

## 1206 Package Super Red LED with Inner lens

### 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



M3015



### Descriptions

- This SMD series is much smaller than lead frame type components, thus enables smaller board size, higher packing density, reduced storage space, and small equipment.
- Besides, light weight makes them ideal for miniature applications, etc.

### Applications

- Backlighting in dashboard and switch.
- Telecommunication: indicator and backlighting in telephone and fax.
- Flat backlight for LCD, switches and symbols.
- General use.

### Device Selection Guide

Part No.	Chip		Lens Color
	Material	Emitted Color	
TSP2-QL3015A3	AlInGaP	Super Red	Water Clear

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TSP2-QL3015A3

## Absolute Maximum Ratings ( $T_a=25^{\circ}\text{C}$ )

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>FP</sub></b>	60	mA
Power Dissipation	<b>P<sub>d</sub></b>	60	mW
Electrostatic Discharge (HBM)	<b>ESD</b>	2000	V
Operating Temperature	<b>T<sub>opr</sub></b>	-40 ~ +85	°C
Storage Temperature	<b>T<sub>stg</sub></b>	-40 ~ +90	°C
Soldering Temperature	<b>T<sub>sol</sub></b>	Reflow Soldering: 260 °C for 10 seconds Hand Soldering: 350 °C for 3 seconds	

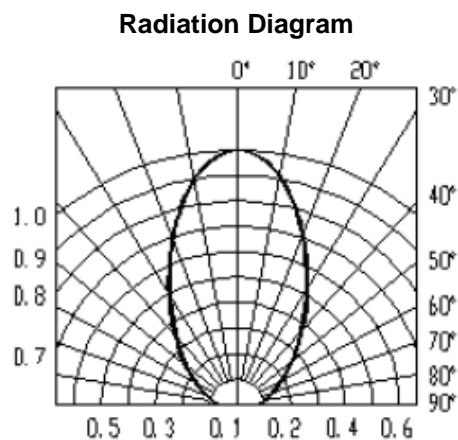
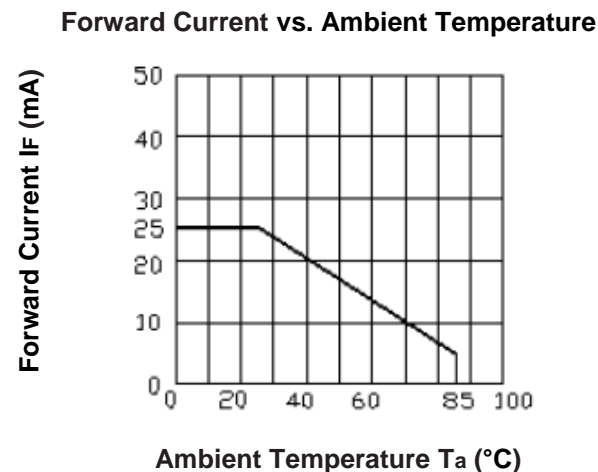
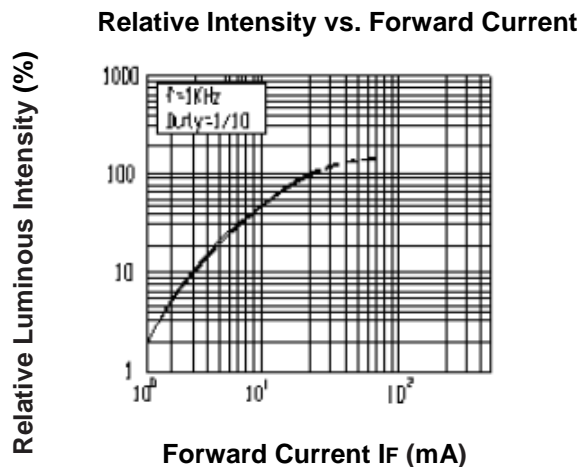
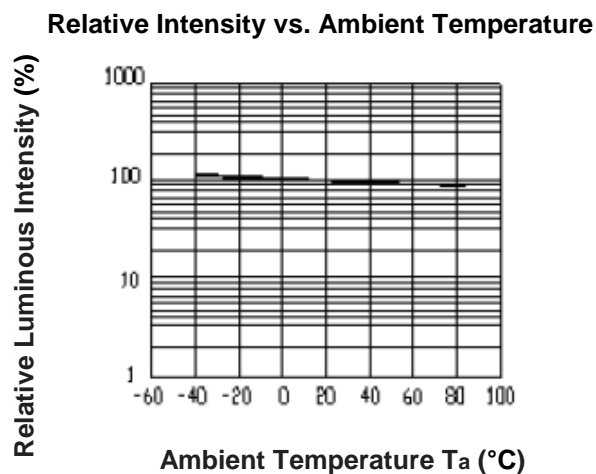
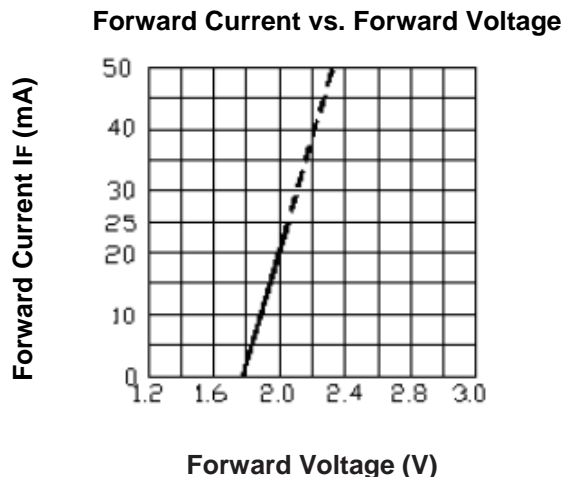
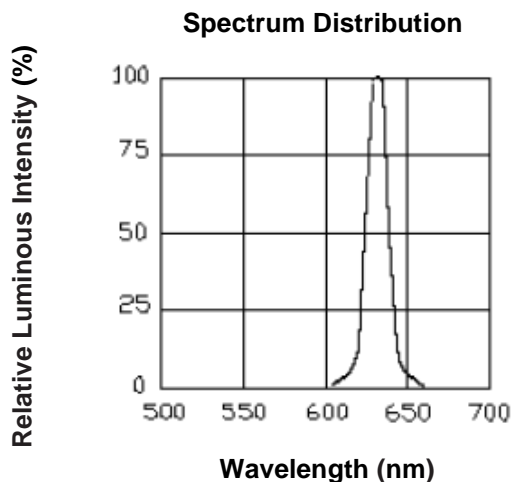
## Electro-Optical Characteristics ( $T_a=25^{\circ}\text{C}$ )

Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
Luminous Intensity	<b>I<sub>v</sub></b>	90	-----	180	mcd	I <sub>F</sub> =20mA
Viewing Angle	<b>2θ<sub>1/2</sub></b>	-----	60	-----	deg	
Peak Wavelength	<b>λ<sub>p</sub></b>	-----	632.0	-----	nm	
Dominant wavelength	<b>λ<sub>d</sub></b>	619.5	-----	628.5	nm	
Spectrum Radiation Bandwidth	<b>Δ λ</b>	-----	20	-----	nm	
Forward Voltage	<b>V<sub>F</sub></b>	1.7	2.0	2.4	V	
Reverse Current	<b>I<sub>R</sub></b>	-----	-----	10	μA	V <sub>R</sub> =5V

### Notes:

1. Tolerance of Luminous Intensity: ±10%
2. Tolerance of Dominant wavelength: ±1.0nm
3. Tolerance of Forward Voltage: ±0.1V

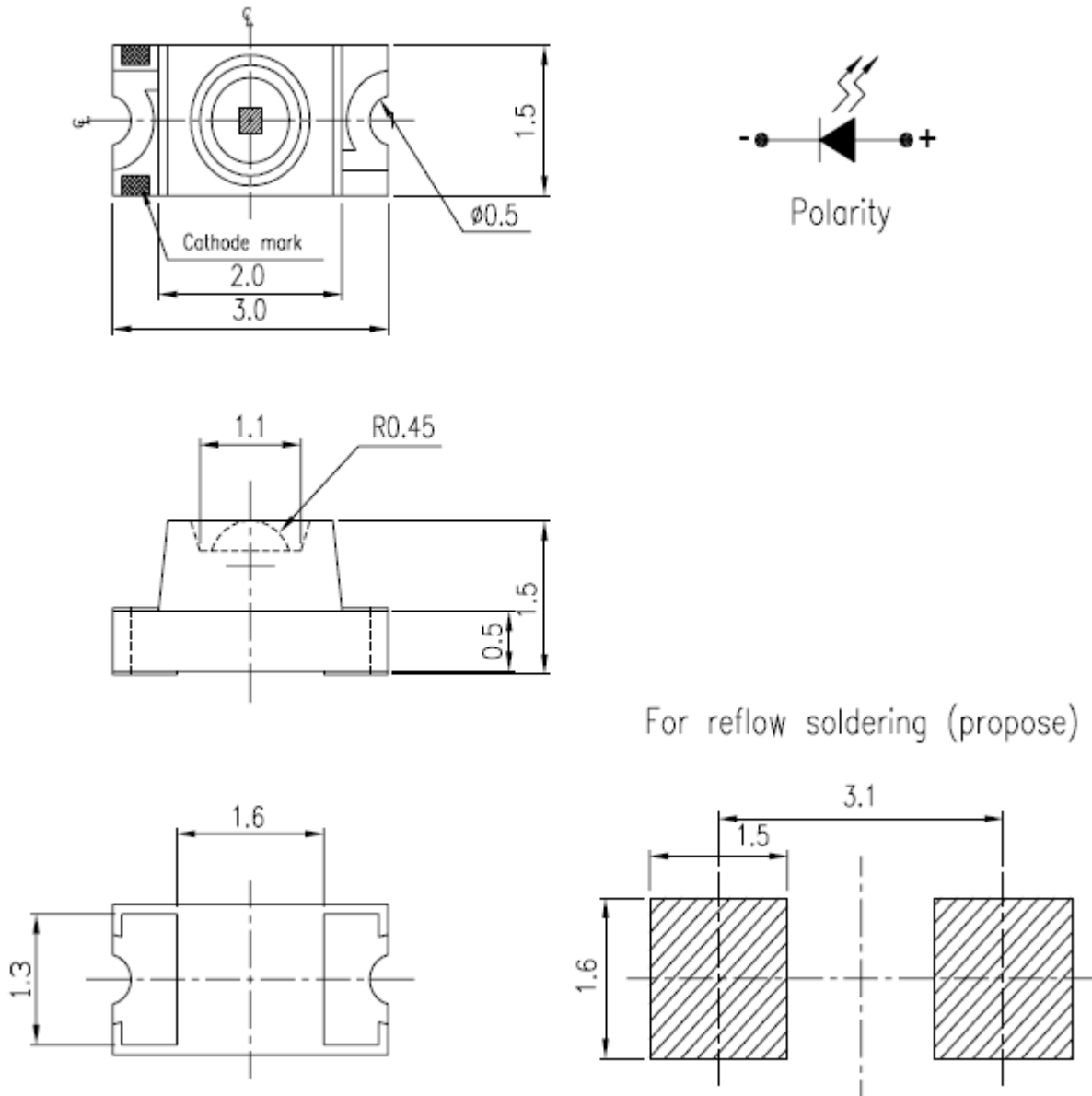
### Typical Electro-Optical Characteristics Curves (Ta=25°C)



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## Package Dimensions (Unit=mm)



