



# 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	1206LED
客户料号 Customer No.		产品型号 Type	QSTERC3-01-20MA
规格书编号 SPEC No	20141015001	日期 Date	2014.10.15

客 户 确 认 APPROVED SIGNATURES		

制定(DRAW): \_\_\_\_\_ 审核(CHECK): \_\_\_\_\_ 批准 (APPROVE): \_\_\_\_\_

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## QSTERC3-01-20MA

### 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:4 级  
Moisture sensitivity level: Level 4
- 包装:3000pcs/卷  
Package:3000pcs/reel
- 符合欧盟 RoHS 标准  
RoHS compliant

### 描述 Description

该产品为红光 LED，是由红光芯片封装形成

The Colour LED which was fabricated by using a red chip

### 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

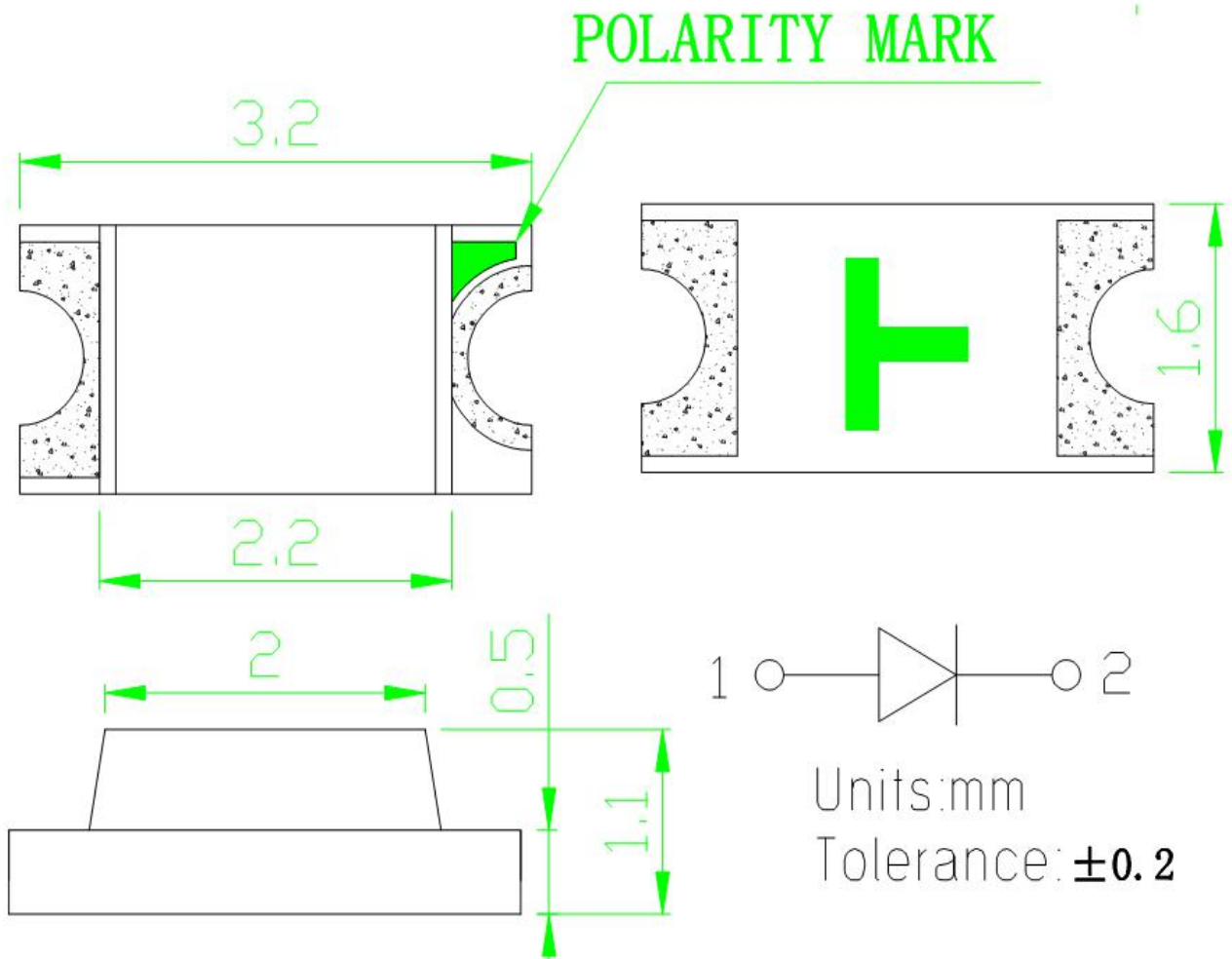
Tubular light application

一般应用

General use

# QSTERC3-01-20MA

## Package Dimensions



### Notes:

1. All dimensions are in millimeters (inches).
2. Tolerance is  $\pm 0.1(0.004")$  unless otherwise noted.



QSTERC3-01-20MA3. Specifications are subject to change without notice.

**Selection Guide**

Part No.	Dice	Lens Type	Iv (mcd) @ 20mA		Viewing Angle
			Min.	Typ.	2 θ 1/2
	RED	WATER CLEAR	70	150	120

**Note:**

1. θ1/2 is the angle from optical centerline where the luminous intensity is 1/2 the optical centerline value.

**Electrical / Optical Characteristics at TA=25°C**

Symbol	Parameter	Device	Typ.	Max.	Units	Test Conditions
λ <sub>peak</sub>	Peak Wavelength	RED	617	625	nm	IF=20mA
λ <sub>D</sub>	Dominant Wavelength	RED			nm	IF=20mA
Δλ <sub>1/2</sub>	Spectral Line Half-width	RED	25		nm	IF=20mA
C	Capacitance	RED	105		pF	VF=0V;f=1MHz
VF	Forward Voltage	RED	1.9	2.2	V	IF=20mA
IR	Reverse Curren	RED		2	uA	VR = 7V

Remarks:

If special sorting is required (e.g. binning based on forward voltage, luminous intensity, or wavelength), the typical accuracy of the sorting process is as follows:

1. Wavelength: +/-1nm
2. Luminous Intensity: +/-15%
3. Forward Voltage: +/-0.1V

Note: Accuracy may depend on the sorting parameters

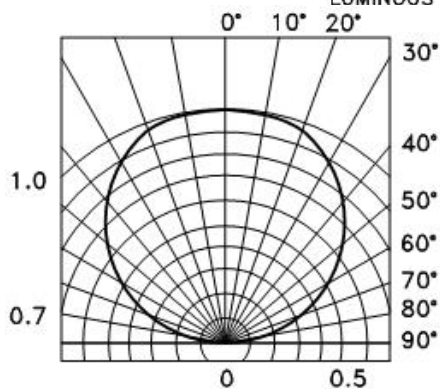
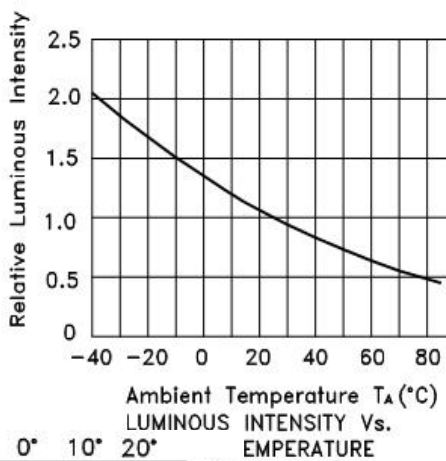
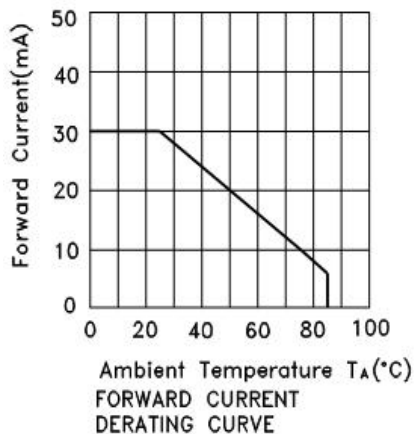
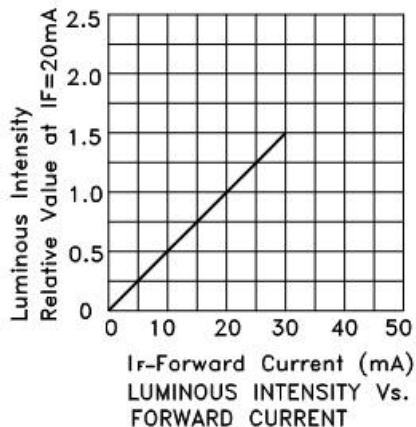
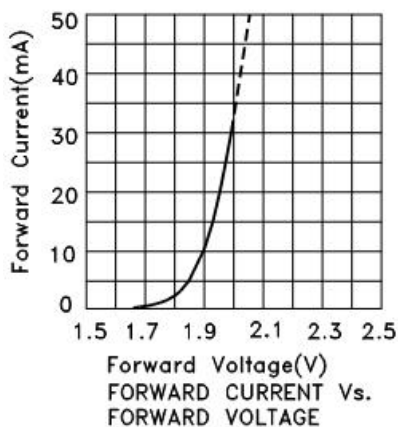
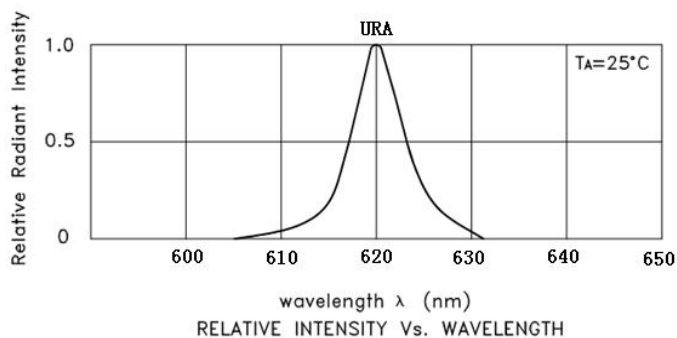
**Absolute Maximum Ratings at TA=25°C**

Parameter	RED	Units
Power dissipation	75	mW
DC Forward Current	30	mA
Peak Forward Current [1]	80	mA
Reverse Voltage	5	V
Operating/Storage Temperature	-40°C To +85°C	

**Note:**

1. 1/10 Duty Cycle, 0.1ms Pulse Width.

QSTERC3-01-20MA



SPATIAL DISTRIBUTION



QSTERC3-01-20MA

可靠性 RELIABILITY

测试项目及结果 Test Items and Results

