

## SE03-3030A-B00



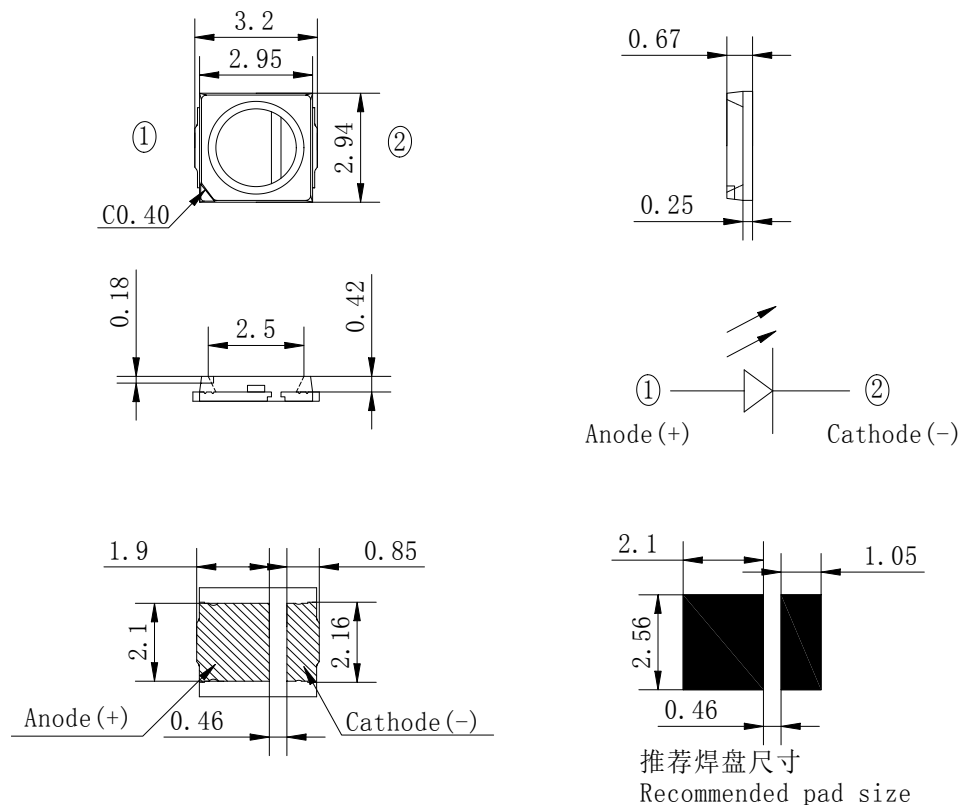
### ■ 特点 Features :

- 适用于 SMT 组装 Suitable for SMT assembly
- 峰值波长 850nm Peak wavelength 850 nm
- 高效红外光源 IR lightsource with high efficiency

### ■ 应用 Applications :

- 监控摄像机辅助光源 Auxiliary light source for surveillance camera
- 红外数据传输 Infrared data transmission
- 红外传感器 infrared sensor

### ■ 外观及推荐焊盘尺寸 Appearance and Recommended pad size :



备注 note :

1. 所有标注尺寸单位为毫米

All dimensioning units are millimeters.

2. 除特别标注外, 所有尺寸允许公差 $\pm 0.15\text{mm}$ 。

Except for special markings, tolerances on all dimensions are allowed to be  $\pm 0.15\text{mm}$ .

