SPECIFICATION FOR APPROVAL

承　　认　　书

CUSTOMER'S CODE
客户代码:

DESCRIPTION
品　　名: 发光二极管

SPECIFICATION
规　　格: Φ5 圆头黄光

DATE
送样日期: 2020-11-06

PART NO.
本厂型号: CP-F5ROLCYC

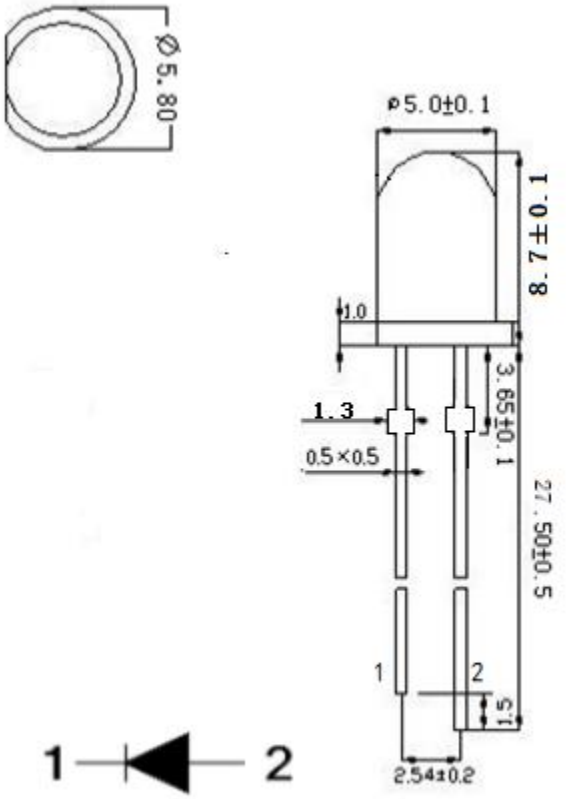
REFERENCE No.
档 案 号:

NUMBER OF SAMPLE
送样数量

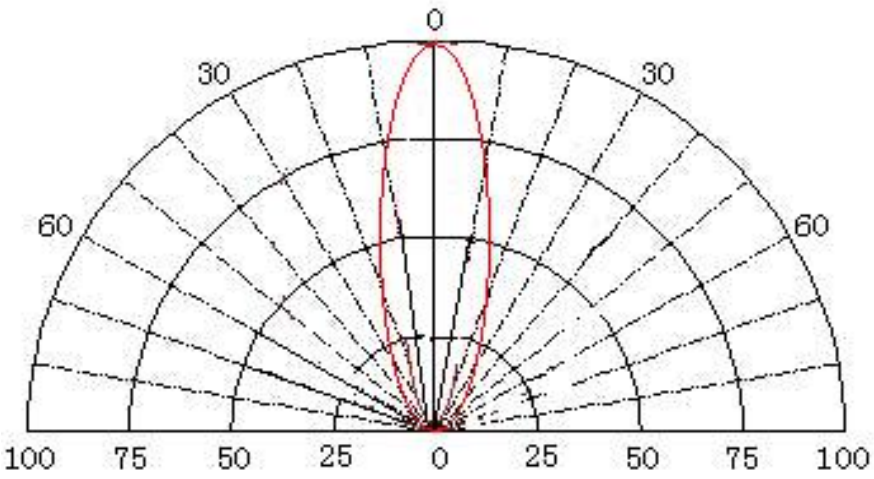
COPY OF ACKNOWLEDGEMENT
承认书份数

Approved By Customer 客 户 承 认	Qualified By 核　　准	Form Designer 制　　作

Emitter 外型图：



Spotial Disttrbution



■ Absolute Maximum Rating 极限工作参数

Item 项目	Symbol 代号	Absolute Maximum Rating 极限工作参数	Unit 单位
Forward Current 正向电流	IF	20	mA
Peak Forward Current 瞬间脉冲电流	IFP	100	mA
ReverseVoltage 反向电压	VR	5	V
Power Dissipation 消耗功率	PD	60	mw
Electrostatic discharge 静电释放	ESD	2000	V
Operation Temperature 工作温度范围	TOPR	-30～+85	℃
Storage Temperature 存放温度范围	TSTG	-40～+90	℃
Lead Soldering Temperature 最高焊接温度	TSOL	230 ℃ for 3sec Max。	

