

Specification

规格书

Customer Name: _____

客户名称

Customer P/N: _____

客户品号

Product P/N: GD-3570W3W6-3C2D-S2E5P

产品型号

Sending Date: _____

供货日期

● Technical Reference 技术参考			● Sample 样品		■ Mass Product 量产供货	
Customer approval 客户审核			GM approval 光脉审核			
Approved 核准	Audit 确认	Confirmation 制作	Approved 核准	Audit 确认	Confirmation 制作	
						
● Qualified 接受		● Disqualified 不接受	Date: 日期:			



ATTENTION
OBSERVE PRECAUTIONS
FOR HANDLING
ELECTROSTATIC
SENSITIVE DEVICES

SHENZHEN GUANGMAI ELECTRONICE CO., LTD.

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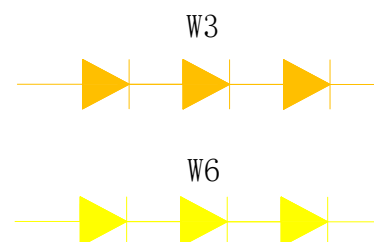
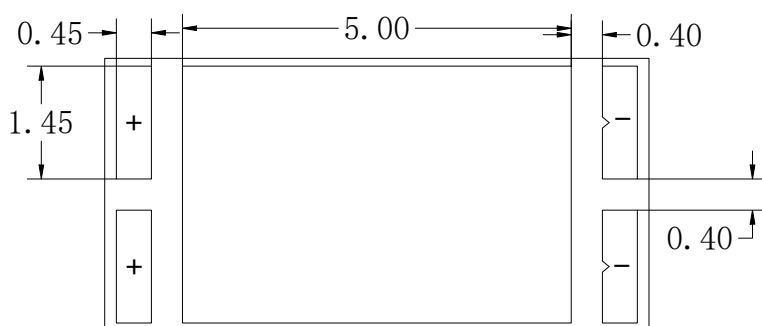
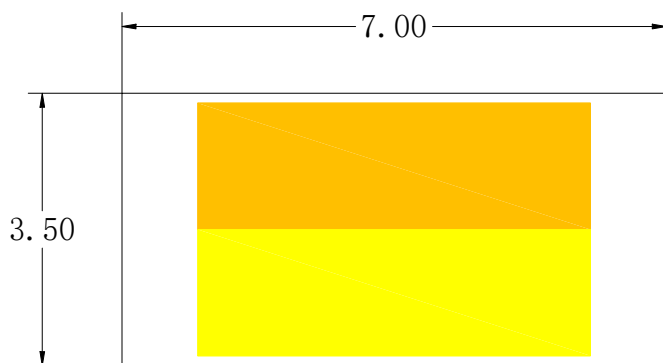
■ Features 产品特征:

- 体积小, 光效高 Small package with high efficiency
- 电压低, 瞬间点亮 Low voltage operation, Instant light
- 工作寿命长 Long operation life
- 通过 RoHS 认证 RoHS compliant

■ Applications 产品应用:

- 室外照明 Outdoor lighting
- 车灯 Car light

■ Package Dimensions 封装外形尺寸



Notes: All dimensions in mm tolerance is $\pm 0.1\text{mm}$ unless otherwise noted.
除非另有说明，以上尺寸以 mm 为单位，公差在 $\pm 0.1\text{mm}$ 。

■ Absolute Maximum Ratings(At TA =25℃) 极限参数

Parameter	Symbol	Rating		Unit
		W3	W6	
DC Forward Current (正向电流)	I _F	1500	1500	m A
Peak pulse Current* (脉冲电流)	I _{FP}	2000	2000	m A
Power Dissipation (功率)	P _D	15	15	W
Reverse Voltage (反向电压)	V _R	15	15	V
Reverse Current (反向电流)	I _R	10	10	μ A
Operating Temperature Range (工作温度)	T _{OPR}	-40 ~ +85	-40 ~ +85	°C
Storage Temperature Range (储存温度)	T _{STG}	-40 ~ +100	-40 ~ +100	°C
LED Junction Temperature (结点温度)	T _J	150	150	°C

Note: 备注

- 1/10 Duty cycle, 0.1ms pulse width. 脉宽 0.1ms,周期 1/10。
- Care is to be taken that power dissipation does not exceed the absolute maximum rating of the product. 使用功率不能超过规定的最大值。
- 3.When the LEDs are in operation the maximum current should be decided after measuring the package temperature, junction temperature should not exceed the maximum rate. LED 使用最大电流需根据散热条件确定，结温不能超过最大值。

