



中山市金阳光电科技有限公司
Zhongshan Golden Sun Opto-Electronic TECH. CO.,LTD

Product Specification

产品规格书

Customer(客户名称): _____

Product(产品名称): 5730 White 正白

Type(产品型号): 5730SWC

Date(编制时间): 2015-06-08

WENLIAN LED		
Drawn 拟制	Checked 审核	Approved 批准
Rev(版本): A/0		Date(日期): 2015-6-8

Customer Signatures 客户回签			
Confirmation 确认		Date 日期	



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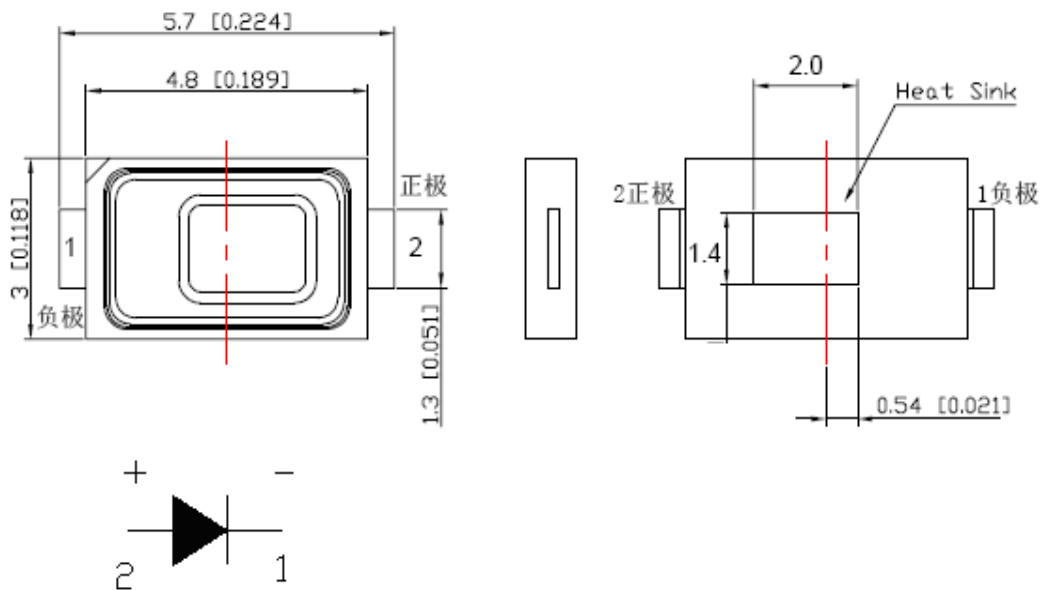
1. Features 特性

- Top View White LED TOP 型贴片白光 LED
- High luminous intensity and high efficiency 高亮度高效率
- Package size: 5.7×3.0×0.9 mm 封装尺寸: 5.7×3.0×0.9 mm
- Wide viewing angle: 120° 宽角度: 120°
- Soldering methods: Reflow soldering 可回流焊接
- RoHS compliant 符合 RoHS 标准

2. Applications 应用

- LCD Back Lighting 背光
- Indoor Lighting 室内照明
- Outdoor Lighting 室外照明

3. Package Dimensions 外形尺寸



Notes(备注):

- (1) 1: 负极, 2: 正极。
- (2). All dimensions are in millimeters. 所有尺寸单位均为毫米。
- (3). Without special declared, the tolerance is ± 0.1 mm. 无特别注明尺寸公差为 ± 0.1 mm。



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4. Absolute Maximum Ratings at Ta = 25°C 极限参数(25°C)

Parameter 参数	Symbol 符号	Rating 数值	Unit 单位
Forward Current 正向电流	I _F	150	mA
Peak forward current ¹ 正向脉冲电流	I _{FP}	200	mA
Power Dissipation 功率	P _d	500	mW
Junction Temperature 结温	T _j	110	°C
Operating Temperature 工作温度	T _{opr}	-40 to +85	°C
Storage Temperature 存储温度	T _{stg}	-40 to +90	°C
Electrostatic Discharge 静电	ESD	1000	V
Soldering Temperature ² 焊接温度	T _{sol}	240±5	°C
Reverse Voltage 反向电压	V _R	5	V

Notes: (1). 1/10 duty cycle, 0.1ms pulse width.
(2). Soldering time ≤ 5 seconds.

