



苏州群力欣光电科技有限公司

Suzhou Que-lesion Optoelectronic Technology co.,Ltd

产品规格书

SPECIFICATION

客户名称 Customer		产品名称 Product	3528LED
客户料号 Customer No.		产品型号 Type	QLXTS3528URZ017
规格书编号 SPEC No	20140821001	日期 Date	2014.08.21

客 户 确 认 APPROVED SIGNATURES		

制定(DRAW): _____ 审核(CHECK): _____ 批准 (APPROVE): _____

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QLXTS3528URZ017

特征 Features

- 宽的发光角度
Extremely wide viewing angle
- 适合所有 SMT 组装和焊接过程
Suitable for all SMT assembly and solder process
- 可用在载带及卷轴上
Available on tape and reel
- 防潮等级:2 级
Moisture sensitivity level: Level 2
- 包装:2000pcs/卷
Package:2000pcs/reel
- 符合欧盟 RoHS 标准
RoHS compliant

描述 Description

橙光 LED 由 AlGaInP 四种元素芯片激发而成

The orange source color devices are made with AlGaInP on Substrate Light Emitting Diode

应用 (Applications)

光学指示

Optical indicator

室内显示

Indoor display

汽车照明

Automotive lighting

LCD 背光、转换器，开关和标志，显示器等 Backlight for LCD , switch and symbol , display

用于日光灯管

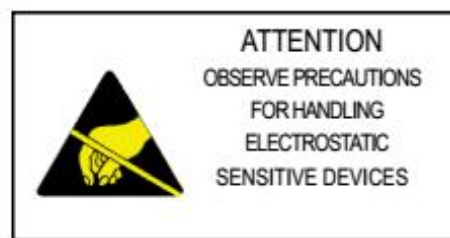
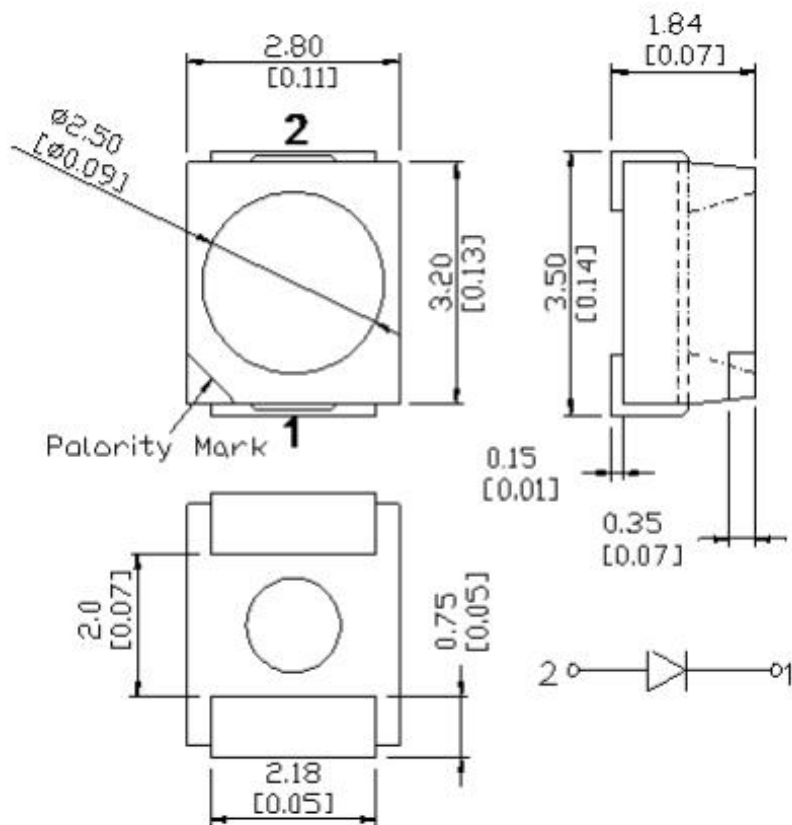
Tubular light application

一般应用

General use

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外形尺寸 Outline Dimensions



NOTES:

1. All dimensions units are millimeters. (所有尺寸标注单位为毫米)
2. All dimensions tolerances are ± 0.2 mm unless otherwise noted. (除特别标注外, 所有尺寸公差为 ± 0.2 毫米)