■ Electrical/Optical Characteristics--White (At T_A=25°C) 光电特性参数

Parameter	Symbol	Conditions	Emitting Color	Values			Units
				Min	Avg.	Max	
Forward Voltage (正向压降)	V _F	I _F =1000mA	W3	8.50	9.00	9.50	V
	V _F	I _F =1000mA	W6	8.50	9.00	9.50	
Luminous Flux (光通量)	Φ _v	I _F =1000mA	W3	1000	1050	1300	lm
	Φ _v	I _F =1000mA	W6	1000	1050	1300	
Color Temperature (色温)	CCT	I _F =1000mA	W3	2800	3000	3200	K
	CCT	I _F =1000mA	W6	6000	6500	7000	
CRI (显色指数)	R _a	I _F =1000mA	W3	70	72	--	--
	R _a	I _F =1000mA	W6	70	72	--	
Reverse Current (反向漏电流)	I _R	V _R =15V	W3/W6	--	--	10	μA
Viewing Angle ^[1] (发光角度)	2Θ _{1/2}	I _F =1000mA	W3/W6	--	120	--	Deg
Thermal Resistance Junction To Board (热阻)	RΘ _{J-B}	I _F =1000mA	W3/W6	--	0.5	--	°C/W

Note:(备注)

1. The above forward voltage measurement allowance tolerance is ±0.1V.

以上所示电压测量误差±0.1V

2. The above luminous flux measurement allowance tolerance is ±5%.

上述发光通量的测试允许公差为±5%

3. The above Color Rendering Index measurement allowance tolerance is ±2.

以上显色性指数的测试允许公差为±2

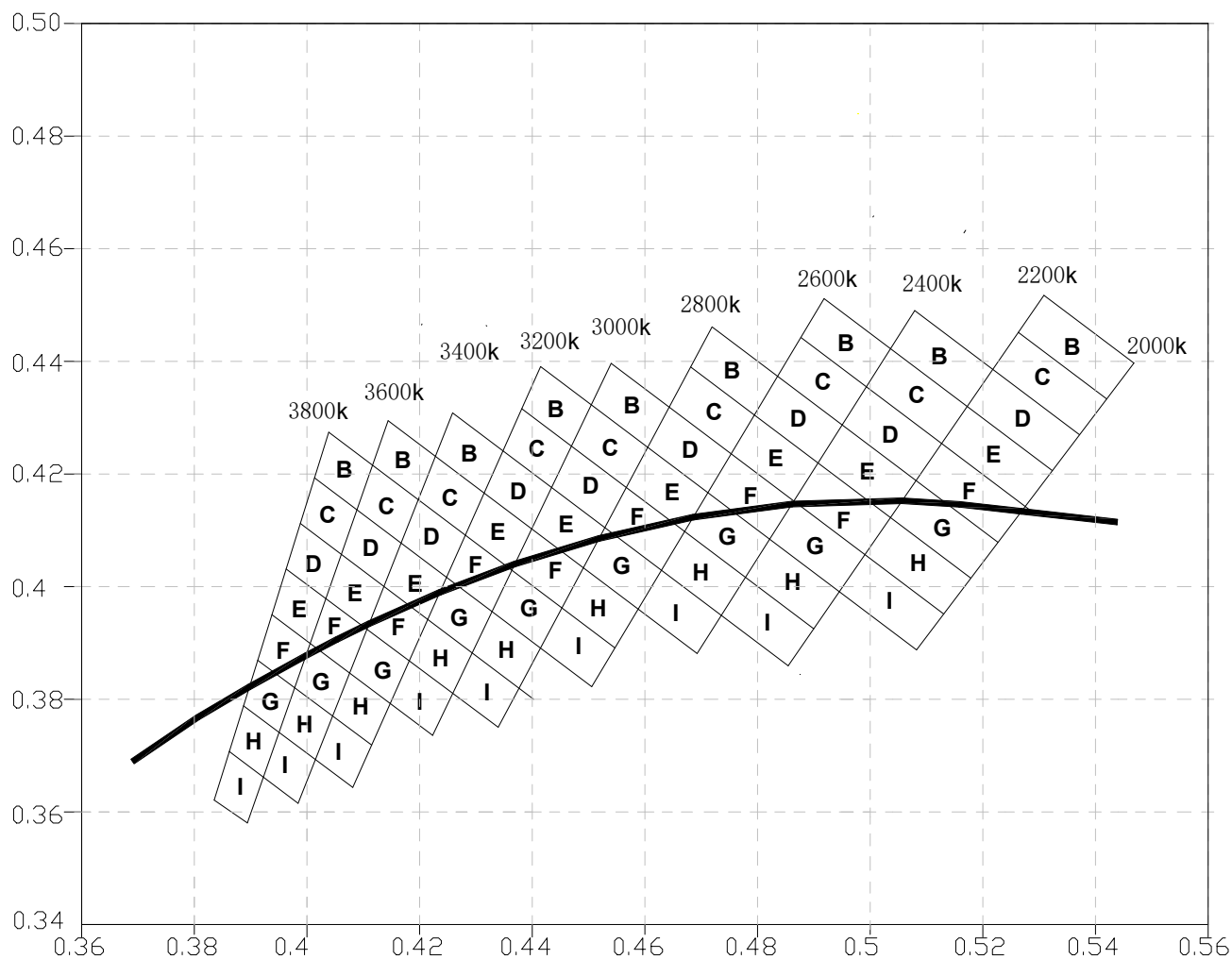
4. The above color coordinates measurement allowance tolerance is ±0.003.