序号	试验项目	参考标准	试验条件	持续时间	取样数	接收水准(不合格数量/抽样总数)
1	温度循环	JEITA ED-4701	-40℃~25℃~100℃~	循环 100 回 合	50	0/50
			25℃ 30 分钟 5 分钟 30 分 钟 5 分钟			
2	冷热冲击	MIL-STD-202G	-40℃~100℃	循环 500 回 合	50	0/50
			15 分钟 15 分钟			
3	高温储存	JEITA ED-4701 200 201	T <sub>s</sub> =100℃	1000 小 时	50	0/50
4	低温储存	JEITA ED-4701 200 201	T <sub>s</sub> =-40℃	1000 小 时	50	0/50
5	常温寿命		T <sub>s</sub> =25±5℃	1000 小 时	50	0/50
	试验		I <sub>f</sub> =20mA			
6	高温高湿		T <sub>s</sub> =60℃ RH=85%	1000 小 时	50	0/50
	寿命试验		I <sub>f</sub> =20mA			
7	可焊性	JEITA ED-4701	T <sub>ref</sub> =235℃±5℃,5 秒	焊接一 次,5 秒	10	0/10
	(回流焊)	300 303	使用助焊剂			
8	耐焊性	JEITA ED-4701	T <sub>ref</sub> =260℃,10 秒	焊接二 次,每次 10 秒	10	0/10
	(回流焊)	300 301	预处理: 35℃ 95%RH 96 小时			
备注	以上试验项目如与客户试验要求存在差异的或者特殊客户特殊要求的可根据实际情况按照客户的要 求进行试作,客户未要求的按我司试验标准试作.不同产品使用不同电流进行测试					