■ 绝对最大额定值 Absolute maximum rating :

项目 Parameter	符号 Symbol	最大额定值 Maximum Rating	单位 Unit	环境温度 ambient temperature
功耗 Power Dissipation	Pd	0.8	W	Ta=25°C
正向电流 Forward Current	IF	≤500	mA	Ta=25°C
反向电压 Reverse voltage	VR	5.0	V	Ta=25°C
工作温度 Operating Temperature	TOPR	-30°C~+85°C	°C	
存储温度 Storage Temperature	TSTG	-40°C~+100°C	°C	
回流焊温度 Soldering Temperature	TSOL	245°C for 5sec	°C	

■ 光电特性 Electrical-optical characteristics :

项目 Parameter	符号 Symbol	条件 Condition	最小 Min	平均 Typ	最大 Max	单位 Unit
辐射通量 Radiant flux	Po	IF=350mA	160	-	200	mW
视角 half-value angle	2θ1/2		-	120	-	Deg
光线光谱 Peak wavelength	λp	IF=350mA	840	850	870	nm
光谱线半波宽 half-wave width	Δλ	IF=350mA	-	30	-	nm
正向电压 Forward voltage	VF	IF=350mA	-	1.6	1.8	V
反向电流 Reverse Current	IR	VR=5.0V	-	-	10	μA

■ 电压的分档 Voltage classification :

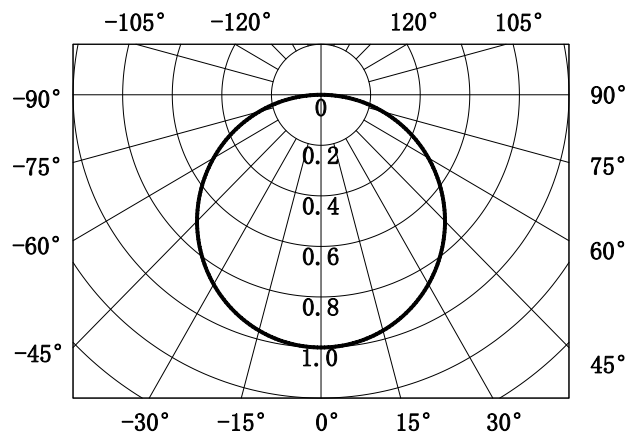
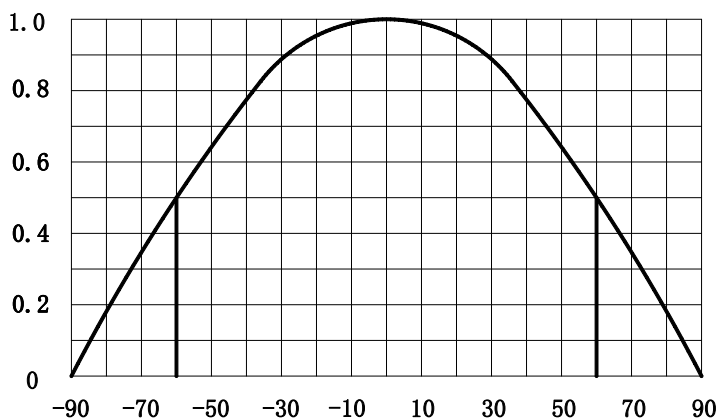
IF=350mA	档位 Stall	最小 MIN	最大 MAX
	I	1.3V	1.4V
	II	1.4V	1.5V
	III	1.5V	1.6V
	IV	1.6V	1.7V
	V	1.7V	1.8V

备注 Note :

1.  $\theta_{1/2}$  是半值角，指发光强度值为轴向强度值一半的方向与发光轴向（法向）的夹角。  
 $\theta_{1/2}$  is the half angle, which refers to the angle of the luminous intensity value in the direction of half of the axial intensity and the axial (normal) direction of the light emitting.
2. 上述辐射通量的测试允许公差是 $\pm 10\%$ ，电压测量误差 $\pm 0.1v$ ，波长测量误差 $\pm 1nm$ 。  
 The permissible tolerance of the above mentioned radiation flux is  $\pm 10\%$ , the voltage tolerance is  $\pm 0.1V$ , and the wavelength tolerance is  $\pm 1nm$ .