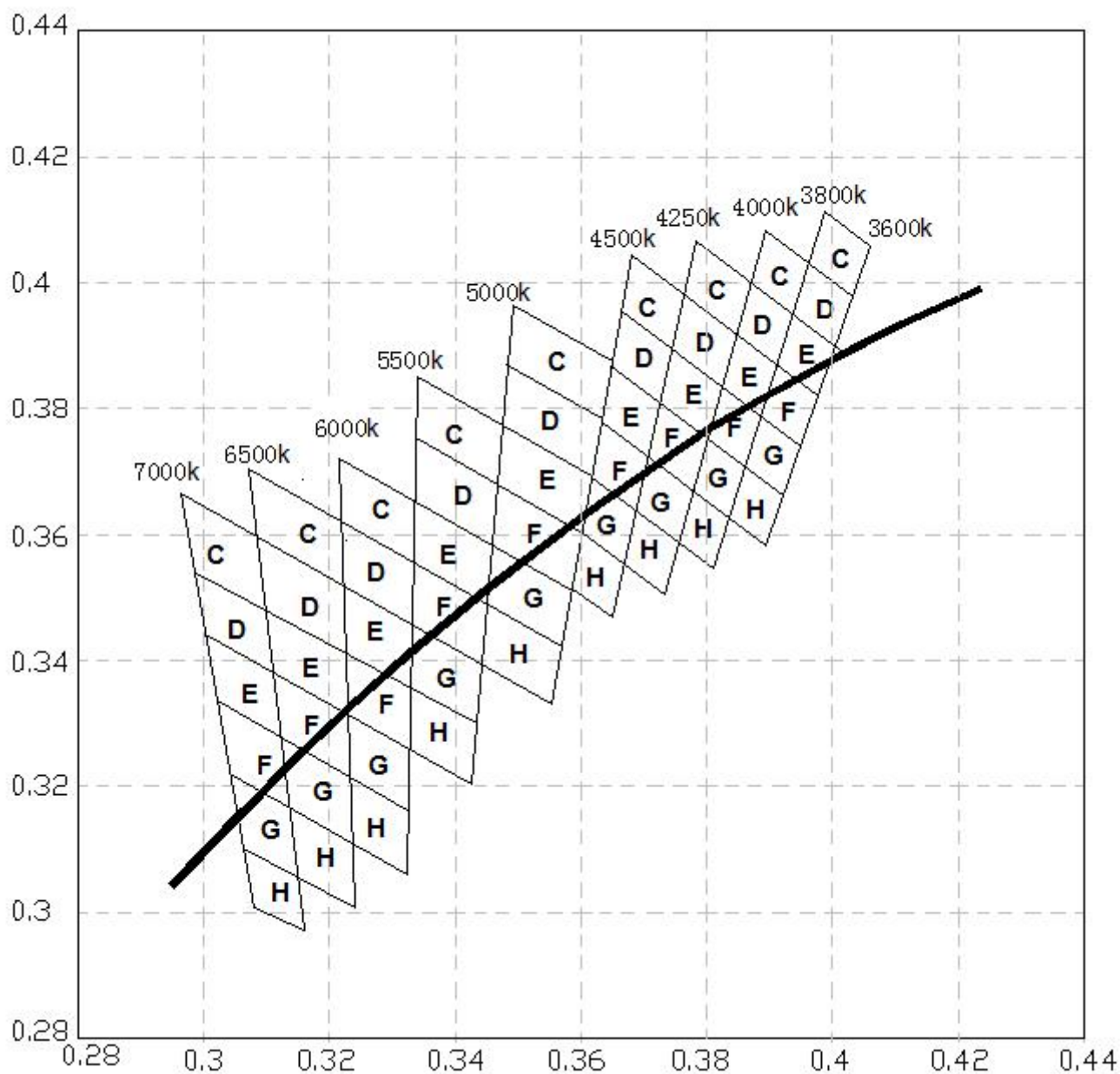
以上所示坐标测量误差 ±0.003。

5. 2Θ_{1/2} is the angle from optical centerline where the luminous intensity is 1/2 the optical centerline value.

