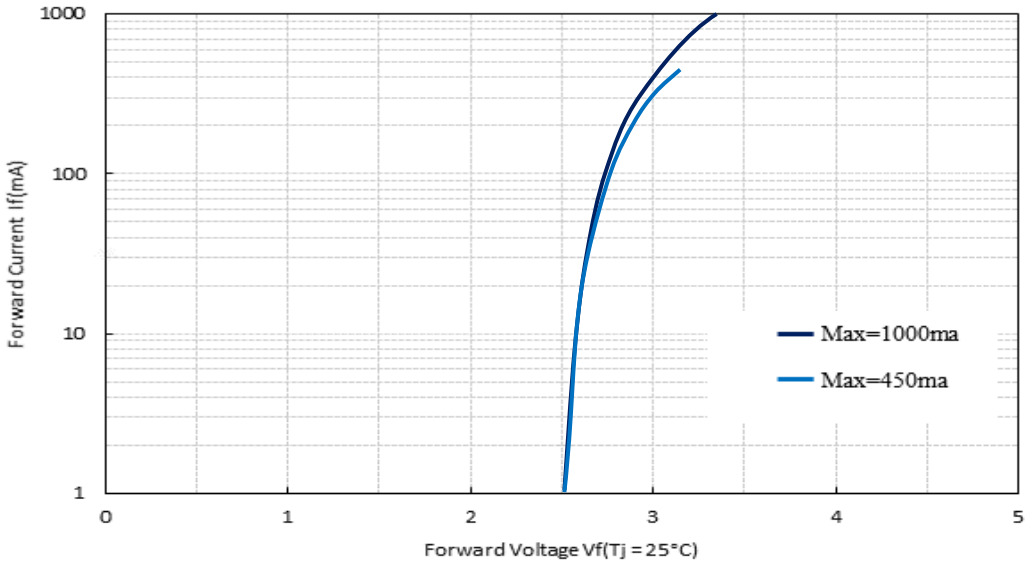


相对光谱relative spectral

CRI(Ra) 90Min

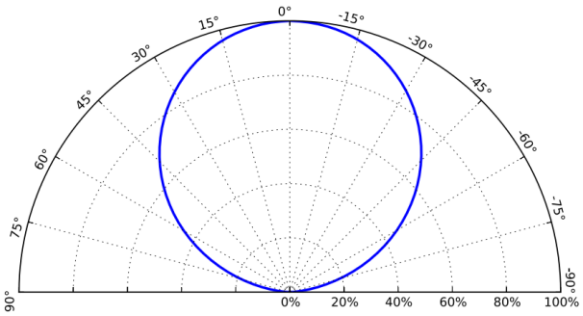


伏安特性曲线 volt-ampere characteristics

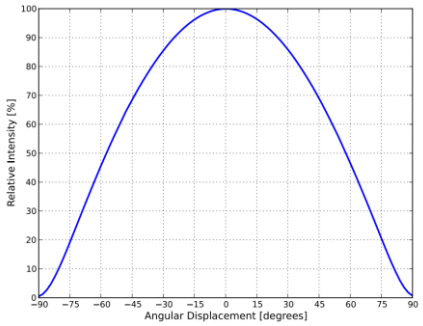


光学特征optical characteristic(Tc = 25℃)