5. Electro-Optical Characteristics (Ta=25°C) 光电参数 (25°C)

Parameter 参数	Symbol 符号	Conditions 条件	Min. 最小值	Typ. 典型值	Max. 最大值	Unit 单位
Forward voltage 正向电压	V _F	I _F =150mA	3.0	--	3.4	V
Reverse current 反向电流	I _R	V _R =5V	--	--	10	μA
Luminous Flux 光通量	Φ	I _F =150mA	50	--	60	Lm
Viewing angle 角度	2θ _{1/2}	I _F =150mA	--	120	--	Deg
Color Temperature 色温	CCT	I _F =150mA	6000	--	7000	K
Color Rendering Index 显色指数	Ra	I _F =150mA	70	--	--	--
Color Tolerance Adjustment 色容差	--	I _F =150mA	--	--	--	SDCM

Add: 4th Floor of No.1 Building, No.22 Shagangxi Road, Shalang, Zhongshan City, Guangdong Province, China

Tel: +86760-22115936

Fax: +86760-87600051

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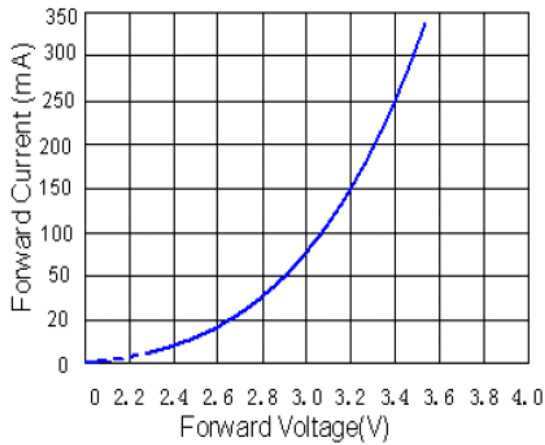


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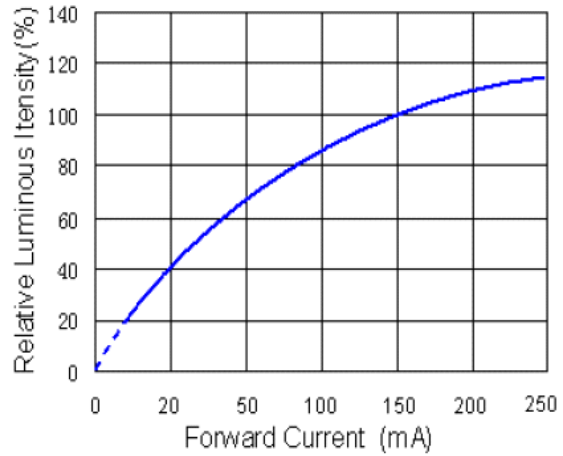
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6. Typical Electro-Optical Characteristic Curves 典型光电曲线

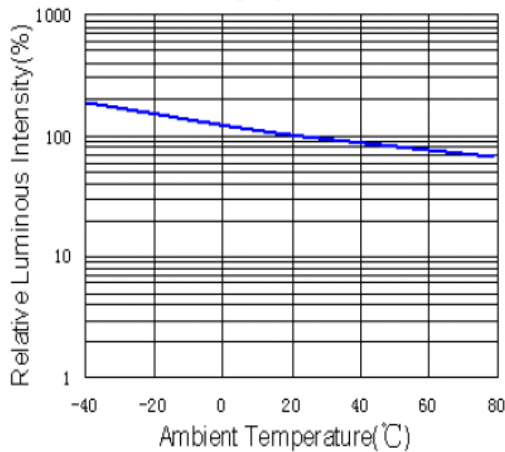
光电特性曲线:



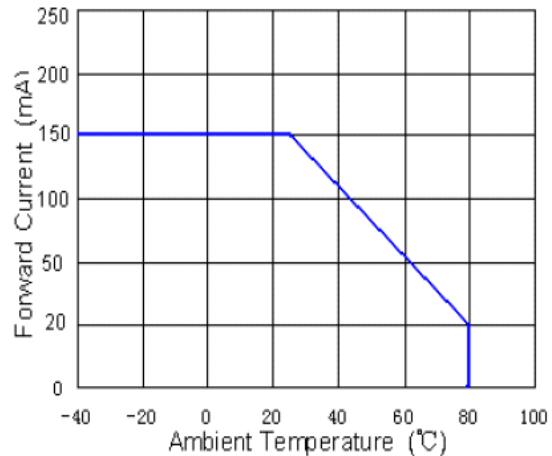
电压与电流关系曲线



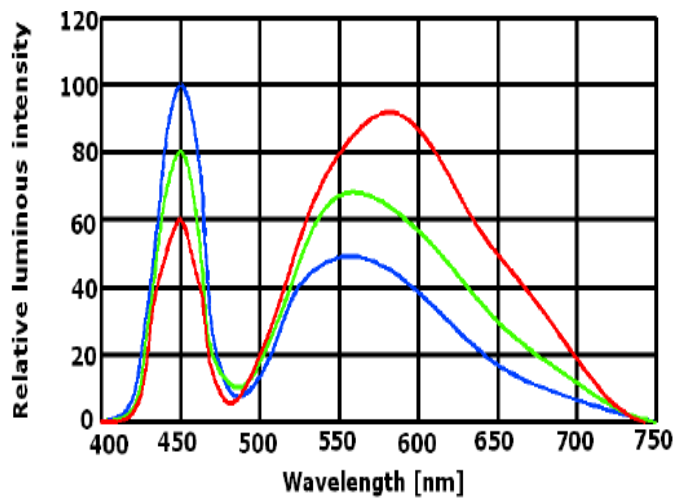
亮度与电流关系曲线



亮度与温度关系曲线



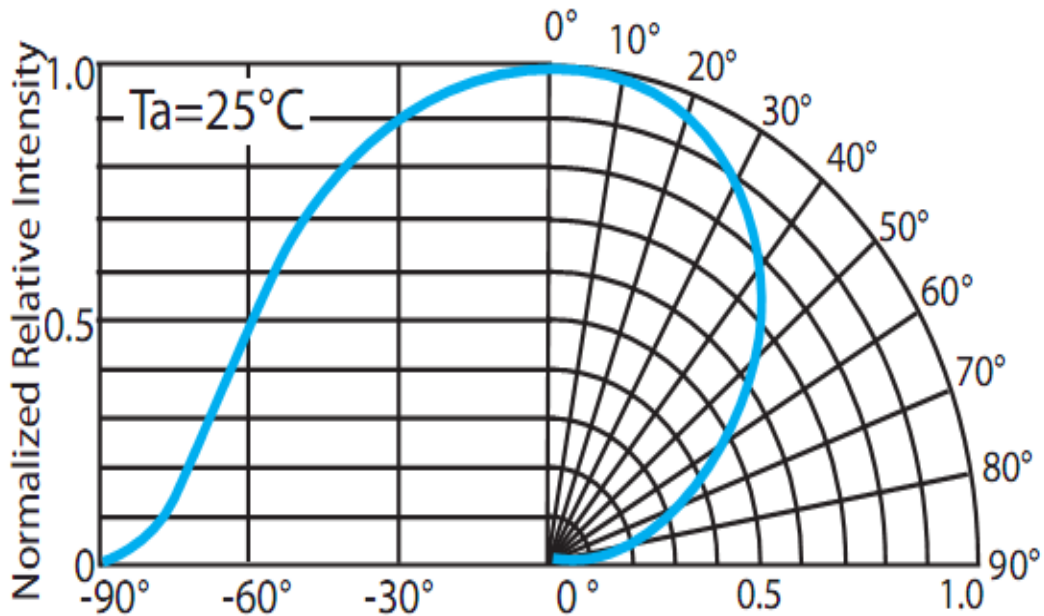
电流与温度关系曲线



光谱特性图

● Radiation Diagram

光强分布图



7. Reliability test items and conditions 信赖性测试项目及条件

● Test Items 测试项目

Item 项目	Test Conditions 试验条件	Test Hours/Cycle 测试时间	Sample Size 样品数量
Solder Heat 回流焊	Tsol=260℃,10sec (Pre-treatment 30℃,70%,168h)	2 times	22 pcs
Temperature Cycle 温度循环	-40℃ 30min~25℃,5min ~100℃,30min~25℃,5min	100 cycles	22 pcs
Thermal Shock 冷热冲击	-40℃,15min~100℃, 15min	100 cycles	22 pcs
High Temperature Storage 高温存储	Ta=100℃	1000 hrs	22 pcs
Low Temperature Storage 低温存储	Ta=-40℃	1000 hrs	22 pcs
Wet High Temperature	Ta=60℃ , 90% RH	1000 hrs	22 pcs



