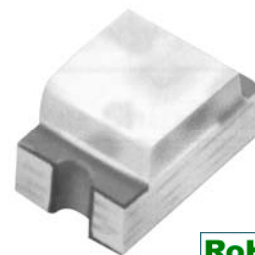


## 0805 Package Chip LED

### Features

- Package in 8mm tape on 7" diameter reel
- Compatible with automatic placement equipment
- Compatible with infrared and vapor phase reflow solder process
- Mono-color type
- RoHS compliance



OSLP2XF2



### Applications

- Automotive: Backlighting in dashboards and switch
- Telecommunication: indicator and backlighting in telephone and fax
- Flat backlight for LCD, switches and symbols
- General Use

### Descriptions

- This SMD Taping is much smaller than leaded components, thus enable smaller board higher packing density, reduced storage space and finally smaller equipment to be obtained.
- Light weight makes them ideal for miniature applications

### Device Selection Guide

Part No.	Chip		Lens Color
	Material	Emitted Color	
TSP2-XF2012A3	AlGaInP	Super Yellow	Water Clear

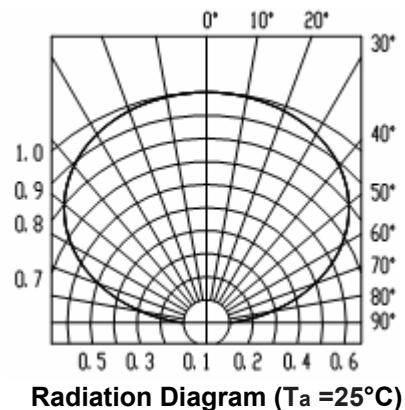
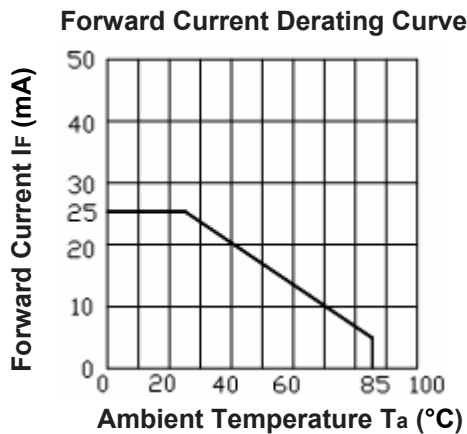
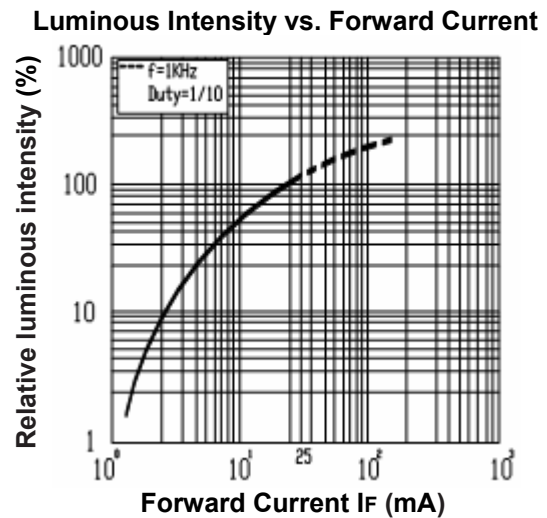
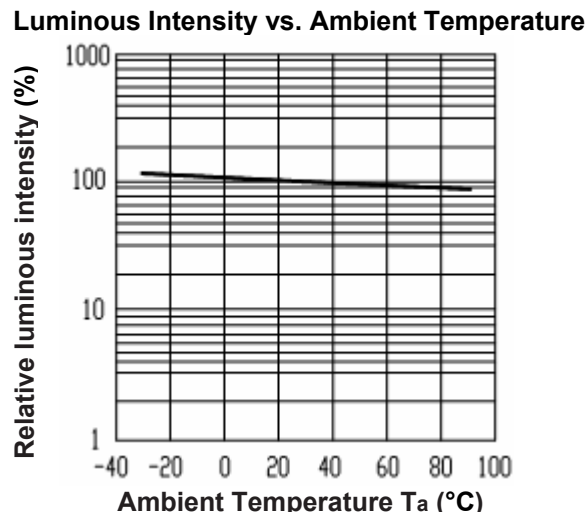
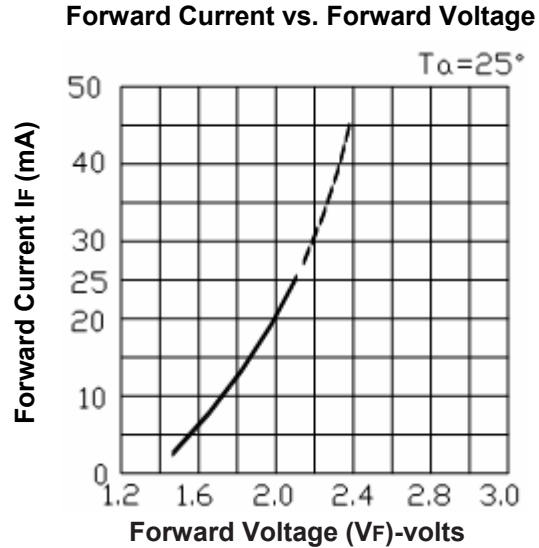
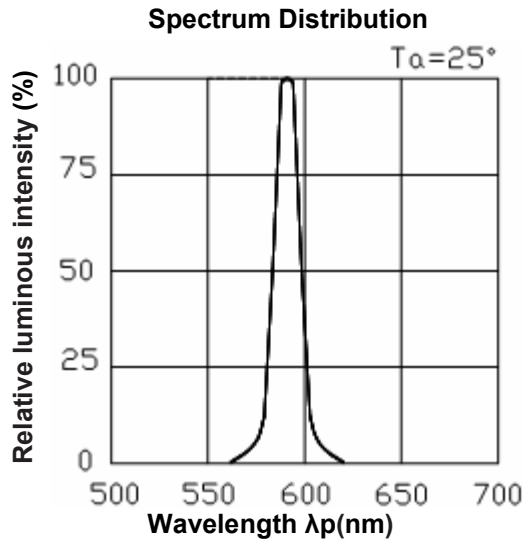
**Absolute Maximum Ratings (T<sub>a</sub>=25°C)**

