

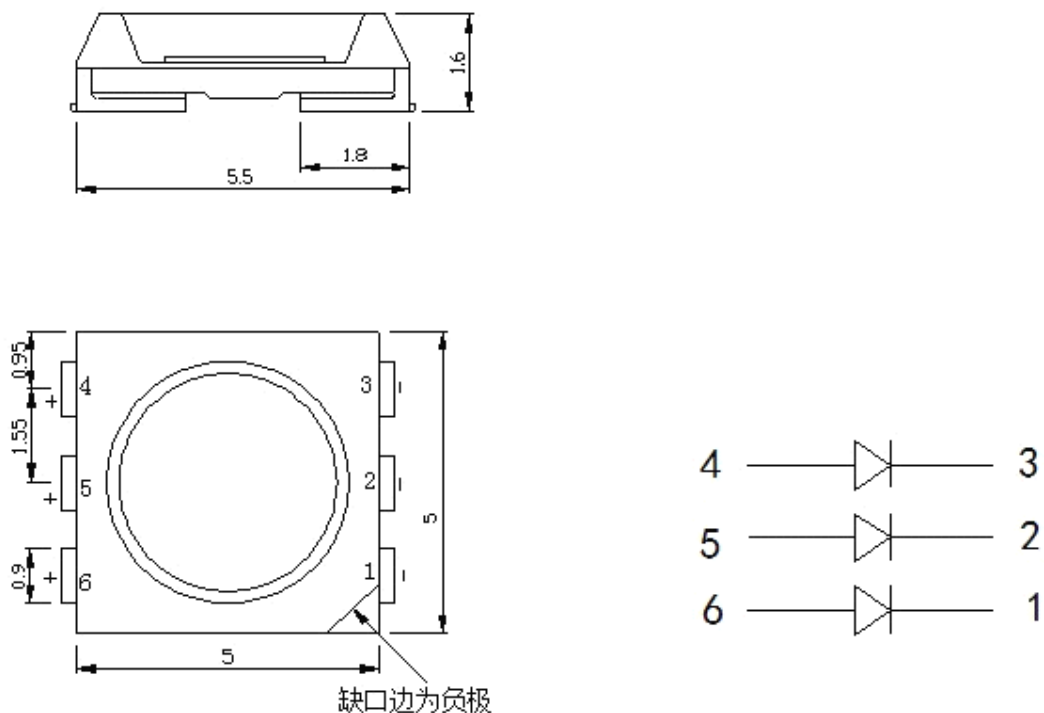
产品型号: **LTST-E500KRKT**

发光颜色: **Red (红色)**

## 1、Features (特征)

- (1). **5.0\*5.0mm** Dimensions SMD  
(**5.0\*5.0mm** 贴片式)
- (2).LOW CURRENT REQUIREMENT  
(低电流驱动)
- (3).LOW POWER CONSUMPTION  
(低功率消耗)
- (4).VERSATILE MOUNTING ON P.C. BOARD PANEL  
(易安装)
- (5).LONG LIFE-SOLID STATE RELIABILITY  
(寿命长)

## 2、product Dimensions(产品尺寸)



### Notes:

- (1).All dimensions are in millimeters.  
(单位: 毫米)
- (2).Tolerance is  $\pm 0.10$  unless otherwise noted.  
(尺寸公差:  $\pm 0.10$ ,另有标注除外.)
- (3).Specifications are subject to change without notice.  
(规格若有变动,恕不另行通知.)

**3、CENTRAL INFORMATION (主要资料)**

Part No. (产品型号)	Chip Material (晶片材质)	Emitting Color (发光颜色)	Lens Type (胶体颜色)	Iv(mcd)@20mA (发光强度)			Viewing Angle (发光角度)
				Min. (最小值)	Typ. (规格值)	Max. (最大值)	2 θ 1/2 (角度)
<b>LTST-E500KRKT</b>	InGaAlP	<b>Red</b> (红色)	Limpidity (透明)	800	900	1040	125°

Note:

- (1).  $\theta 1/2$  is the angle from optical centerline where the luminous intensity is 1/2 the optical centerline value. ( $\theta 1/2$  是指当亮度减到一半时与发光特性曲线相交所对应的角度值.)