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Storage 高温高湿存储			
Room Temperature Operating Life 常温寿命试验	Ta=25°C If =150mA	1000 hrs	22 pcs
High Temperature Operating Life 高温寿命试验	Ta=85°C If =150mA	500 hrs	22 pcs
Wet High Temperature Operating Life 高温高湿寿命试验	Ta=60°C, 90% RH If =150mA	500 hrs	22 pcs

● Failure Criteria 失效标准

Items 项目	Symbols 符号	Test Conditions 测试条件	Limits 判定标准
Forward Voltage 正向电压	V _F	I=150mA	>U.S.L*1.1
Luminous Flux 光通量	Φ	I=150mA	<L.S.L*0.7

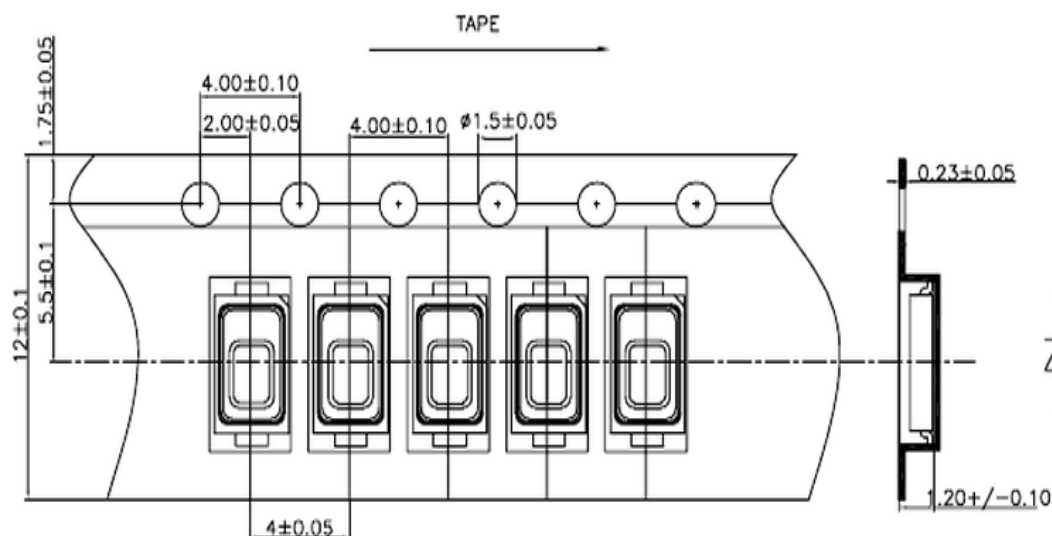
Notes: U.S.L: Upper Specification Limit; L.S.L: Lower Specification Limit.

U.S.L: 规格上限值; L.S.L: 规格下限值。

8. Packing Quantity Specification 包装规格

- Tape Dimensions: Loaded Quantity 5000pcs per reel.