辐射场型图Radiation field type figure

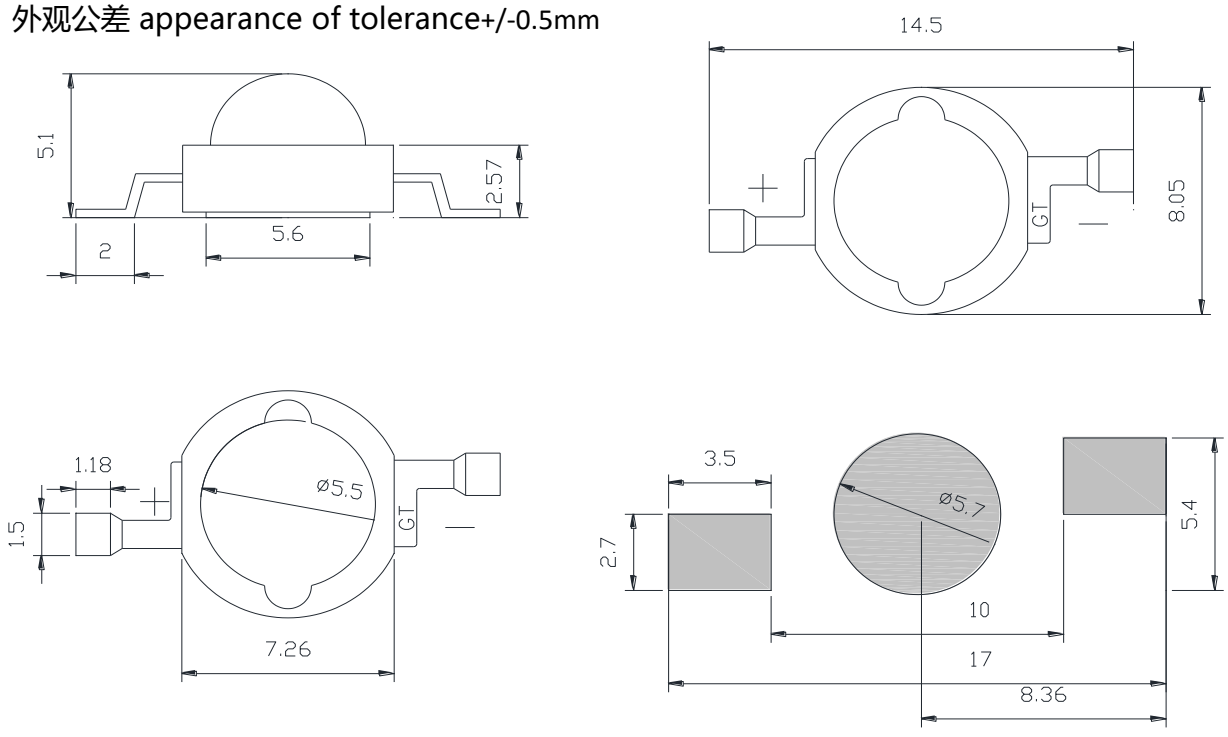


光强分布图surface of intensity distribution

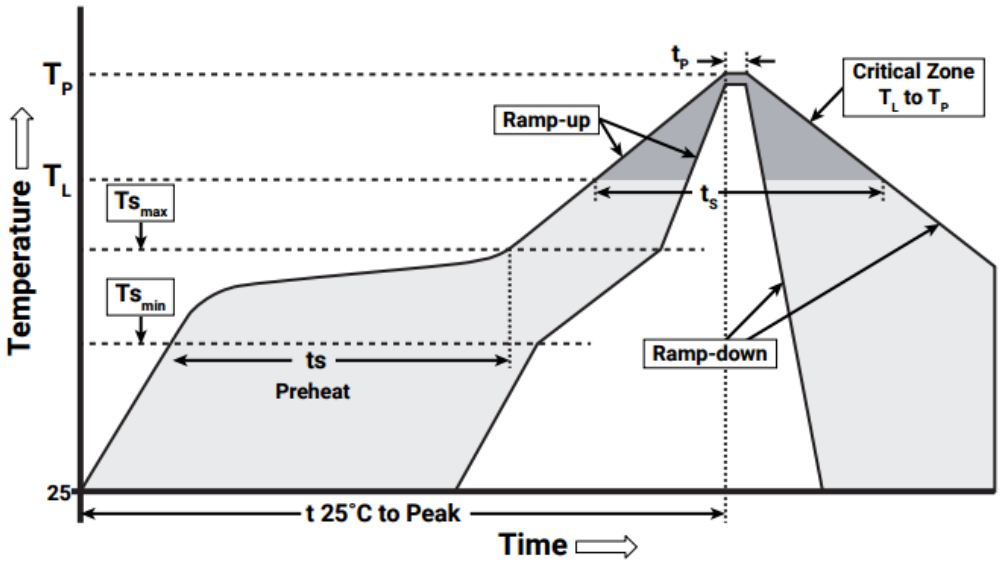


标准尺寸standard size(Unit:mm)

