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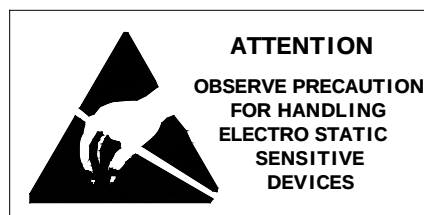
Approval Sheet 承认书

Customer/客户：

Product/产品：546 无边椭圆型黄光

Part Number/型号：JD546YW-3JN3-F1

Issue Date /发行日期：2013-10-08

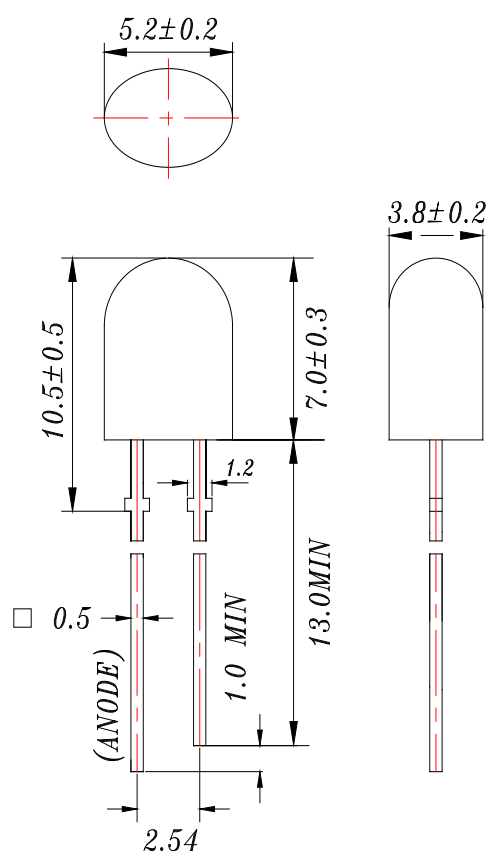


CUSTOMER 客户			MANUFACTURER 制造商		
Des/Gner 设计/开发	Checked 审核	Approved 批准	Prepared 制作	Checked 审核	Approved 批准
			吴 敏	许进松	赵先华

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■ Dimensional drawing/尺寸图

- ※ High intensity
- ※ Reliable and rugged
- ※ Low current requirement
- ※ IC compatible



All dimensions are in millimeter/圖中所有尺寸均以毫米為單位

Tolerance is $\pm 0.25\text{mm}$ (0.10") unless otherwise noted/若無特別標注，圖中尺寸公差為 $\pm 0.25\text{mm}$

Pin Cut: Anode - 4.1mm, 3.5mm Cathode

■ Shape Specification /外觀要求

No. 序号	ITEM 項目	SPEC OR DESCRIPTION 規格要求描述
1	Lens 胶体	◆ No change color/不可有胶体变色 ◆ No Disrepair/不可有破损 ◆ Scratch/划伤 (length $\leq 2.0\text{mm}$, Width $\leq 0.25\text{mm}$) ◆ macula/黑点、异物 ($\leq 0.25\text{mm}$ and $\leq 2\text{EA}$ in Encapsulation reverse) ◆ bubble/气泡 ($\leq 0.3\text{mm}$ and $\leq 2\text{EA}$ Encapsulation reverse)
2	PIN PIN 脚	◆ No bottom crook/PIN 尖不可有弯脚 ◆ No oxidation/不可有氧化 ◆ No electropolar reverse/不可有切反 (极性反)
3	Configuration 结构	◆ No Encapsulation reverse/不可封反 ◆ No PIN loosen/PIN/脚不可松动
4	surface preparation 表面处理	◆ Cut needn' t electroplate /切口处无需做电镀
5	Lens color 胶体颜色	◆ Yellow Diffused 黄色雾状

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■ Absolute Maximum Ratings /最大绝对额定值