**4、Electrical / Optical Characteristics at T<sub>A</sub>=25° C(25° C 环境下之电性/光学特性)**

Parameter(参数)	Symbol (符号)	Min (最小值)	Typ. (规格值)	Max. (最大值)	Units (单位)	Test Conditions (测试条件)
Forward Voltage(正向电压)	V <sub>F</sub>	1.8	2.1	2.3	V	I <sub>F</sub> =20mA
Chromaticity wavelength (波长)	W <sub>ld</sub>	620	624	630	-	I <sub>F</sub> =20mA
Spectral Line Half-width (带宽)	$\Delta \lambda$	-	29	-	nm	I <sub>F</sub> =20mA
Reverse Current (反向电流)	I <sub>R</sub>	-	-	5	uA	V <sub>R</sub> =5V

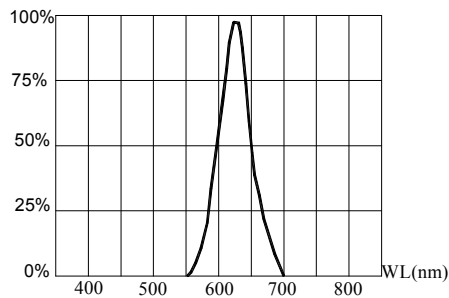
**5、Absolute Maximum Ratings at T<sub>A</sub>=25° C(在 25° C 环境下之最大绝对额定值)**

Parameter(参数)	Symbol(符号)	Maximum Rating(最大值)	Units(单位)
Power dissipation(功率消耗)	P <sub>d</sub>	23	mW
Forward Current(正向电流)	I <sub>F</sub>	20	mA
Peak Forward Current (1)(正向电流峰值)	I <sub>F</sub> (Peak)	130	mA
Reverse Voltage(反向电压)	V <sub>R</sub>	5	V
Operating Temperature(操作温度)	T <sub>opr</sub>	-40° C To +80° C	
Storage Temperature(贮藏温度)	T <sub>stg</sub>	-40° C To +80° C	
Lead Solder Temperature(2)(焊接温度)	T <sub>sol</sub>	240° C for 3 seconds	

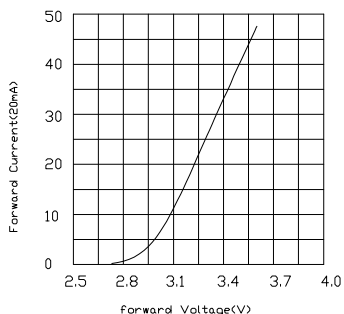
Note:

- (1). 1/10 Duty Cycle, 0.1ms Pulse Width.  
(1/10 周期, 0.1ms 脉宽)
- (2). The production accord with the demand of ROHS.  
(此产品符合 ROHS 要求.)

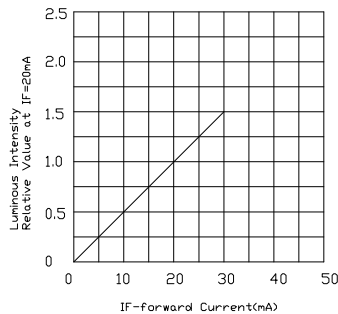
## 6. Graphs



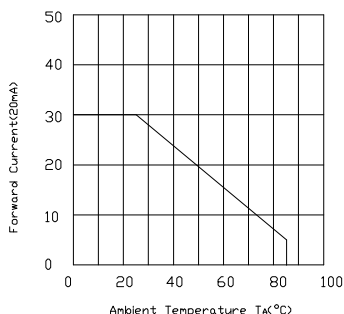
RELATIVE INTENSITY vs. WAVELENGTH  
相对亮度与波长曲线图



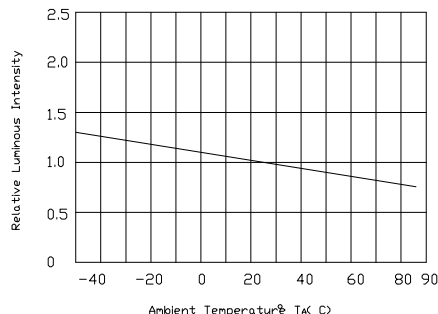
FORWARD CURRENT vs FORWARD VOLTAGE  
正向电流与正向电压关系曲线图