外观公差 appearance of tolerance+/-0.5mm



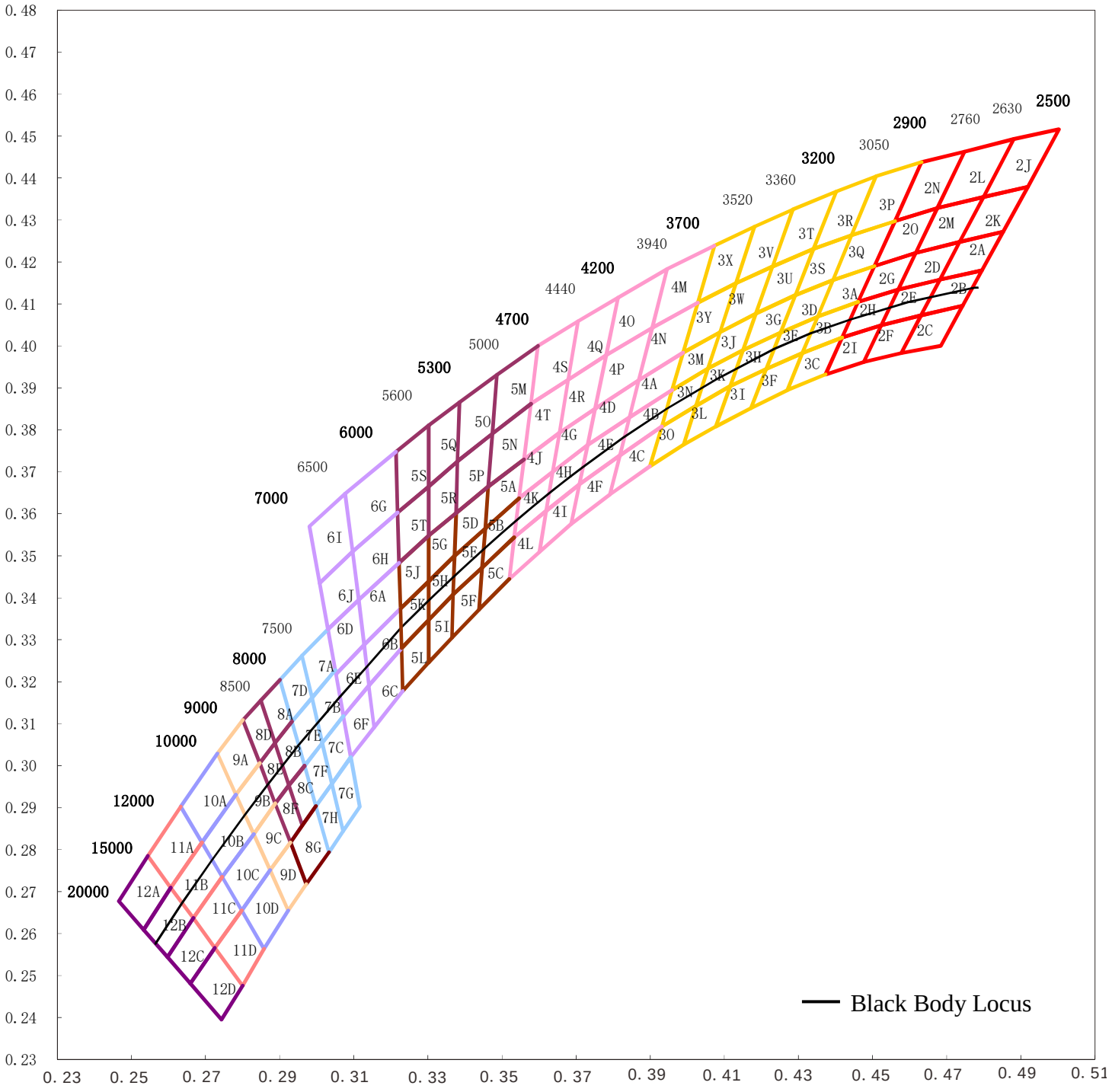
回流焊特性Reflow soldering properties



轮廓特征Contour features	无铅焊料Pb-free solder	手动焊接weld	
升温速度 (Ts max to Tp)	3 ° C/second max.	最高温度 maximum temperature	焊接时间 weld time
预热：最低温度(Tsmin)	90 ° C		
预热：最高温度(Tsmax)	120 ° C	350℃	3 秒一次 3s/time
预热：时间 (tsmin to tsmax)	60-180 seconds		
时间保持在：温度(TL)	150 ° C		
时间保持在 ：时间(tL)	60-150 seconds		
温度峰值/分类 (Tp)	180 ° C		
在实际峰值温度 5° C 内的时间(tp)	20-40 seconds		
降温速率	6 ° C/second max.		
25° C 温度达到峰值的时间	6 minutes max.		

注释：上述提供操作流程数据仅为参考作用，实际应严格按照产品规格书和焊接材料特性进行首检实验以及微调参数； 务必未经过首检进行大量生产，以免造成不必要的损失。The above operation process data provided are for reference only, should be in strict accordance with the actual product specifications and features of the welding material first screening experiment and the tuning parameters; Be sure without first checking a large number of production, so as not to cause unnecessary losses;