■ 光学特性曲线 Optical property curve :

配光曲线 Light distribution curve



■ 光电特性曲线 Photoelectric characteristic curve :

Fig.1-Relative Radiant Flus vs. Forward Current

相对辐射通量 & 正向电流

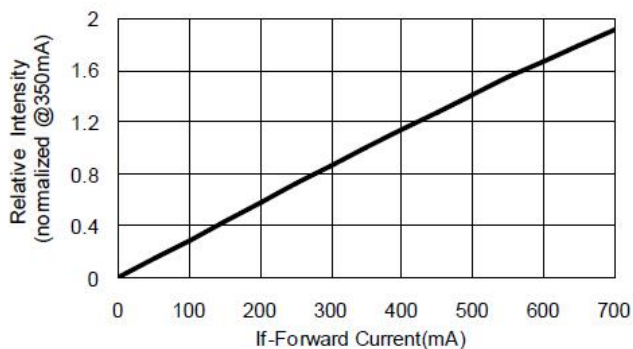


Fig.2-Forward Current vs. Forward Voltage

正向电流 & 正向电压

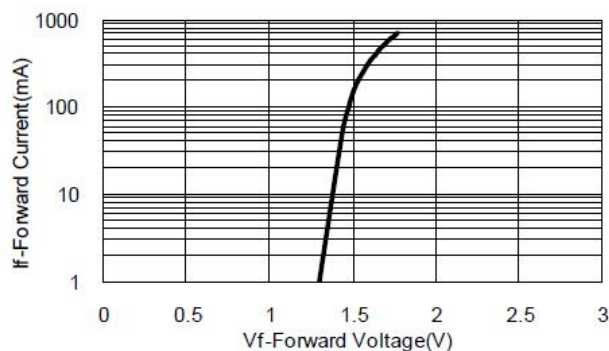


Fig.3-Relative Intensity (@350mA) vs. Ambient Temperature

辐射强度 & 环境温度

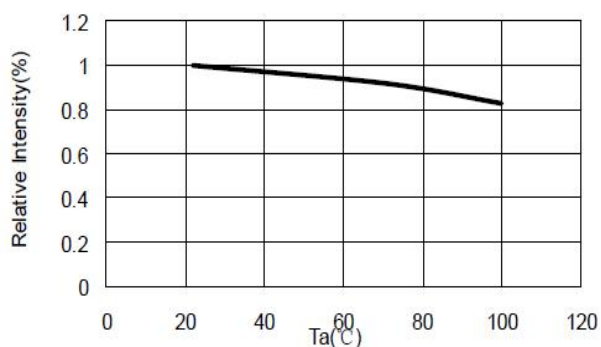


Fig.4-Forward Voltage (@350mA) vs. Temperature

正向电压 & 环境温度

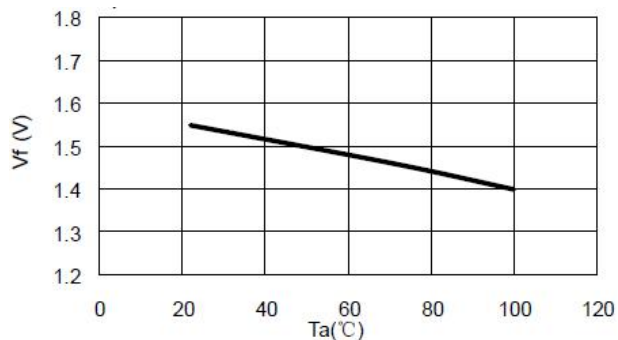


Fig.5- Peak Wavelength (@350mA) vs. Ambient Temperature.