2q_{1/2} 是半值角, 指光强是光学中心线光强的 1/2 处到光学中心线的角度

■ Color & binning 色区分级

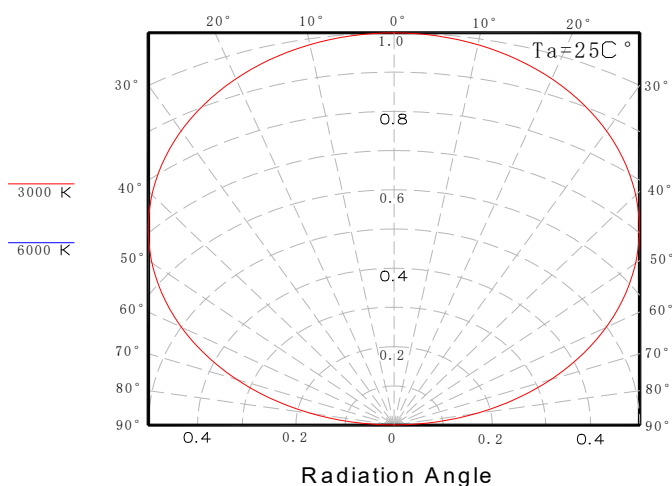
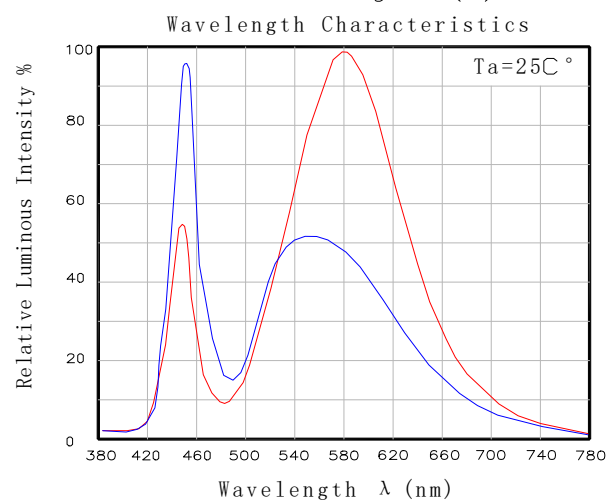
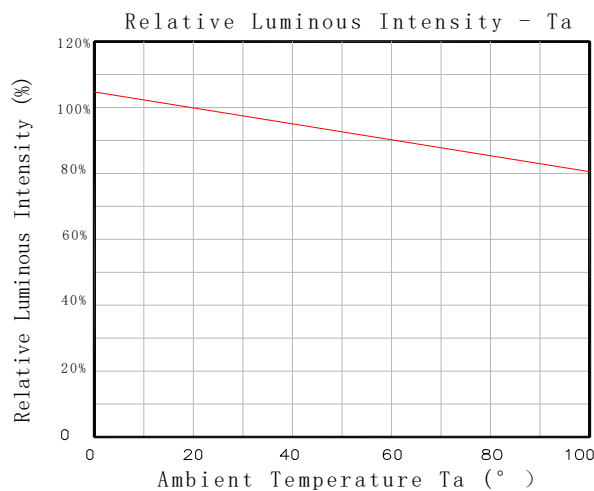
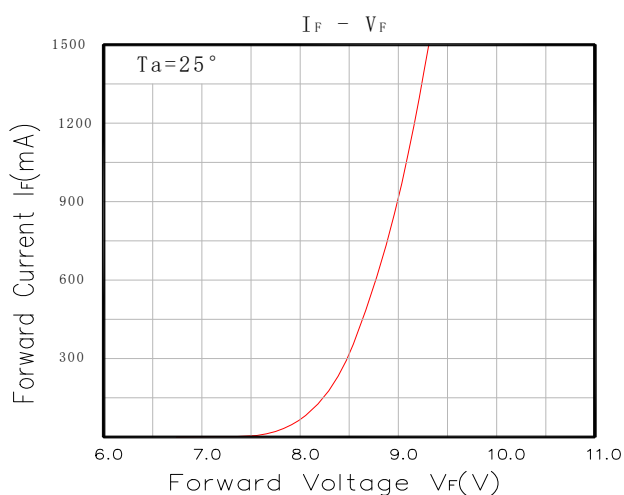
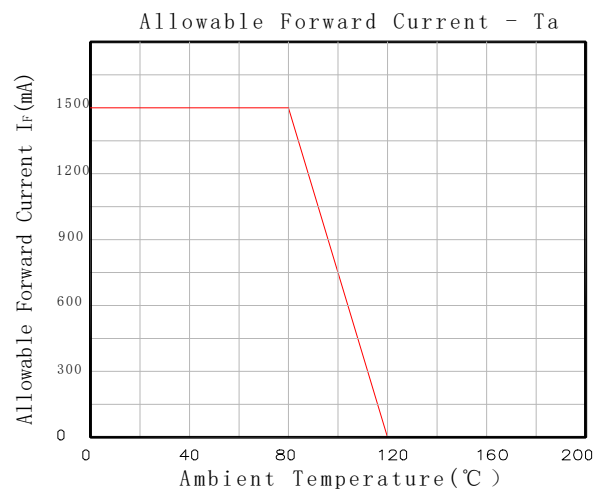
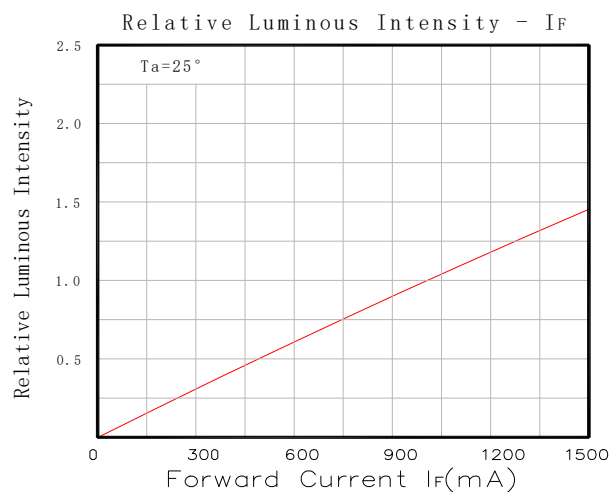