*Ifp Conditions: Pulse Wide≤10msec≤1/10 瞬间脉冲电流

*Tsol Conditions:3mm from the base of epoxy bulb 最高焊接温度 距胶体 3mm

■ Typical Optical/Electrical Characteristics 光电特性参数

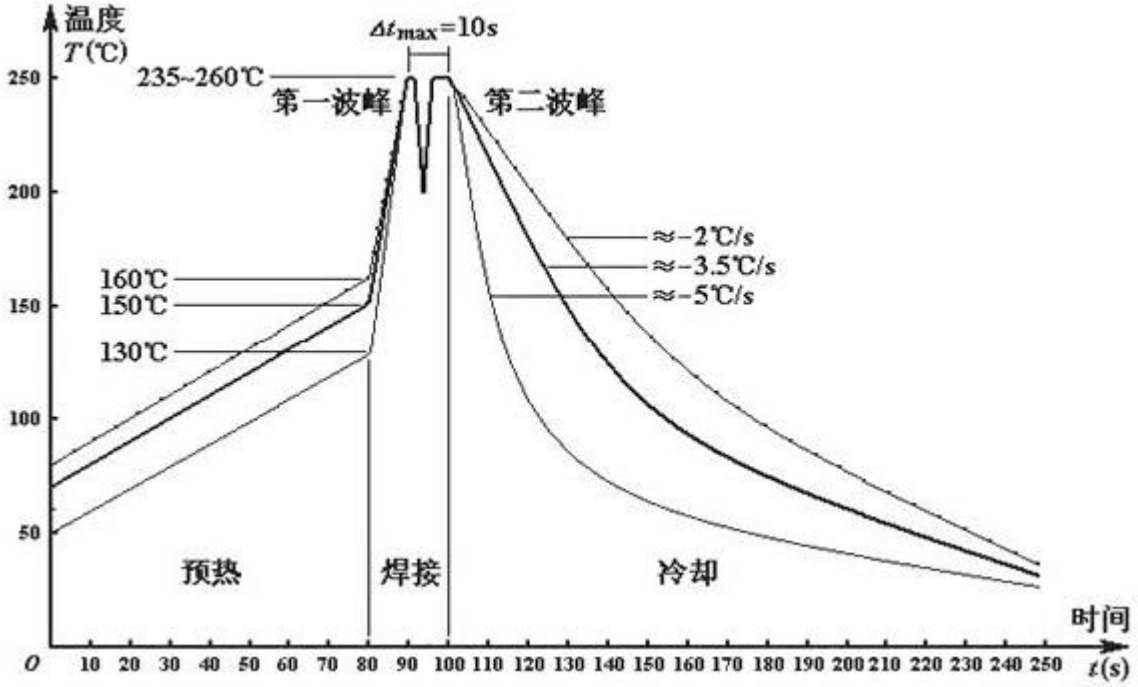
Item 项目	Symbol 代号	Condition 测试条件	Min 最小值	Typ 典型值	Max 最大值	Unit 单位
Forward Voltage 正向电压	VF	IF=20mA	3.0	3.4	3.8	V
Reverse Current 逆向电流	IR	VR=5V			5	uA
Viewing Angle 半光全角	2θ1/2	IF=20mA		20		deg
Light intensity 光强度	IV	IF=20mA	6000	7000	8000	mcd
Wavelength 波长	WLD	IF=20 mA	585	590	595	nm
Recommend Forward Current 持续正向电流	IF(rec)	IF=20mA			20	mA

Notes:

1.Work absolute ratings Ta=25℃ 工作常规值 温度=25℃

2.Tolerance of measurement of forward voltage±0.1V 正向电压误差范围±0.1V

■ Soldering Profile Suggested



(1) TEST ITEMS AND RESULTS（测试项目及结果）

Test Item	Standard Test Method	Test Conditions	Note	Number of Damaged
Resitance to Soldering Heat (Reflow Soldering)	JEITA ED-4701 300 301	Tsld=180℃, 10sec. (Pre treatment 30℃,70%,168hrs)	2 times	0/50
Solderability (Reflow Soldering)	JEITA ED-4701 300 303	Tsld=240±5℃, 3sec. (Leader Solder)	1time over 95%	0/50
Thermal Shock	JEITA ED-4701 300 307	-40℃~100℃ 5min. 5min.	100cycles	0/50
Temperature Cycle	JEITA ED-4701 100 105	-40℃~25℃~100℃~25℃ 30min. 5min. 30min. 5min.	100cycles	0/50
Moisture Resistance Cycle	JEITA ED-4701 200 203	25℃~65℃~-10℃ 90%RH 24hrs./1cycle	10 cycles	0/50
High Temperature Storage	JEITA ED-4701 200 201	Ta=100℃	1000 hrs	0/50
High Temperature High Humidity Storage	JEITA ED-4701 100 103	Ta=60℃, 90%RH	1000 hrs	0/50
Low Temperature Storage	JEITA ED-4701 200 202	Ta=-40℃	1000 hrs	0/50
Steady State Operating Life		Ta=25℃, I_F=20mA	1000 hrs	0/50
Steady State Operating Life of High Temperature		Ta=85℃, I_F=20mA	1000 hrs	0/50
Steady State Operating Life of High Humidity Heat		60℃, 90%RH, I_F=20mA	500 hrs	0/50
Steady State Operating Life of Low Temperature		Ta=-30℃, I_F=20mA	1000 hrs	0/50
Drop		H=75cm	3 cycles	0/50
Substrate Bending	JEITA ED-4702	3mm, 5 ± 1 sec.	1 time	0/50
Stick	JEITA ED-4702	5N, 10 ± 1 sec.	1 time	0/50