峰值波长 & 环境温度

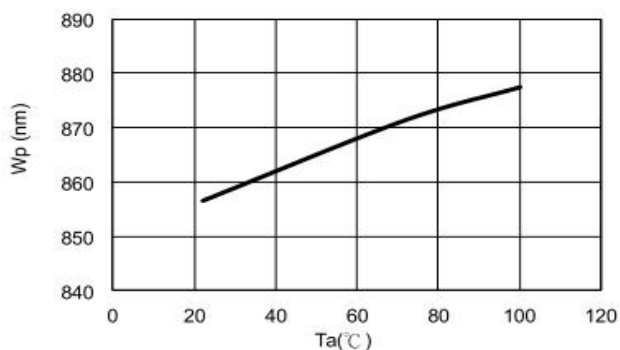
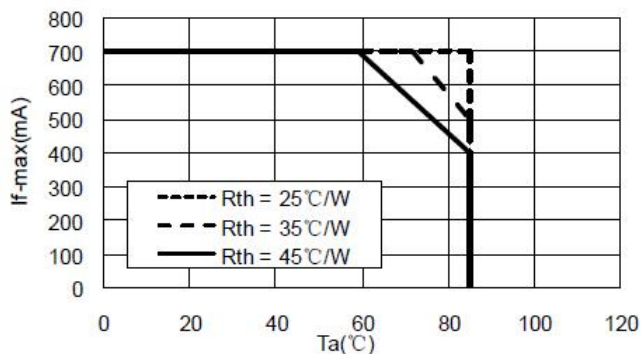


Fig.6- Maximum Driving Forward DC Current vs. Ambient Temperature (Derating based on Tj max=115°C)

最大正向直流电流 & 环境温度



■ 信赖性测试项目及条件 Reliability testing items and conditions :

测试项目 Test item	参考标准 Reference standard	测试条件 Test condition	时间 Time	数量 Number	接受/拒收 Accept / Reject
回流焊 Reflow soldering	JESD22-B106	Temp:245°C max T=5sec	3 times	22Pcs	0/1
冷热冲击 Thermal Shock	JESD22-A104	100°C±5°C 30min. ↑↓5min -40°C±5°C 30min.	100 Cycles	22Pcs	0/1
高温保存 High temperature storage	JESD22-A103	Temp:100°C± 5°C	1000Hrs	22Pcs	0/1
低温保存 Low temperature storage	JESD22-A119	Temp:-40°C± 5°C	1000Hrs	22Pcs	0/1
常温通电 Ambient temperature energization	JESD22-A108	Ta=25°C±5°C IF=350mA	1000Hrs	22Pcs	0/1
常温加速通电 Ambient temperature accelerated energization	JESD22-A108	Ta=25°C±5°C IF=500mA	1000Hrs	22Pcs	0/1
高温高湿通电 High temperature and high humidity energization	JESD22-A101	85°C±5°C /85%RH IF=350mA	1000Hrs	22Pcs	0/1

■ 失效判定标准

项目 Item	符号 Symbol	测试条件 Test condition	判定标准 Criterion	
			最小 MIN	最大 MAX
正向电压 Forward voltage	VF	IF=350mA	--	U.S.L* ) ×1.2
反向电流 Reverse Current	IR	VR=5V	--	U.S.L* ) ×2.0
辐射通量 Radiant flux	mW	IF=350mA	L.S.L* ) ×0.7	--