LUMINOUS INTENSITY vs FDRWARD CURRENT  
亮度与正向电流关系曲线图

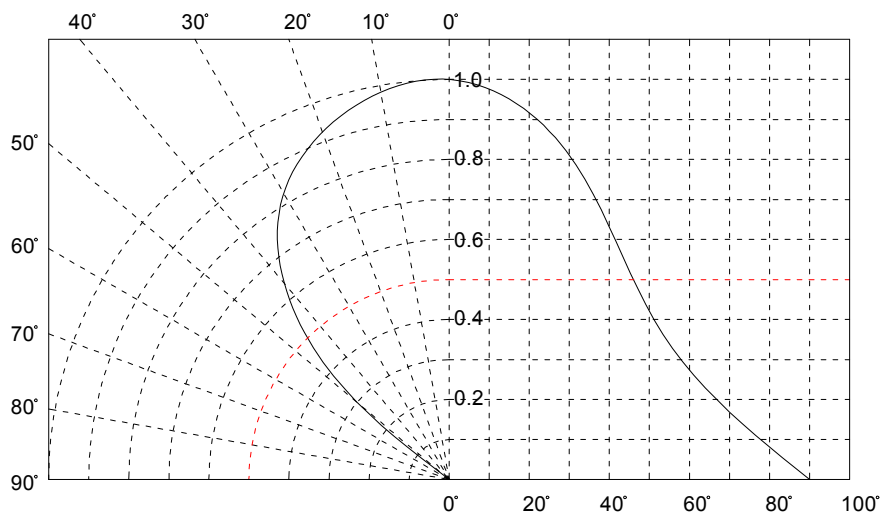


FORWARD CURRENT DERATING CURVE  
正向电流递减曲线图



LUMINDUS INTENSITY vs AMBIENT TEMPERATURE  
亮度与环境温度关系曲线图

### Diagram characteristics of radiation



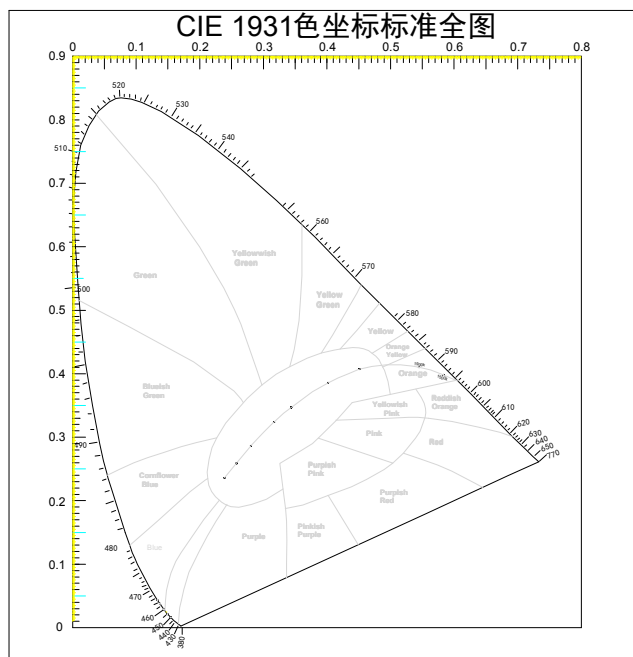
## 7、 Intensity、 Color And Forward Voltage Bin Limits(亮度、 颜色及正向电压等级)

### (1) Intensity Bin Limits (I<sub>F</sub>=20mA)

SELECTION CODE FOR SUPER BRIGHT LEDS		
Group	Light intensity in mcd(20mA) Super Bright white	
	Min.	Max.
T2	800	1040
U1	1040	1350

Tolerance for each Bin limit is  $\pm 15\%$ .

### (2) CIE Specifications (Tolerance is $\pm 0.01@I_F=20mA$ ) 色品图



### (3) Forward Voltage Bin limits(I<sub>F</sub>=20mA)

Grade (等级)	V7	V8	V9	V10
Range (范围)	1.8-2.0	2.0-2.2	2.2-2.4	

Tolerance for each Bin limit is  $\pm 0.1v$ .

## 8、Reliability Test Items and Conditions 可靠性测试项目及测试条件

No.	Test Item 测试项目	Test Conditions 测试条件	Note 频次	Number of Damaged 允许破坏数
01	Resistance to Soldering Heat(Reflow Soldering) 回流焊可承受条件测试	Tsld=260°C,10sec	2 times	0/22
02	Temperature Cycle 温度循环测试	-35°C 30min ↑↓5min 85°C 30min	100 cycle	0/100
03	Thermal Shock 冷热冲击测试	-35°C 15min ↑↓ 85°C 15min	100 cycle	0/100
04	High Temperature Storage 高温贮藏测试	T <sub>a</sub> =80°C	1000 hrs	0/100
05	Temperature Humidity Storage 恒温恒湿贮藏测试	T <sub>a</sub> =85°C RH=90%	1000 hrs	0/100
06	Low Temperature Storage 低温贮藏测试	T <sub>a</sub> =-35°C	1000 hrs	0/100
07	Power On/off Cycle Test IF=20mA 亮暗测试	On 2 hours ↑↓ Off 10min	100 cycle	0/100
08	Life Test 常温寿命测试	T <sub>a</sub> =25°C I <sub>F</sub> =20mA	1000 hrs	0/100
09	High Humidity Heat Life Test 恒温恒湿寿命测试	60°C RH=90% I <sub>F</sub> =20mA	500 hrs	0/100
10	Low Temperature Life Test 低温寿命测试	T <sub>a</sub> =-35°C I <sub>F</sub> =20mA	1000 hrs	0/100
11	Drop 跌落测试	75cm	3 times	0/10

## 9、Criteria for Judging the Damage 破坏判定标准

Item	Symbol	Test Conditions	Criteria for Judgement	
			Min.	Max.
Forward Voltage 正向电压	VF	IF=20mA	—	U.S.L*)×1.1
Reverse Current 反向电流	IR	VR=5V	—	U.S.L*)×2.0
Luminous Intensity 发光强度	IV	IF=20mA.	L.S.L**)×0.7	—