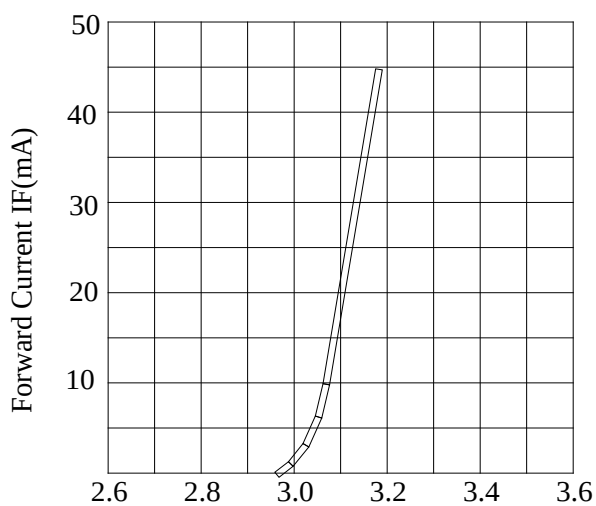
Parameter 参数	Symbol 符号	Value 数值	Unit 单位
Forward Current 正向电流	If	30	mA
Reverse Voltage 反向电压	Vr	5	V
Power Dissipation 功率消耗	Pd	72	mW
Pulse Current 脉冲电流	I _{FP}	100	mA
Operating Temperature 工作温度	Topr.	-25 to +85	℃
Storage Temperature 储存温度	Tstg.	-40 to +100	℃
Soldering temperature 焊接温度	Tsol	260±5℃ (for4sec)	℃
Electro Static Discharge 抗静电能力	ESD	1500	V

■ Opto-Electrical Specification/光电参数规格

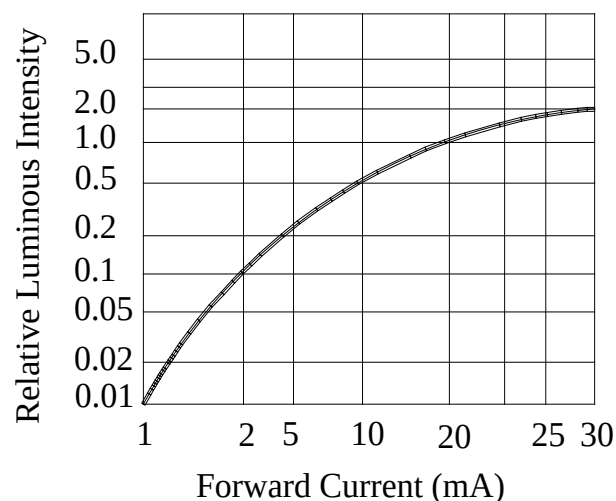
Parameter 参数	Symbol 符号	Min. 最小值	Typ. 平均值	Max. 最大值	Unit 单位	Tolerance 误差值	Test Conditinos 测试条件
Forward Voltage 正向电压	Vf	2.0	--	2.2	V	± 0.05V	IF/正向电流=20mA Test Temperature 测试温度=25℃
Luminous Intensity 发光强度	Iv	1700	--	2000	mcd	± 60 mcd	
Wavelength 波长	WD	585	--	590	nm	± 2nm	
Chromatic current 光谱坐标	X	--	--	--	/	±0.005	
	Y	--	--	--	/	±0.005	
Luminous Flux 光通量	Φ	--	--	--	Lm	± 0.1 Lm	
Color rendering index 显色指数	Ra	--	--	--	/	± 2	
Lighting Angle 发光角度	θ	--	70/40	--	deg	±2	
Reverse Current 反向电流	Ir	--	--	10	μ A	±0.1 μ A	Vr=5V

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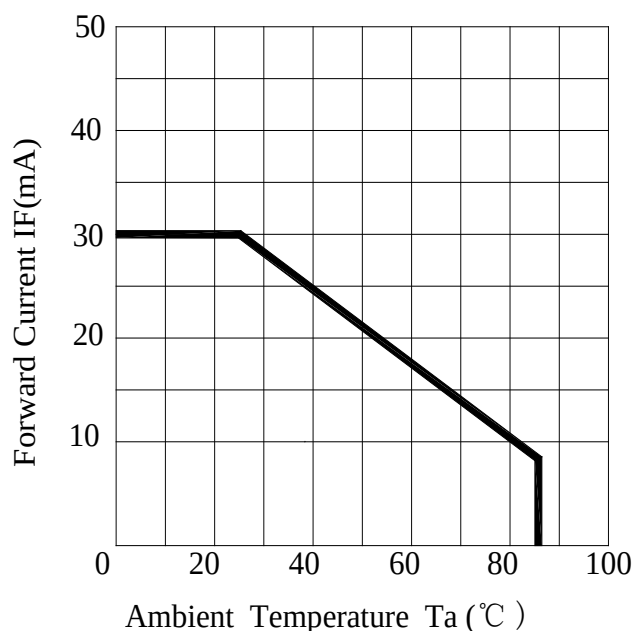
■ Optical Characteristics Curves/光电特性图