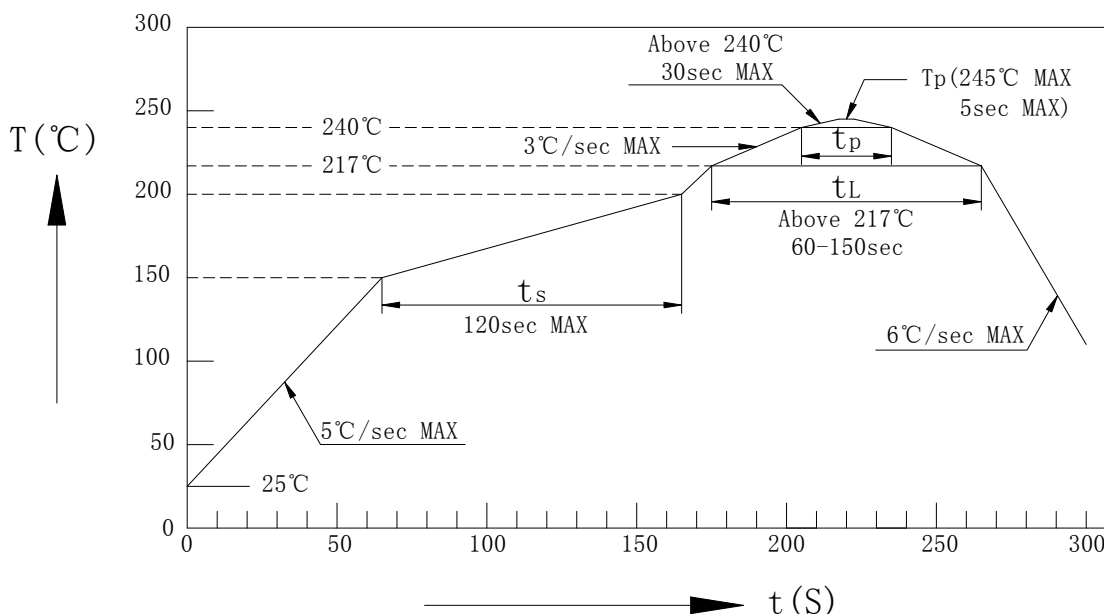
备注 Note :

1. U.S.L : 规格上限 ; L.S.L : 规格下限

U.S.L : Upper limit of specification ; L.S.L : Lower limit of specification

2. 数据表格中所示的技术信息仅限于典型特征值和电路实例引用的产品，它既不构成工业特性的保证，也不构成任何许可的授权。The technical information shown in the data table is limited to the product of the typical eigenvalue and the reference of the circuit instance. It does not constitute the guarantee of industrial characteristics, nor does it constitute any license.

■ 回流焊说明 Reflow soldering instruction :



备注：回流焊最多只能进行一次，在回流焊接升温过程中，请不要对 LED 施加任何压力。在焊接完成后，待产品温度下降到室温之后 再进行其他处理。Note: Re-flow soldering can only be operated one time at most. During the temperature ramp-up, do not put any pressure. After soldering completed, do not make any processing until the product temperature ramp down to room temperature.

## ■ 处理防护措施 Treatment & Protection measures :

### 焊接 Soldering ( 包括手动和回流焊 including manual operation & re-flow soldering )

人手焊接时，烙铁的温度必须保持在 300°C 以下，且每个电极只能进行一次焊接，每次焊接的持续时间不能超过 3 秒。因 LED 尺寸较小，采用手工焊接较难管控焊接温度及加锡时间的一致性，且易破坏灯体结构，严重时可能造成 LED 失效，请尽量使用回流焊机台作业。

The temperature of soldering iron must keep under 300°C during hand soldering. Each electrode can only be soldered one time and the duration could not be over 3sec. It is very hard to control the soldering temperature and make tin time uniformly via manual operation due to LED small size. In addition, it is easy to damage LED structure even caused LED losing efficacy. Therefore, using re-flow soldering machine for operation is better.

### 存储 Storage

本产品使用密封防潮抗静电铝箔袋包封并附有干燥剂。搬运过程中应尽量避免挤压，刺破包装袋的情况发生。同时为避免产品受潮引发可靠性失效的问题，需做好 LED 产品焊接前的储存与防潮措施。

开封前，LED 产品在温度不高于 30°C，湿度不高于 60%RH 的环境中保存时间为 90 天。

开封后，LED 产品必须在温度不高于 30°C，湿度不高于 60%RH 的环境中，且在 24 小时内使用完。

开启后如发现湿度卡超过 10% 需低温除湿处理 75°C/12h。

Our products packed by aluminum foil bag attaching dryer that can be sealed, moisture-proof and anti-static electricity. Please try to avoid pressing or puncturing bag during carrying. At the same time, please be ready for storage and moisture-proof measures before soldering to be keep LED away from dampness that may cause reliability losing efficacy.