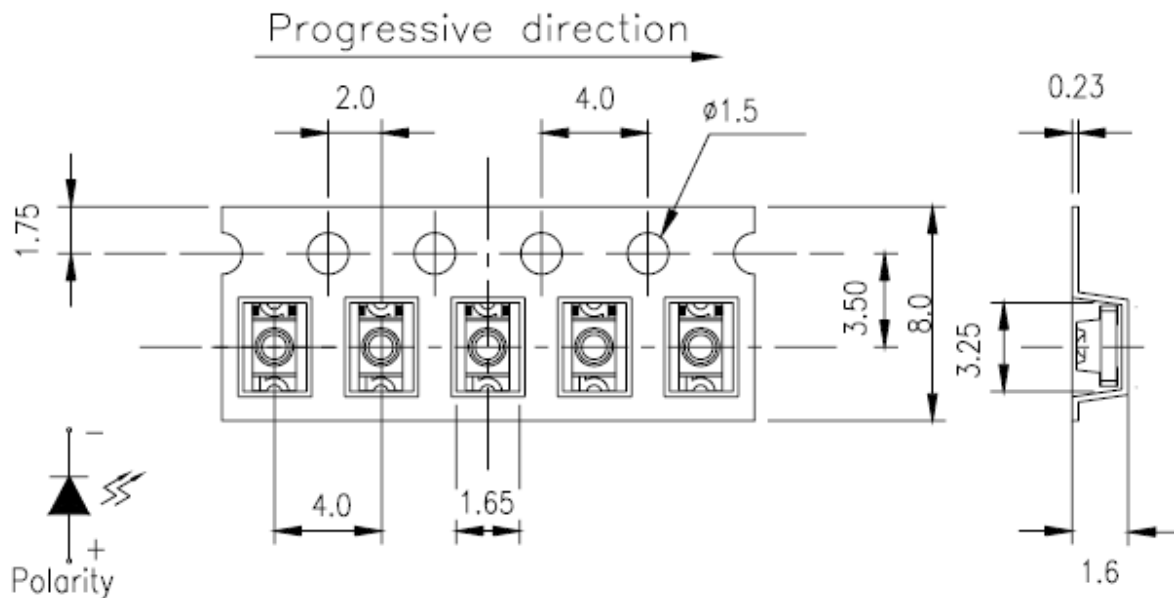
For reflow soldering (propose)

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

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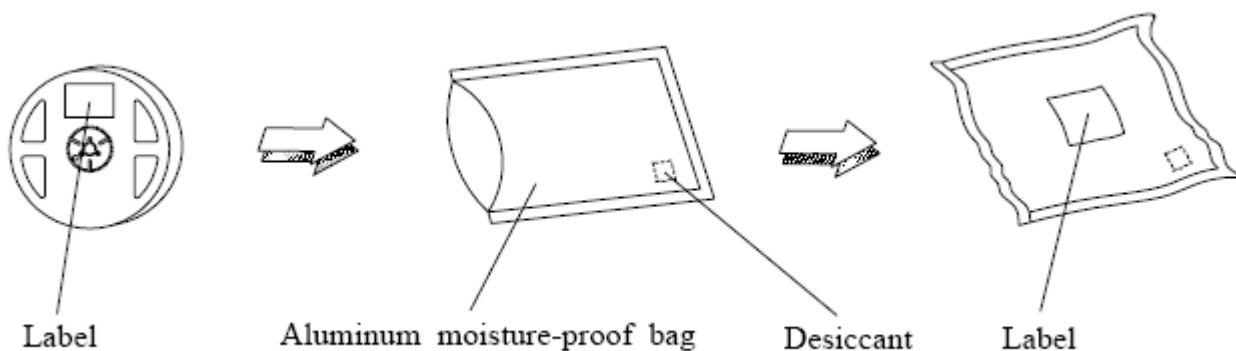
TSP2-QL3015A3