色度定义Chromaticity definition（1931CIE）



可靠性reliability

可靠性试验reliability test

测试项目	测定条件	样品数	Ac/Re
连续老化continuous ageing	IF=350mA Ta=25℃×1000hrs	22	0/1
	IF=350mA Ta=85℃×1000hrs	22	0/1
高温储存high-T storage	100℃ × 1000 hours	22	0/1
低温储存low-T storage	-40℃ × 1000 hours	22	0/1
高温高湿老化H-T H humidity aging	IF=350mA 85℃, 85 %RH for 1000 hours	22	0/1
冷热冲击thermal shock	-40℃ × 30 minutes - +100℃ × 30 minutes, 100 cycle	22	0/1
抗静电anti-static electricity	2000V HBM/1 次	10	0/1

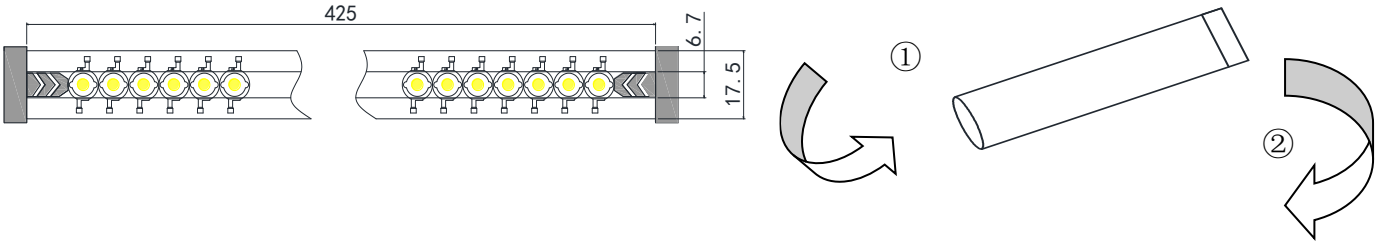
失效判定failure judgement(Tc=25℃)

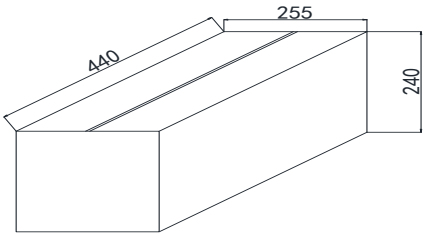
测量	符号	测量条件	失效判定
正向电压forward voltage	VF	IF=350mA	>U × 1.1
反向电流reverse current	IR	VR=5V	IR≥10μA
初始光通量initialluminousflux	Φv	IF=350mA	<S × 0.7

U 定义指定特性的上限The upper limit of definition specified characteristics;
S 定义初始值Define the initial value;
注释：失效判定均在常温 25℃测试，如大于判定标准属于失效不良范围.All in normal temperature 25 ℃ test failure determination, such as greater than standard falls within the scope of bad failure.

包装规格packing specification(Unit:mm)