Before opening, The storage time of LED products is 90 days in the environment of temperature not higher than 30°C and humidity not higher than 60% RH.

After opening, LED products must be used up within 24 hours in an environment where the temperature is not higher than 30°C and the humidity is not higher than 60% RH. If it is found that the humidity card exceeds 10% after opening, it needs low temperature dehumidification treatment at 75°C/12h.

## 静电防护 Electrostatic protection

静电和电涌会导致产品特性发生改变，例如正向电压降低等，情况严重甚至会损毁产品。所以对于整个工序（生产，测试，包装等）与 LED 直接接触的员工都要做好防止和消除静电的措施。

所有相关的设备和机器都应该正确接地。接地交流电阻小于 1.0 欧姆，工作台上需垫表面电阻 106-109 欧姆的桌垫。

在容易产生静电的环境和设备上，还必须安装离子风扇。作业过程中，操作员需使用防静电手环，防静电垫子，防静电工作服，工作鞋，手套，防静电容器等。

Static and surge will change product property, such as lower forward voltage and damage products. Therefore, the workers in direct contact with LED in production processes must take some treatment to prevent and eliminate static electricity.

All related equipment and machine should be grounded correctly. Grounded AC resistance should less than 1.0Ω and the working table need to be applied the mat with surface resistance 106-109Ω.

It must to fix ion fan for the environment that easy to generate static electricity and also on the equipment. During operation, workers need to use anti-static wrist strap, anti-static mat, anti-static clothing, anti-static shoes, anti-static gloves, anti-static container and etc.

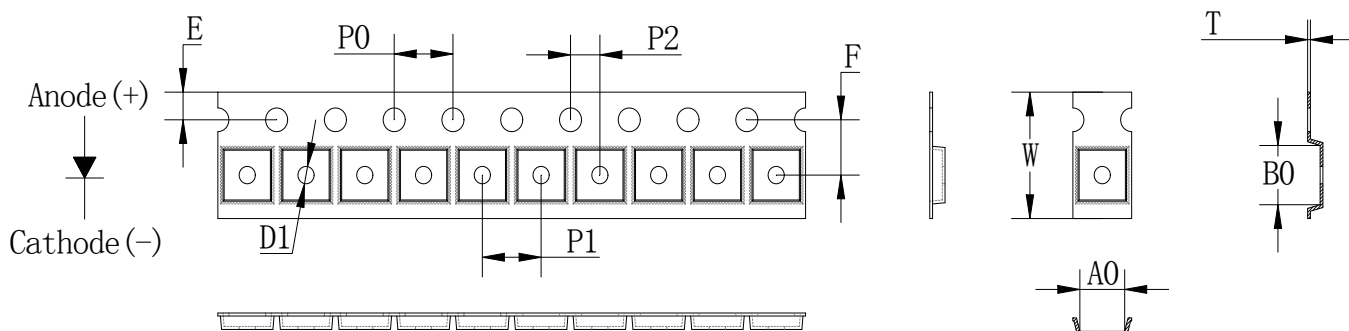
## 其他事项 Others

LED 产品的树脂封装部分相当脆弱，请勿用坚硬，尖锐的物体刮擦封装树脂部分。用镊子夹取 LED 时也要十分小心。请勿直接用手去直接拿去 LED 产品。直接用手去拿取 LED 产品不但会污染 LED 封装树脂表面，也可能由于静电等因素导致 LED 产品性能的改变。请勿对 LED 产品施加过度压力，特别当 LED 处于高温状态小（例如在回流焊焊接过程中），过度的压力可能直接影响封装内部的芯片及金线。LED 工作环境及 LED 适配的材料中硫元素及化合物成分不可超过 100PPM。不可将模组材料堆积在一起，它可能会损坏内部电路。不可用在 PH<7 的酸性场所。The resin package part of LED product is quite fragile. Thus, not to scrap this part by used hard or sharp objects. Please not to take LED products directly by hand. Otherwise, it will not only contaminate LED package resin surface, but also may change LED performance due to static electricity or other factors. Do not apply excessive pressure on LED products when LED is in a state of high temperature, such as during re-flow soldering. Excessive pressure may impact the inner chip and gold thread directly. In LED working environment and compound composition of the LED, the sulfur element not be more than 100PPM. Do not pile up the module material and it may damage inner circuit. Do not apply on acid sites that PH<7.