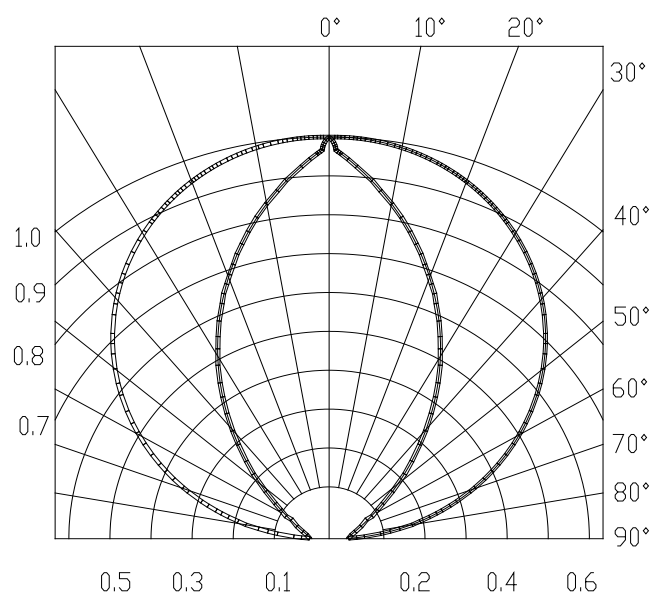
LED Chip Forward Current vs. Forward Voltage
芯片伏安特性



FORWARD CURRENT VS. LUMINOUS INTENSITY
电流与光强



Maximum Forward Current vs. Ambient Temperature
环境与温度的关系



RADIATION DIAGRAM
Lighting Angle / 发光角度: $\pm 5^\circ$

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■ Reliability Test Items/可靠度测试项目

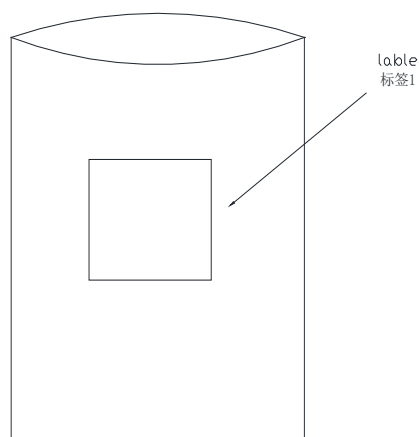
No.	Item 测试项目	Condition 测试条件	Time/Cycle 测试时间与周期	Number of Damaged 不良数/测试数
1.	Soldering Heat Test 焊接实验	260±5 °C	10 sec	0/60
2	Thermal Shock 热冲击	0 °C (15sec) ~ 100 oC(15sec)	20 cycle	0/60
3	High Temp. Storage 高温储存	100 °C	1000Hrs	0/60
4	Low Temp. Storage 低温储存	-40 °C	1000Hrs	0/60
5	Temperature Cycle Test 高低温循环	-40 °C ~ 80 °C	100 Cycles, 200 Hrs	0/60
6	High Temp. High Humidity Test 高温高湿	60 °C, 90 % RH	1000 Hrs	0/60
7	Operation Life Test 1 常温老化	Room Temp., 20mA	1000 Hrs	0/60
8	Operation Life Test 2 常温老化	Room Temp., 30mA	500 Hrs	0/60
9	High Temp. Operation Life Test 高温老化	85 °C , 5mA	1000 Hrs	0/60
10	Low Temp. Operation Life Test 低温老化	-30 °C , 20mA	1000 Hrs	0/60

Judgment Criteria/判定标准

Item 项目	Symbol	Test Conditions	Judgment Criteria
Forward Voltage 正向电压	V _f	I _F = 20 mA	Δ % < 20 %
Leakage Current 反向漏电流	I _r	V _r = 5V	< 20 uA
Luminous Intensity 发光强度	I _v	I _F = 20 mA	Δ % <20 %
Luminous Flux 光通量	lm	I _F = 20 mA	Δ % <20 %