Parameter	Symbol	Value	Unit
Reverse Voltage	<b>V<sub>R</sub></b>	5	V
Forward Current	<b>I<sub>F</sub></b>	25	mA
Peak Forward Current (Duty 1/10 @1KHz)	<b>I<sub>F(Peak)</sub></b>	160	mA
Power Dissipation	<b>P<sub>d</sub></b>	60	mW
Electrostatic Discharge	<b>ESD</b>	2000	V
Soldering Temperature	<b>T<sub>sol</sub></b>	260 (for 5 seconds)	°C
Operating Temperature	<b>T<sub>opr</sub></b>	-40 ~ +85	°C
Storage Temperature	<b>T<sub>stg</sub></b>	-40 ~ +90	°C

**Electro-Optical Characteristics (T<sub>a</sub>=25°C)**

Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
Luminous Intensity	<b>I<sub>v</sub></b>	----	4	----	mcd	I <sub>F</sub> =2mA
		41	64	----	mcd	I <sub>F</sub> =20mA
Viewing Angle	<b>2θ<sub>1/2</sub></b>	----	140	----	deg	
Peak Wavelength	<b>λ<sub>p</sub></b>	----	591	----	nm	
Dominant wavelength	<b>λ<sub>d</sub></b>	----	589	----	nm	
Spectrum Radiation Bandwidth	<b>Δλ</b>	----	15	----	nm	
Forward Voltage	<b>V<sub>F</sub></b>	----	2.0	2.4	V	
Reverse Current	<b>I<sub>R</sub></b>	----	----	10	μA	V <sub>R</sub> =5V

### Typical Electro-Optical Characteristics Curves



## Reliability Test Items and Conditions

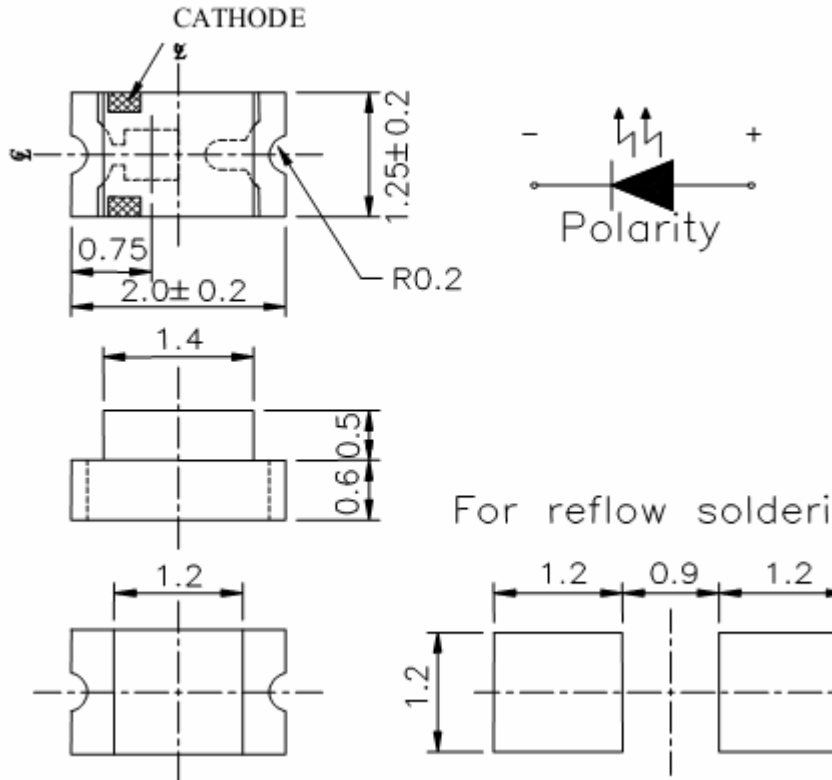
The reliability of products shall be satisfied with items listed below.