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Absolute maximum ratings at Ta=25°C

Parameter	Symbol	Value	Unit
Forward current	If	30	mA
Reverse voltage	Vr	5	V
Operating temperature range	Top	-40 ~+100	°C
Storage temperature range	Tstg	-40 ~+100	°C
Pulse Forward Current	Ifp	100	mA
Electrostatic Discharge	ESD	2000(HBM)	V

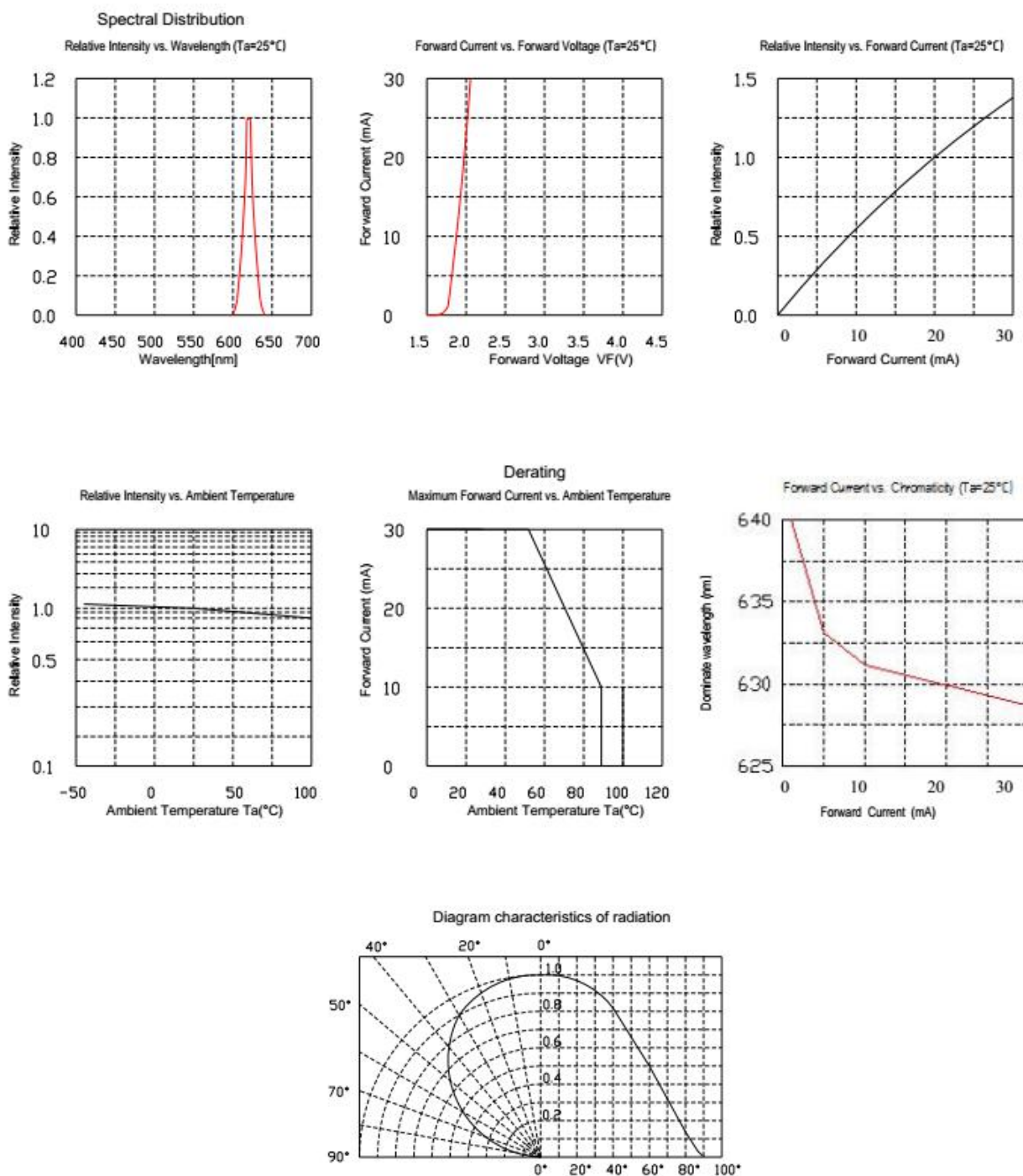
Electro-optical characteristics at Ta=25°C