(2) CRITERIA FOR JUDGING THE DAMAGE（损伤判定标准）

Item	Symbol	Test Conditions	Criteria for Judgement	
			Min.	Max.
Forward Voltage	V_F	I_F=20mA	-	U.S.L.*)X1.1
Reverse Current	I_R	VR=5V	-	U.S.L.*)X2.0
Luminous Intensity	I_V	I_F=20mA	L.S.L.**)X0.7	-

*) U.S.L.：Upper Standard Level　　**) L.S.L.：Lower Standard Leve

产品注意事项：

Product Notes:

产品运输

适用范围：所有产品；

LED产品在运输过程中，需保持正面朝上，防潮防水，运输过程中避免挤压、碰撞和剧烈震动。

Product transportation

Scope of application: for all products

In the course of transportation, led products need to keep face-up, moisture-proof and waterproof, need to avoid extrusion, collision and violent vibration.

产品储存及期限

适用范围：所有产品

室温密封存储：20℃～30℃，40%～60%RH，产品有效期为半年；

防潮密封存储：20℃～30℃，25%～60%RH，产品有效期为一年；

产品拆包开封后，建议24小时内使用完成，（环境条件温度<30℃，湿度<60%）。

Product storage and time limit

Scope of application: for all products

Sealed storage at room temperature: 20℃～30℃, 40%～60%RH and product valid for six months;

Moisture-proof sealing storage: 20℃～30℃, 25%～60%RH and product valid for one year;

After unpacking, led product is recommended to complete within 24 hours(Environmental conditions temperature <30 ℃, humidity <60%).

除湿处理

适用范围： 大功率、SMD LED系列。

LED产品超出以上规定期限，或者由于其他原因受潮，建议客户做除湿处理后再使用。

除湿方法：70℃/22±2小时。

Dehumidification process

Scope of application: 1w high power LED and SMD led series

LED products beyond the above deadline, or for other reasons be damp, we recommend that customers do dehumidification before use.

Dehumidification method: 70℃/22±2hours.

结温极限及散热处理
适用范围：所有产品
LED产品在使用过程中，请保证必要的散热设计，如散热不足，LED内部结温超过125℃，将降低光效及影响LED的使用寿命。

Junction temperature limit and thermal treatment
Scope of application: for all products
When LED products are in use, please ensure that there are the necessary thermal design and if LEDs are inadequate cooling and LED internal junction temperature exceeds 125 ℃ , the LED luminous efficiency and service life will be reduced.

静电防护
适用范围：所有产品
LED是静电敏感器件，虽然联新瑞的LED产品具有优异的抗静电能力，但每经历一次静电释放产生的冲击，都会对LED造成一定程度的损坏。因而在使用LED产品过程中需要做好静电防护措施，
例如佩戴防静电手套及防静电手环。

Electrostatic protection
Scope of application: for all products
LED is an electrostatic sensitive product, and although Lianxinrui opto electronic LED products with excellent anti-static ability, every shock generated by electrostatic discharge will have a certain degree of damage to the LED. Therefore, in the process of using LED products, we need to do electrostatic protective measures, Such as wear anti-static gloves and anti-static bracelets.

手动焊接操作指引
适用范围：所有产品
建议焊接时电烙铁在支架引脚上停留时间不超过3秒，如需要反复焊接时，间隔停留时间不少于2秒，
避免长时间高温对LED造成损伤。 焊接过程中，请勿触摸或挤压LED的透镜表面，避免对LED内部造成损伤，同时请注意避免电烙铁对LED表面胶体的烫伤及其它损伤。

Manual welding operation guidelines
Scope of application: for all products
when welding, we advice the soldering iron on the bracket pin’s residence time is not more than 3 seconds and if need to weld repeatedly, the interval time is not less than 2 seconds, in order to avoid long-time high temperature causing damage to the LED.

其它

使用的 LED 矩阵驱动器，要确保反向电压不会超过最大额定值，LED 的光输出强度足以让人的眼产生不适, 必须采取预防措施, 以保障直视 LED 不超过几秒钟。发现产品缺陷后，用户应告知我们, 不得自行对 LED 解剖和分析等的反向工艺。

Others notes:

When Using LED matrix drive, to make sure the reverse voltage does not exceed the maximum rating, and the LED light output intensity can let a person discomfort, and we must take preventive measures, in order to ensure direct vision LED no more than a few seconds. After finding defective LEDs, users should inform us, and shouldn’t make the reverse process of LEDs ,such as anatomy and analysis, etc.