Confidence level: 90%,

LTPD: 10%

No.	Items	Test Condition	Test Hours / Cycles	Sample Size	Ac/Re
1	Solder Heat	Temp.: 260°C ±5°C.	5 Sec	76 PCS.	0/1
2	Temperature Cycle	H: +85°C 30min ↓ 5 min L: -55°C 15min	50 Cycles	76 PCS.	0/1
3	Thermal Shock	H: +100°C 5min ↓ 10 sec L: -10°C 5min	50 Cycles	76 PCS.	0/1
4	High Temperature Storage	Temp: 100°C	1000 Hrs.	76 PCS.	0/1
5	Low Temperature Storage	Temp: -55°C	1000 Hrs.	76 PCS.	0/1
6	DC Operating Life	I <sub>F</sub> = 20 mA	1000 Hrs.	76 PCS.	0/1
7	High Temperature / High Humidity	85°C / 85%RH	1000 Hrs.	76 PCS.	0/1

**Package Dimensions** (In mm)

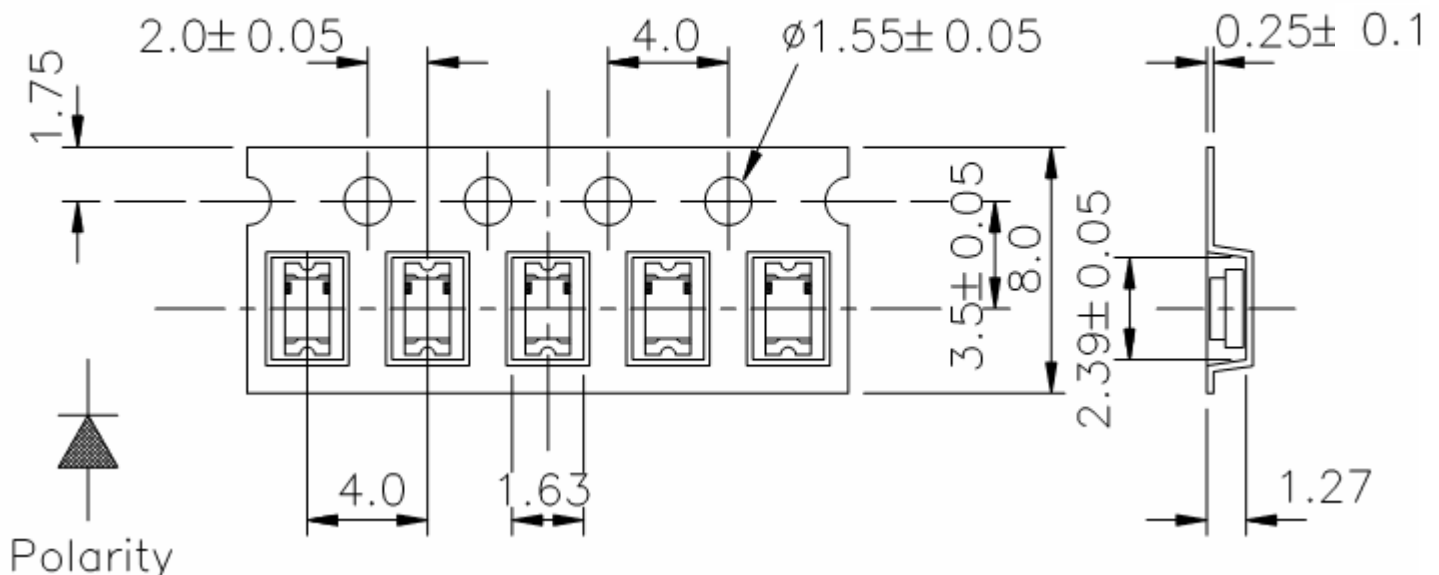


For reflow solder

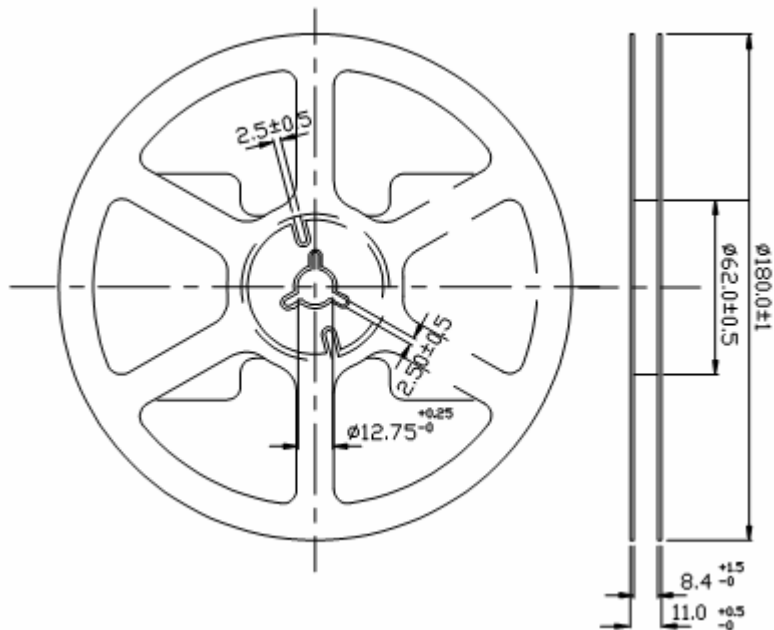
**Note:** The tolerances unless mentioned is  $\pm 0.1$ mm, Unit = mm

**Carrier Tape Dimensions** Loaded quantity 3000pcs per reel (In mm)

Progressive direction

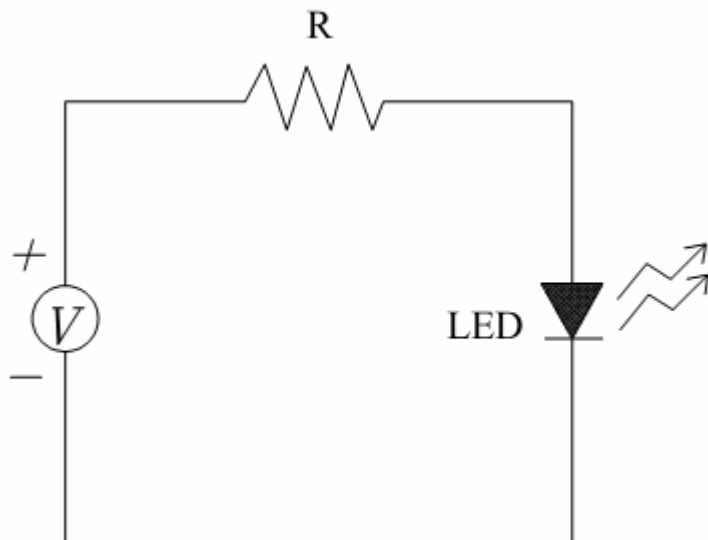


Reel Dimensions



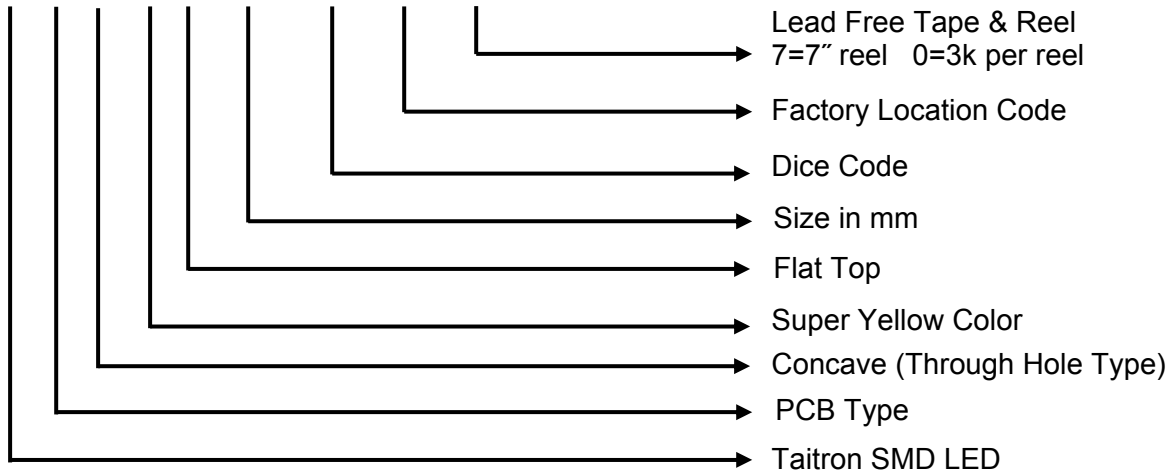
Note: The tolerances unless mentioned is  $\pm 0.1\text{mm}$ , Unit = mm

Test Circuit



### Ordering Information

T S P 2 - X F 2 0 1 2 A 3 - 9 2 - T R 7 0



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