20E 2000- 2200K	0.5172	0.432	20F 2000- 2200K	0.5127	0.4254	22E 2200- 2400K	0.495	0.4287	22F 2200- 2400K	0.4907	0.4219
	0.5324	0.4206		0.5275	0.4142		0.5082	0.4188		0.5036	0.4122
	0.5275	0.4142		0.5227	0.4078		0.5036	0.4122		0.4991	0.4057
	0.5127	0.4254		0.5082	0.4188		0.4907	0.4219		0.4865	0.4152
24E 2400- 2600K	0.4795	0.4304	24F 2400- 2600K	0.4753	0.4236	26E 2600- 2800K	0.4605	0.4247	26F 2600- 2800K	0.4567	0.4176
	0.4907	0.4219		0.4865	0.4152		0.4712	0.4167		0.4671	0.4098
	0.4865	0.4152		0.4822	0.4084		0.4671	0.4098		0.463	0.4029
	0.4753	0.4236		0.4712	0.4167		0.4567	0.4176		0.4529	0.4105
28E 2800- 3000K	0.4434	0.4176	28F 2800- 3000K	0.4399	0.4102	30E 3000- 3200K	0.4315	0.4166	30F 3000- 3200K	0.4281	0.4091
	0.4529	0.4105		0.4491	0.4033		0.4399	0.4102		0.4364	0.4029
	0.4491	0.4033		0.4453	0.3962		0.4364	0.4029		0.4327	0.3951
	0.4399	0.4102		0.4364	0.4029		0.4281	0.4091		0.4248	0.4016
32E 3200- 3400K	0.4167	0.4077	32F 3200- 3400K	0.4137	0.4	34E 3400- 3600K	0.4061	0.4057	34F 3400- 3600K	0.4033	0.3978
	0.4248	0.4016		0.4214	0.3942		0.4137	0.4		0.4106	0.3923
	0.4214	0.3942		0.4181	0.3867		0.4106	0.3923		0.4076	0.3846
	0.4137	0.4		0.4106	0.3923		0.4033	0.3978		0.4006	0.3899
36E 3600- 3800K	0.3963	0.4031	36F 3600- 3800K	0.3938	0.395	38E 3800- 4000K	0.3848	0.3918	38F 3800- 4000K	0.3825	0.3835
	0.4033	0.3978		0.4006	0.3899		0.3913	0.3869		0.3887	0.3788
	0.4006	0.3899		0.3978	0.382		0.3887	0.3788		0.3862	0.3707
	0.3938	0.395		0.3913	0.3869		0.3825	0.3835		0.3802	0.3752
40E 4000- 4250K	0.3746	0.3895	40F 4000- 4250K	0.3726	0.3809	42E 4250- 4500K	0.3649	0.3868	42F 4250- 4500K	0.3633	0.3779
	0.3825	0.3835		0.3804	0.3751		0.3726	0.3809		0.3707	0.3724
	0.3804	0.3751		0.378	0.3669		0.3707	0.3724		0.3688	0.3639
	0.3726	0.3809		0.3707	0.3724		0.3633	0.3779		0.3618	0.3691
45E 4500- 5000K	0.3475	0.3775	45F 4500- 5000K	0.3467	0.3679	50E 5000- 5500K	0.3327	0.3659	50F 5000- 5500K	0.3326	0.3559
	0.3618	0.3693		0.3603	0.3602		0.3459	0.3584		0.345	0.3489
	0.3603	0.3602		0.3587	0.3511		0.345	0.3489		0.3442	0.3393
	0.3467	0.3679		0.3459	0.3584		0.3326	0.3559		0.3325	0.3459
55E 5500- 6000K	0.3224	0.3517	55F 5500- 6000K	0.3227	0.3415	60E 6000- 6500K	0.3102	0.3486	60F 6000- 6500K	0.3117	0.3377
	0.3325	0.3459		0.3325	0.336		0.3227	0.3415		0.323	0.3313
	0.3325	0.336		0.3324	0.326		0.323	0.3313		0.3234	0.3211
	0.3227	0.3415		0.323	0.3313		0.3117	0.3377		0.3133	0.3268
65E 6500- 7000K	0.3009	0.3438	65F 6500- 7000K	0.3032	0.3325	70E 7000- 7500K	0.293	0.3383	70F 7000- 7500K	0.2961	0.3265
	0.3117	0.3377		0.3133	0.3268		0.3032	0.3325		0.3055	0.3212
	0.3133	0.3268		0.3148	0.316		0.3055	0.3212		0.3078	0.3099
	0.3032	0.3325		0.3055	0.3212		0.2961	0.3265		0.2992	0.3148