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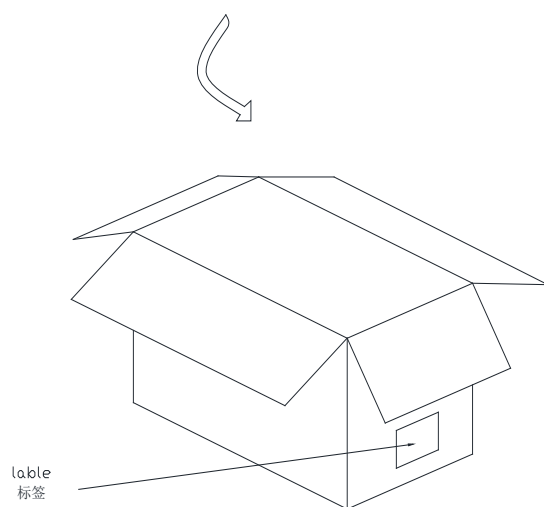
■ Packing/包装规格



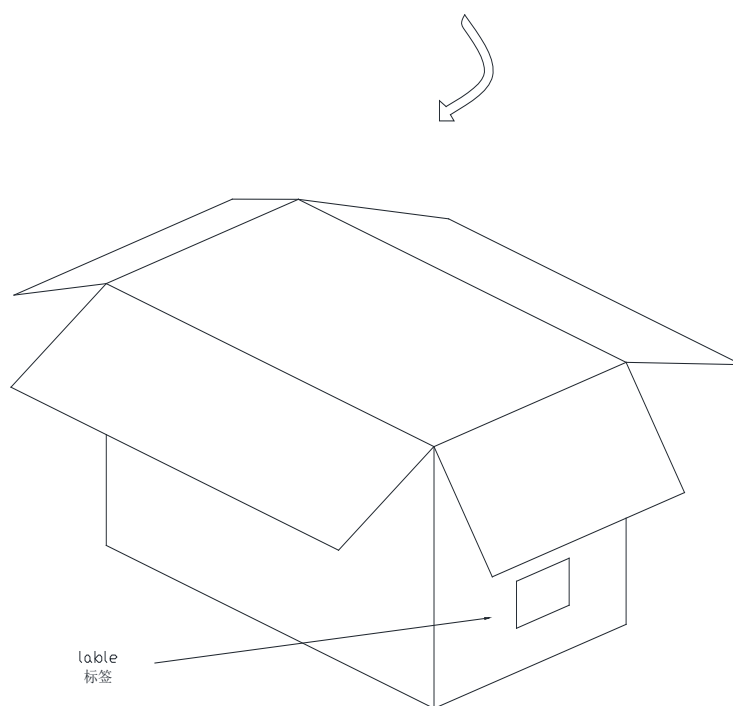
防静电袋：140*180mm

中山市晶得光电有限公司	
型号：_____	电压：_____
光通量：_____	色温：_____
质检：_____	数量：_____

标签：60*40mm



中箱尺寸：340*323*328mm



大箱尺寸：495*358*357mm

备注：1. 由于各种外形包装的数量不一，包装数量需根据实际情况包装。
2. 可根据订单量挑选使用纸箱。

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■ Caution/注意事项

- 1、 After open the package, the LED should be kept at 30°C, 60 % 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、 The LED should be soldered within 48 hours (2 days) after opening the package.
打开包装后请在 48 小时内做焊接。
- 3、 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。
- 4、 when make use of it, please use static-free container, operator should wear antistatic clothes and rope-static-ring also should make effective ground.
使用时请使用防静电的盛装器具, 作业人员应穿着防静电服装及佩戴有剩之静电环并作为有效接地。
- 5、 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。
- 6、 It's unsuitable for circumfluence soldering
本产品不适合作回流焊接。
- 7、 ferrochromium soldering : power keep no more than 40W, tip temperature should not pass 300 °C, soldering time within 3 second, welding position and lens should keep 1.6mm distance at least
铬铁焊接时铬铁功率不要超过 40W, 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 1.6mm 距离。
- 8、 wave-soldering: temperature should not pass 265 °C, soldering time within 3 second, welding position and lens should keep 1.6mm distance at least
波峰焊接时温度不超过 265 °C, 焊接时间不要超过 3 秒, 焊接位置最少与胶体保持 1.6mm 距离。
- 9、 After soldering the LED should keep out off any shake or outer force before it come to normal temperature
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。
- 10、 when shaped pin should used tong or by professional staff, keep 2mm 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 2mm 才能弯折引脚, 请在焊接前完成引脚成形。
- 11、 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。
- 12、 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。
- 13、 LED is one-way continuity, please check electrode before mount, if amount wrong , the LED chip will damage or fail when LED applied voltage
单端导电性, 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。
- 14、 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。
- 15、 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。
- 16、 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。
- 17、 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气及光学之特性要求, 如电流是否均衡, 光色、亮度的一致性。