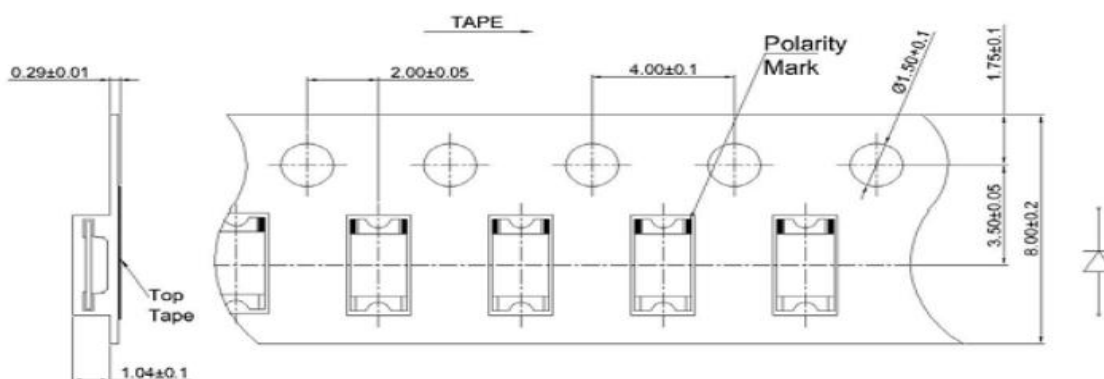
## QSTERC3-01-20MA

### 包装 Packaging

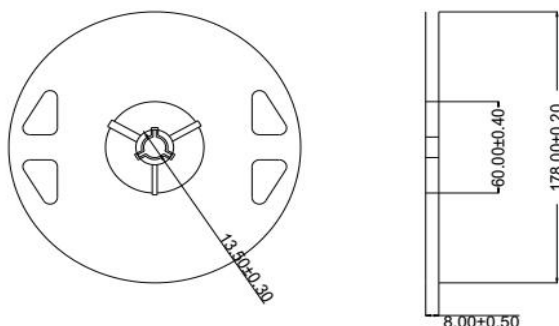
### 标签 Label

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:\*\*\*

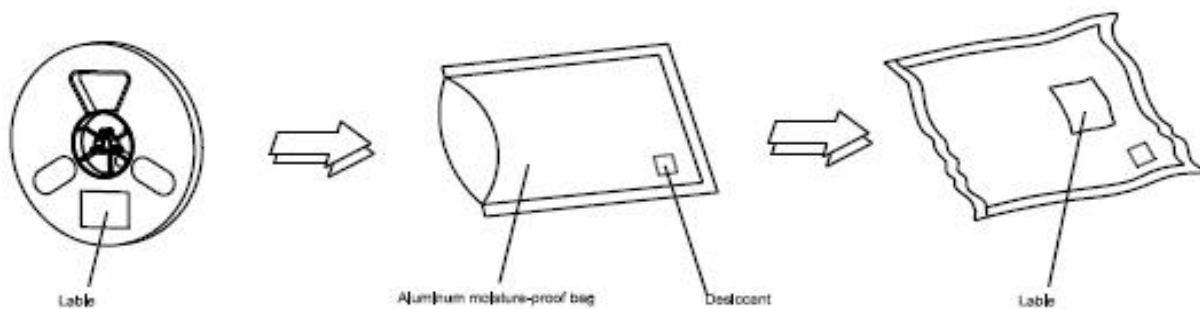
### 载带规格 (单位: mm) Tape Specifications(Units:mm)



### 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



## QSTERC3-01-20MA

## 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

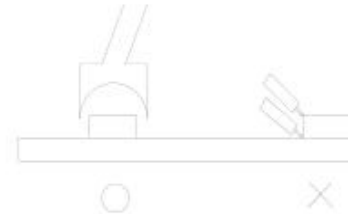
2. The hand solder should be done only one times

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