## Carrier Tape Dimensions (Unit=mm): Loaded quantity 2000pcs per reel

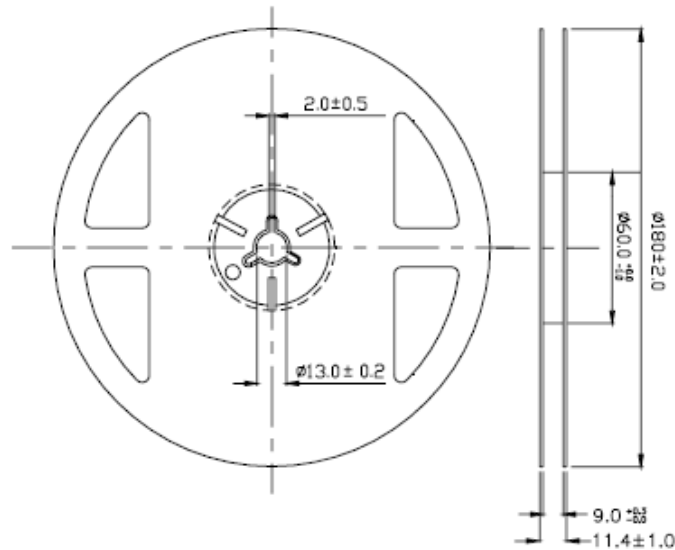


**Note:** The tolerances unless mentioned is  $\pm 0.1$ mm.

## Moisture Resistant Packaging



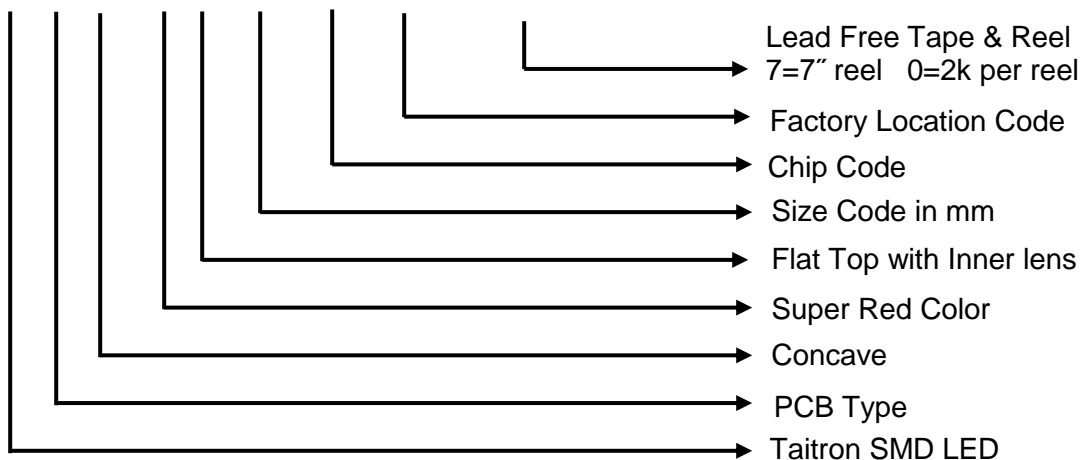
### Reel Dimensions (Unit=mm)



**Note:** The tolerances unless mentioned is  $\pm 0.1$ mm.

### Ordering Information

T S P 2 - Q L 3015 A3 - 92 - TR70

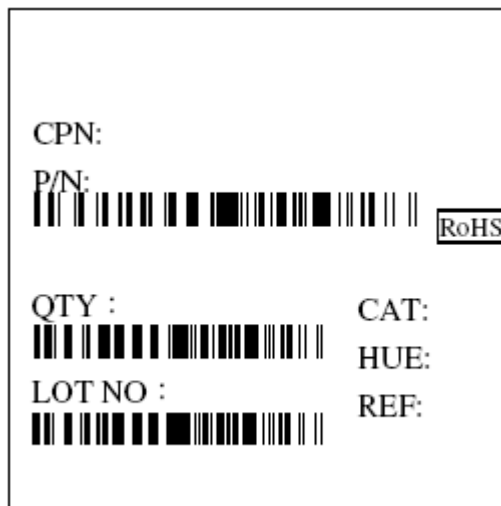


### Label Explanation

CAT: Luminous Intensity Rank

HUE: Dominant Wavelength Rank

REF: Forward Voltage Rank



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TSP2-QL3015A3

## Rank Combination

## Bin Range of Luminous Intensity

Bin Code	Min.	Max.	Unit	Condition
Q2	90	112	mcd	IF=20mA
R1	112	140		
R2	140	180		

**Notes:** Tolerance of Luminous Intensity:  $\pm 10\%$

## How to contact us

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