载带尺寸 (每小卷 5000 pcs)



Add:4th Floor of No.1 Building,No.22 Shagangxi Road,Shalang,Zhongshan City,Guangdong Province,China

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Notes:

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所有尺寸单位均为毫米。
- (2). Without special declared, the tolerance is $\pm 0.1\text{mm}$.
无特别注明尺寸公差为 $\pm 0.1\text{mm}$ 。

● Label Structure 标签说明

BIN: Chromaticity Bin 颜色 Bin 号

(Refer 8. Chromaticity Bins)

(参考 8.色度分 Bin 表)

IV: Luminous Intensity 光强

Φ : Luminous Flux 光通量

VF: Forward voltage rank 电压等级

CT: Color temperature 色温

Qty: Quantity 数量

JY-5730SWC31

● Product Name Structure 品名说明

①—② ③ ④ ⑤ ⑥ ⑦

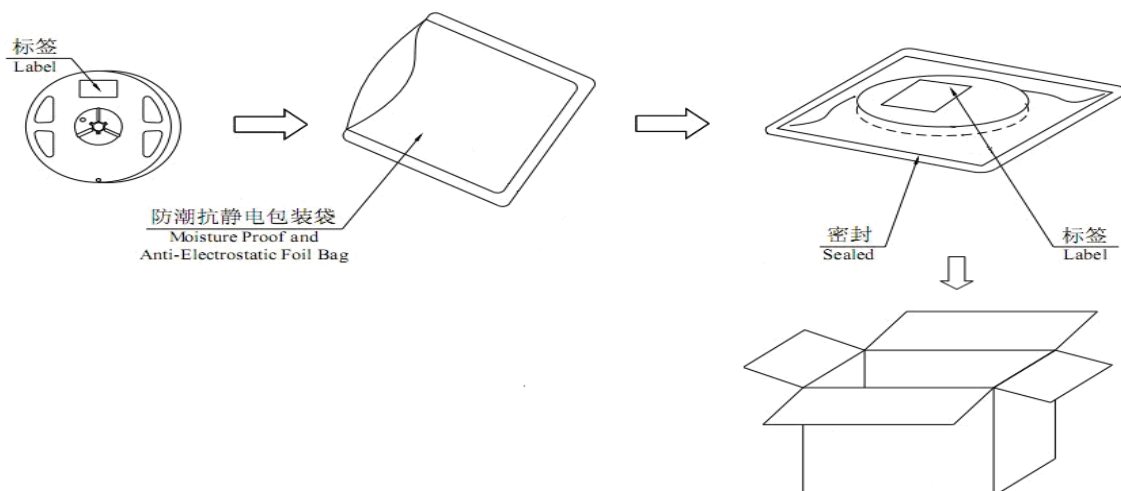
①:Company Abbreviation 公司缩写

②③: Package Dimension 封装型号

④: Color Temperature Ranks 色温段

MW: 2500~3500K; N: 3500~5000K; W: 5000~7000K; C: 7000K 以上

⑤⑥: Chip Type 芯片代码



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9. Precautions For Use 使用注意事项

● Storage 存储

- a) Do not open moisture proof bag before the products are ready to use.
未准备使用时，不能打开密封防潮袋。
- b) Before opening the package, the LEDs should be kept at 30°C or less and 60%RH or less.
开封前，产品需存放于温度不高于 30°C，湿度不超过 60%的环境中。
- c) After opening the package, the LEDs should be stored at 30°C or less and 10%RH or less, and be soldered within 24 hours. It is recommended that the product be operated at the workshop condition of 30°C or less and 60%RH or less.
开封后，产品需存放于温度不高于 30°C，湿度不超过 10%的环境中，且应该在 24 小时内使用完，建议工作环境温度不高于 30°C，湿度不超过 60%
- d) If the moisture absorbent material has fade away or the LEDs have exceeded the storage time, baking treatment should be performed on the following condition: 60°C for 12 hours.