Parameter	Test Condition	Symbol	Value			Unit
			Min.	Typ.	Max.	
Spectral Half bandwidth	If=20mA	$\Delta \lambda$	--	15	--	nm
Forward voltage	If=20mA	Vf	1.8	--	1.9	V
			1.9	--	2.0	V
			2.0	--	2.1	V
			2.1	--	2.2	V
			2.2	--	2.3	V
			2.3	--	2.4	V
			2.4	--	2.5	V
Dominant wavelength	If=20mA	λ_d	615.0	--	620.0	nm
Luminous intensity	If=20mA	Iv	800	--	1000	mcd
			1000	--	1200	mcd
			1200	--	1500	mcd
Viewing angle at 50% Iv	If=20mA	2 θ 1/2	--	120	--	Deg
Reverse current	Vr=5V	Ir	--	--	10	\square u A

NOTE: (Tolerance: Iv \pm 10%, λ_d \pm 2nm, Vf \pm 0.05V)
IFP Conditions: Pulse Width \leq 10msec. and Duty \leq 1/10.

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典型特性曲线 Typical Characteristics Curves





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信赖性测试项目及条件 Reliability Test Item And Conditions

Type	Test Item	Ref. Standard	Test Conditions	Note	Number of Damaged
Environmental Sequence	Resistance to Soldering Heat(Reflow Soldering)	JESD22-B106	Tsld=260℃,10sec	2 times	0/22
	Temperature Cycle	JESD22-A104	-40℃ 30min ↑↓5min 100℃ 30min	300 cycle	0/22
	Thermal Shock	JESD22-A106	-40℃ 15min ↑↓ 100℃ 15min	300 cycle	0/22
	High Temperature Storage	JESD22-A103	T _a =100℃	1000 hrs	0/22
	Low Temperature Storage	JESD22-A119	T _a =-40℃	1000 hrs	0/22
Operation Sequence	Life Test	JESD22-A108	T _a =25℃ I _f =20mA	1000 hrs	0/22
	High Humidity Heat Life Test	JESD22-A101	60℃ RH=90% I _f =20mA	1000 hrs	0/22

失效判断标准 Criteria For Judging Damage

Item	Symbol	Test Conditions	Criteria for Judgement	
			Min.	Max.
Forward Voltage	VF	IF=20mA	-	U.S.L*)×1.1
Reverse Current	IR	VR=5V	-	U.S.L*)×2.0
Luminous Intensity	IV	IF=20mA	L.S.L**)×0.7	-

备注 Note:

Tsol-锡液温度; I_{FT}:典型电流 Tsol –Temperature of tin liquid ; I_{FT}:Typical current

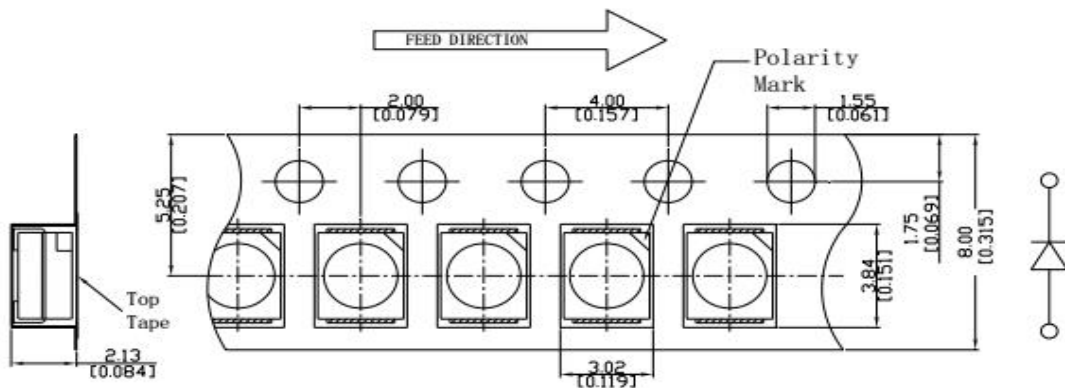
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包装 Packaging