■ Typical Optical/Electrical Characteristics Curves 典型光电参数曲线

(IF=1000mA ,Ta=25°C Unless Otherwise Noted)



■ Reliability test standards 可靠性实验标准

测试项目 Test Item	参考标准 REF. Standard	测试条件 Test condition	持续时间 Duration	取样数 Sample count	允收数 Accept
温度循环 Temperature Cycle	JESD22-A104 -A	100℃±5 30min~25℃ 30min,5min,30min,5min	循环 100 次 100 cycles	22	0/22
冷热冲击 Thermal shock	JESD22-A106	-40℃~100℃ 30min, 30min	循环 100 次 100 cycles	22	0/22
高温储存 High Temperature Storage	JEITA ED-4701 200 201	TA=100℃±5℃	1000 Hrs	22	0/22
低温储存 Low Temperature Storage	JEITA ED-4701 200 202	TA=-40℃±5℃	1000 Hrs	22	0/22
高温/高湿储存 Humidity Heat Storage	JIS C 7021 (1977)B-11	Ta=60℃ RH=85%	1000Hrs	22	0/22
寿命测试 Life test	JESD22-A108 -A	Ta=25℃ If=1500mA	1000Hrs	22	0/22
高温/高湿寿命测试 High humidity Heat life test	JESD22-A101	Ta=60℃ RH=85% IF=1500mA	1000Hrs	22	0/22

Criteria For Judging Damage 失效判定标准:

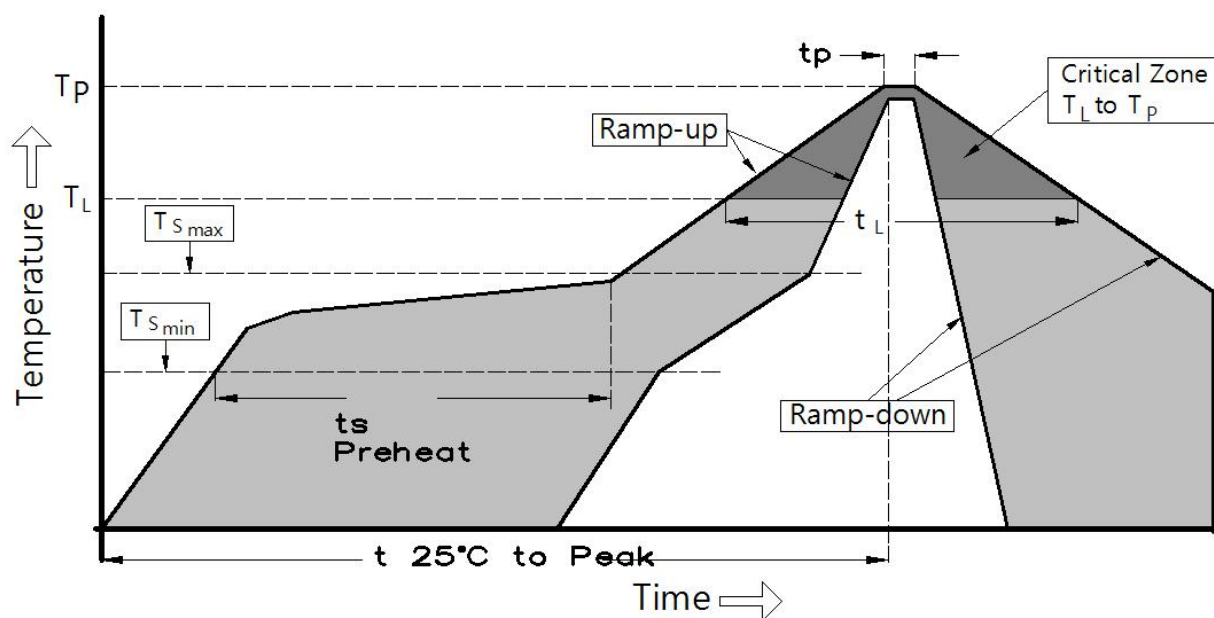
Test Item 项目	Symbol 符号	Test condition 测试条件	Criteria For Judgement 判定标准	
			Min. 最小	Max. 最大
Forward Voltage 正向电压	VF	IF=1500mA	—	U.S.L*)1.1
Reverse Current 反向电流	IR	VR=15V	—	10uA
Luminous Flux 光通量	Lm	IF=1500mA	L.S.L*)0.7	—
Lamp bead lighting test 灯珠点亮测试	/	IF=1500mA	无开路、短路、闪变	

U.S.L: Upper standard level 规格上限

L.S.L: Lower standard level 规格上限

Note 备注:

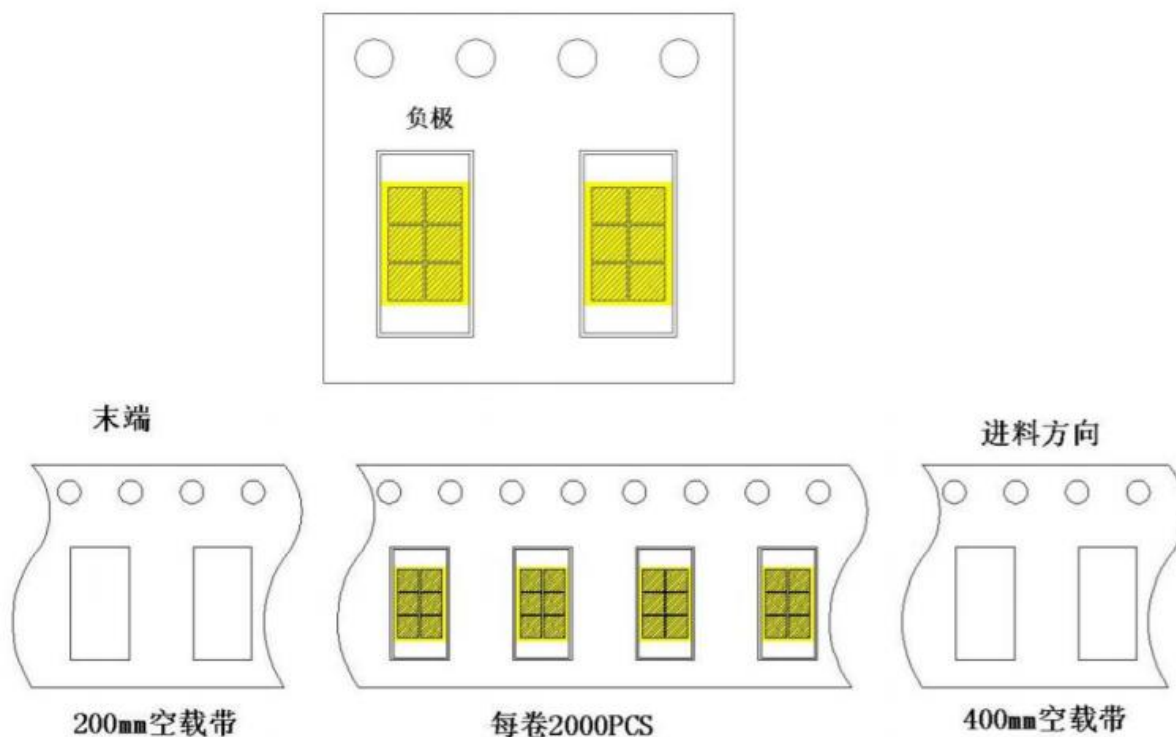
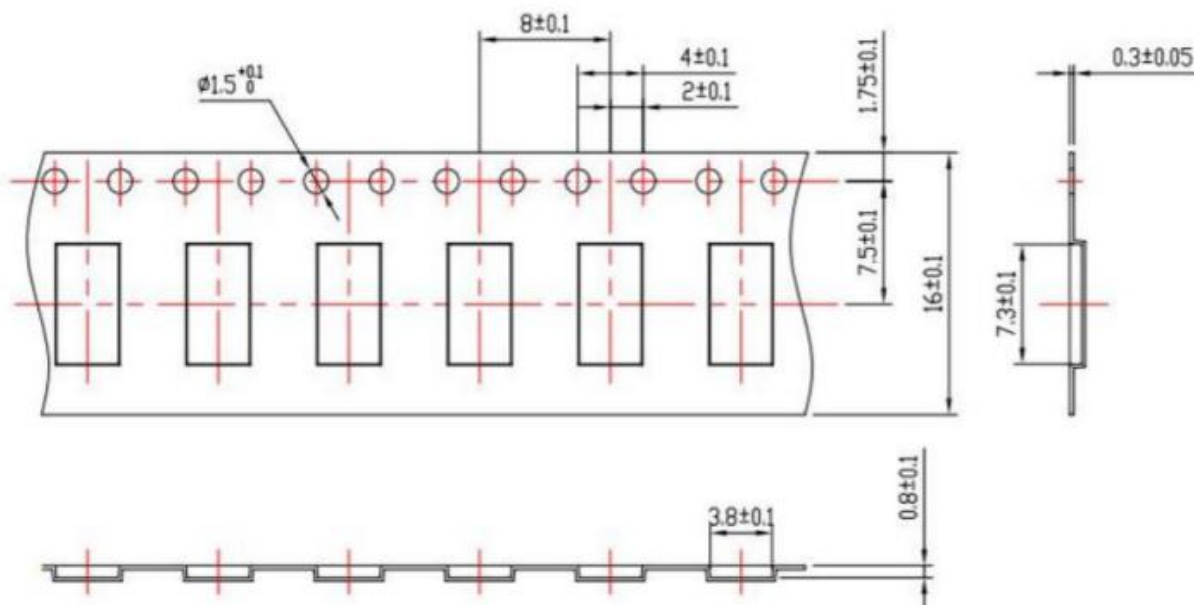
The above technical data is only the typical value of the product, not as any application conditions and application mode guarantee. 以上技术数据仅为产品的典型值，不作为任何应用条件及应用方式的保证。

■ SMT ReflowSoldering Instructions SMT 回流焊说明


平均升温速度 (T_{Smax} 至 T_p)	最高 3 ° C/秒
预热: 最低温度 (T_{Smin})	150 ° C
预热: 最高温度 (T_{Smax})	200 ° C
预热: 时间 (t_{Smin} 至 t_{Smax})	60 - 120 秒
限时维持高温: 温度 (T_L)	215 ° C
限时维持高温: 时间 (t_L)	最多 60 秒
峰值 / 分类温度 (T_p)	255±5 ° C
限时峰值分类温度:时间 (t_p)	最多 10 秒
与实际峰值温度 (t_p) 低 5 ° C 以内的保持时间	最多 30 秒
降温速度	最高 6 ° C/ 秒
25 ° C 升至峰值温度所需时间	最多 8 分钟

■ Packing Standard 包装标准

Normal packing quantity: 2000pcs/reel 正常包装数量: 2000 片/卷



Reel Specifications 卷盘规格