■ 包装规格 Packing specification :

载带尺寸 Carrier Dimension

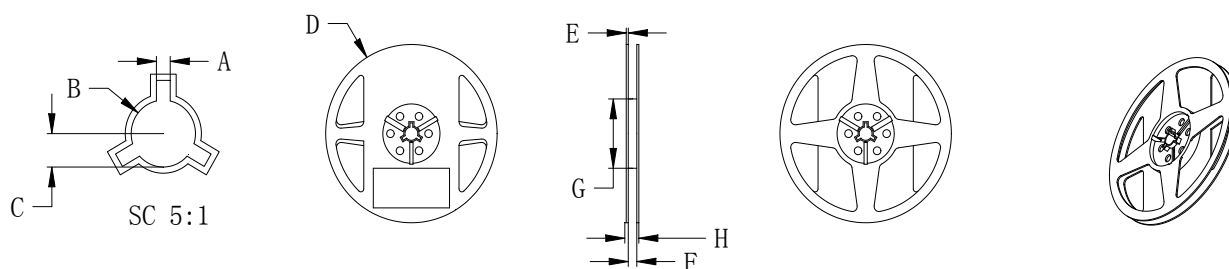


TIEM	W	A0	B0	K0	E	F	D0	D1	P0	P1	P2	T
DIM	8.00	3.25	3.25	0.85	1.75	3.50	1.50	1.10	4.00	2.00	8.00	0.20
TOLE	±0.10	±0.10	±0.10	±0.10	±0.10	±0.10	±0.10	±0.10	±0.10	±0.10	±0.10	±0.03

备注 Note :

- 任意 10 个链孔累积误差不超过 $\pm 0.2\text{mm}$  ;  
Any 10 chain hole accumulate error not over  $\pm 0.2\text{mm}$ .
- 载带长度方向 100mm 距离的非平行度不超过 1mm ; 超过 250mm 不计算累计误差 ;  
100mm carrier length non parallelism not over 1mm and over 250mm not count accumulate error ;
- 非指明, 公差范围为:  $\pm 0.1\text{mm}$  ;  
Except special signs , all dimensions tolerance  $\pm 0.1\text{mm}$  ;
- 材料: 黑色, 防静电材料 ;  
Material : black , anti-static ;
- 所有尺寸符合 EIA-481-E 的要求。  
All dimensions accord with EIA-481-E requirement.

卷轴尺寸 Reel Dimension(4000pcs/reel)



TIEM	A	B	C	D	E	F	G	H
DIM	2.90	13.60	10.80	180.0	1.50	13.20	70.0	12.00
TOLE	±0.20	±0.20	±0.20	±2.0	±0.20	±0.20	±0.20	±0.20

标签 Label:

XSSY® 旭晟半导体成品标示单			
产品型号		物料编码	
生产批号		生产日期	
电压		数量	
波长		QC判定	
RoHs			

XSSY® 深圳市旭晟半导体股份有限公司	
湿敏等级: 5	New technology product
使用说明:	
1. 开封后, LED产品在温度不高于30℃, 湿度不高于60%RH的环境中M且在48小时内使用完. 若未使用完或者开启后湿度卡对应的蓝色圈颜色变为粉红色且超过30%时, 需放入烤箱里除湿处理: 75℃/12H.	
2. 建议焊接工艺使用回流焊低温(200℃)锡膏作业。	

防潮袋包装 Moistureproof static bag packing :