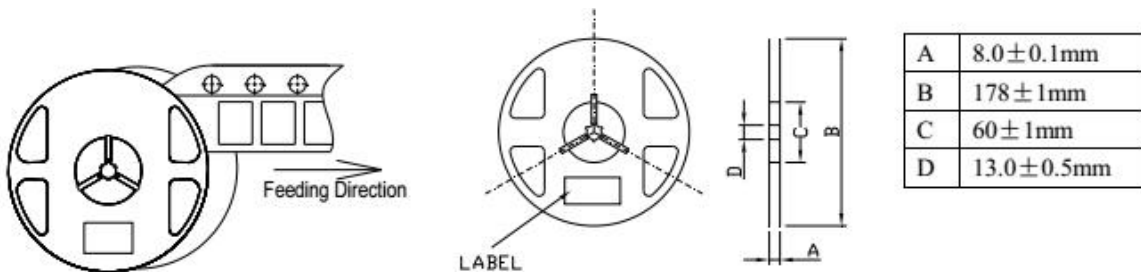
标签 Label

料号 Part No.:*** 批号 Lot No.:*** 数量 O'ty(pcs):***
 亮度 Iv(mcd):*** 波长 (nm) :*** 电压 VF (v) :***
 日期 Date:***

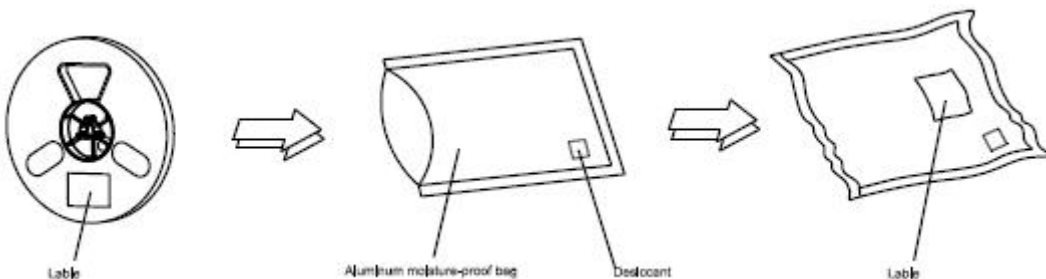
载带规格 (单位: mm) Tape Specifications(Units:mm)



卷轴尺寸 Reel Dimensions



防潮袋包装 Moisture Resistant Packaging



备注: 标注公差为 ±0.1mm,单位: mm

Note : The tolerances unless mentioned is ±0.1mm,Unit:mm

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焊接指导 Guideline for Soldering

Soldering iron 烙铁焊接

1. When hand soldering, keep the temperature of iron below less 300°C less than 3 seconds

当手工焊接时，烙铁的温度必须小于300℃，时间不可超过3秒

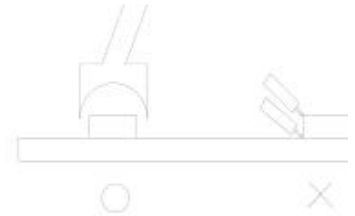
2. The hand solder should be done only one times

手工焊接只可焊接一次

Repairing 修补

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 in advance whether the characteristics of LEDs will or will not be damaged by repairing.

LED回流焊后不应该修复，当修复是不可避免时，必须使用双头烙铁（如下图），但必须事先确认此种方式会或不会损坏LED本身的特性。



Cautions 注意事项

The encapsulated material of the LEDs is silicone. Therefore the LEDs have a soft surface on the top of package. The pressure to the top surface will be influence to the reliability of the LEDs. Precautions should be taken to avoid the strong pressure on the encapsulated part. So when use the picking up nozzle, the pressure on the silicone resin should be proper.

LED封装为硅胶，故LED胶体表面较软，用力按压胶体表面会影响LED可靠性，因此应有预防措施避免在封装的零件上的强大压力，当使用吸嘴时，胶体表面的压力应是恰当的。

3. Do not stack together assembled PCBs containing LEDs. Impact may scratch the silicone lens or damage 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

4. Not suitable to operate in acidic environment, PH<7

不可用在PH<7的酸性场所