对于尚未焊接的 LED，如果吸湿剂或包装失效，或者产品没有符合以上有效存储条件，烘焙可以起到一定的性能恢复效果。烘焙条件：60°C，持续 12 小时。

● Static Electricity 防静电

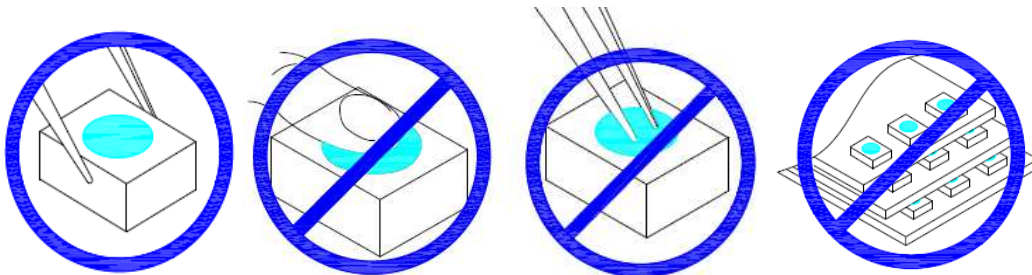
- 1) The LEDs are sensitive to the static electricity and surge voltage. Damaged LEDs may show some unusual characteristics such as increase in leak current, lowered turn-on voltage, or abnormal lighting of LEDs at low current.

LED 对静电和浪涌电压很敏感。因此损坏的 LED 会导致某些产品特性发生变化，例如启动电压降低，漏电流增大，如果情况严重甚至损毁产品。

- 2) All devices, equipment and machinery must be properly grounded. It is recommended that wrist band or anti-electrostatic gloves, anti-electrostatic containers be used when dealing with the LEDs.

所有相关设备和机器都应该正确接地。在使用 LED 时，建议使用防静电的手环、垫子、手套，防静电电容器等工具。

● Handling Indications 处理防备措施



- 1) Handle the component along the side surface by using forceps or appropriate tools.

通过使用适当的工具从材料侧面夹取。

- 2) Do not directly touch or handle the silicone lens surface. It may damage the internal circuitry.

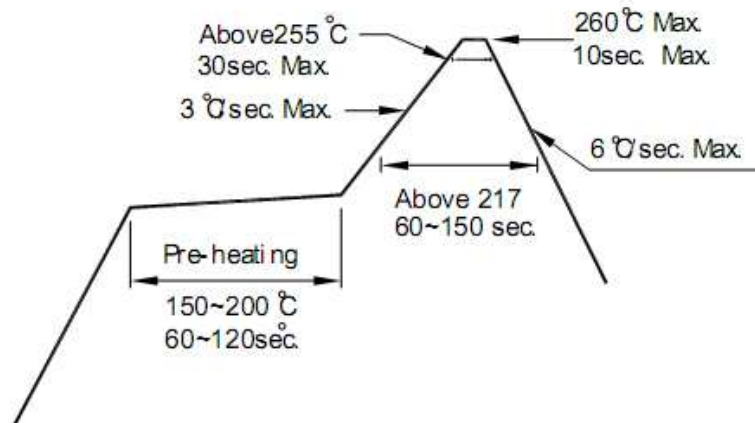
不可直接用手或尖锐金属压胶体表面,它可能会损坏内部电路。

- 3) Do not stack together assembled PCBs containing the internal circuitry.

不可将模组材料堆积在一起,它可能会损坏内部电路。

● Soldering Conditions 焊接条件

Reflow Soldering Conditions (Pb Free) 无铅回流焊条件



- 1) Reflow soldering should not be done more than two times.

回流焊不可超过两次。

- 2) When soldering, do not put stress on the LEDs during heating.

当回焊时, 不可用力压胶体表面。

For Manual Soldering 手工焊接条件

- 1) When hand soldering, the temperature of the iron must less than 300°C for 3 seconds.

当手工焊接时, 烙铁的温度必须小于 300°C, 时间不可超过 3 秒。

- 2) The hand solder should be done only one times

手工焊接只可焊接一次。

● Repairing 维修

Repair should not be done after the LEDs have been soldered. When repairing is unavoidable, a double-head soldering iron should be used (as below figure). It should be confirmed beforehand whether the characteristics of the LEDs will or will not be damaged by repairing.

LED 回流焊后不应该修补, 当修复不可避免的时候, 必须使用双头烙铁 (如图), 但必须事先确认此种方式会或不会损坏 LED 本身的特性。