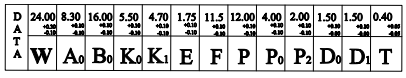
包装①：料管规格



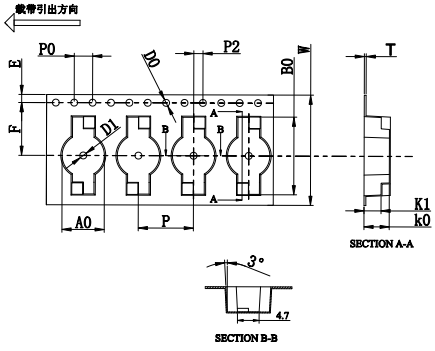


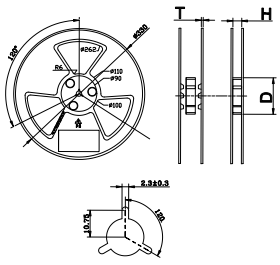
标准包装规格

料管Tube:50pcs/管tube
铝箔袋Aluminium foil bag:1000pcs/袋bag
箱子Box:15K/箱carton

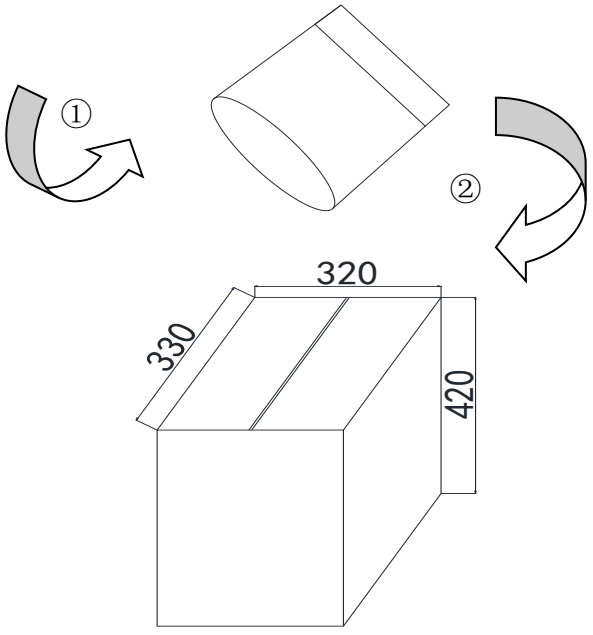


DATA	24.00	8.30	16.00	5.50	4.70	1.75	11.5	12.00	4.00	2.00	1.50	1.50	0.40
	W	A_0	B_0	K_0	K_1	E	F	P	P_0	P_2	D_0	D_1	T





包装②：载带卷盘规格The load coil plate specifications



标准包装规格

卷盘：1000pcs/卷
箱子：14K/箱

简要说明brief description

参数描述parameter description

在本规格书中属产品系列规格说明，不再针对某个型号产品强调说明；在特定参数上属于该系列产品的通用数值，如产品数 值在允许误差范围，请以实际产品为准，不在参数范围请与公司销售人员或技术相关人员核准； In this specification is a product series specifications, no longer highlight for a type of product; On the specific parameter belongs to the general numerical of this series of products, such as product number value in the allowed error range, please refer to our actual product, not please with the company's sales staff or technical parameters related personnel for approval;

焊接weld

（a）回流焊只允许过一次。（不可使用加热平台）Reflow soldering only allowed once. (do not use the heating platform) （b）烙铁焊接过程中不可对透镜施加压力。Soldering iron during the welding process is adding to pressure on the lens.
（c）回流焊完成之后不可压挤压灯板。 After reflow soldering done not plate extrusion pressure lamp.
（d）我司高温 PC 透镜产品能过 180℃低温回流焊。Our high temperature PC lens products to over 180 ℃ low temperature reflow soldering.

条件 condition

使用的条件必须在额定的参数范围内操作。 Conditions must be used within the scope of rated parameters of the operation.

安装 install

在安装灯具使用时，不可用高温的烙铁烫伤产品的发光层，避免发生死灯或者影响发光效果。Installation of lamps and using, do not use high temperature of soldering iron burns products luminous layer, avoid death lamp or glow effect.

静电 static

静电或浪涌电压会使产品失效。我们建议在使用产品时手带防静电手腕或防静电手套，所有的器件,设备和机器必须接地，建 议采取防范措施来防止设备产生的浪涌电压作用到产品上。当检验由单个产品组装成成品时,建议检验每个产品是否以被静电 破坏，检验可通过一指示灯测试或在一低电流下正向导通电压测试 (电流90mA 最合适),已遭到破坏的产品表现为与正常产品 不同的特性，比如说正向电压变的更低或在小电流下不发光。 Electrostatic or surge voltage can make the product failure. We recommend that when using the product hand belt or anti-static gloves, anti-static wrist all devices, equipment and machines must be grounded, and suggest to take preventive measures to prevent the effects of the surge voltage equipment on the product. When assemble into finished products inspection by a single product, test whether each product is recommended to destroyed by static electricity, examination may be held by a lamp test or in electricity shed is to the test voltage (current 90 ma, the most suitable), has been damaged products show is different from normal product features, such as forward voltage becomes lower down or in a small electric light.

散热 radiating

终端产品的散热设计格外重要。请考虑到产品的散热，当设计系统时，产品随电功率的输入温度系数的增加是由电路板的热阻 和产品在电路板上的密度和其原器件而决定的。因此必须避免大量集中散热并且严格按照规格书上参数特征给定的极限参数来 操作使用。Terminal products of heat dissipation design is particularly important. Considering the heat dissipation of the product, please, when designing the system, the product with the increase of the input temperature coefficient of electrical power is composed of PCB thermal resistance and the density of products on the circuit board and of its components. So you must avoid a large number of concentrated heat and in strict accordance with the specifications of the book parameters characteristics of a given limit to operate.

清洗 clean

推荐使用无水乙醇作为 LED 产品的唯一清洗溶剂。Recommended to use anhydrous ethanol as the sole cleaning solvents of LED products.

其他 others

LED 产品发出足够强度的光时可能损伤眼睛,在没有戴防护眼镜的情况下不可直接观看产品，眩光使人感到不舒服，刺激性较强， 因此在使用过程中可采取防范措施，同时也要采取必要的防护措施在使用由单个产品组装成的模块。LED products enough intensity of light can damage the eyes, in the absence of protective glasses, not directly to see product glare makes people feel uncomfortable, excitant strong, can take preventive measures in the process of use, therefore, at the same time also want to take the necessary protective measures in use by a single product assembled into modules.