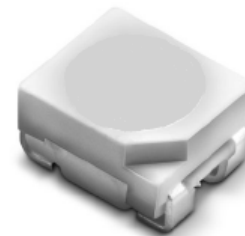


## Top View with White LED

### Features

- PLCC-3 package.
- High flux output and high current capability.
- White package
- Optical indicator and colorless clear window.
- Ideal for backlight and light pipe application.
- Inter reflector and wide viewing angle.
- Suitable for automatic placement equipment.
- Suitable for reflow and wave solder processes.
- RoHS



**M3227**



### Descriptions

- This series is available in soft orange, red and yellow. Due to the package design, the LED has wide viewing angle and optimized light coupling by inter reflector.
- The feature makes the ideal for light pipe application. The low current requirement makes this device ideal for portable equipment or any other application where power is at a premium.

### Applications

- Indicator and backlight for audio and video equipment.
- Indicator and backlight in office and family equipment.
- Flat backlight for LCD's, switches and symbols.
- Light pipe application.
- General use

### Device Selection Guide

Part No.	Chip		Lens Color
	Material	Emitted Color	
TSRJ-WU3227-X1Y1	InGaN	White	Water Clear

### Absolute Maximum Ratings (Ta=25°C)

Parameter	Symbol	Rating	Unit
Reverse Voltage	VR	5	V
Forward Current	IF	30	mA
Peak Forward Current (Duty 1/10@1KHz)	IFP	100	mA
Power Dissipation	Pd	110	mW
Electrostatic Discharge	ESD	2000	V
Operating Temperature	Topr	-40 ~ +85	°C
Storage Temperature	Tstg	-40 ~ +90	°C
Soldering Temperature	Tsol	Reflow soldering: 260°C for 10 sec. Hand soldering: 350°C for 3 sec	

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

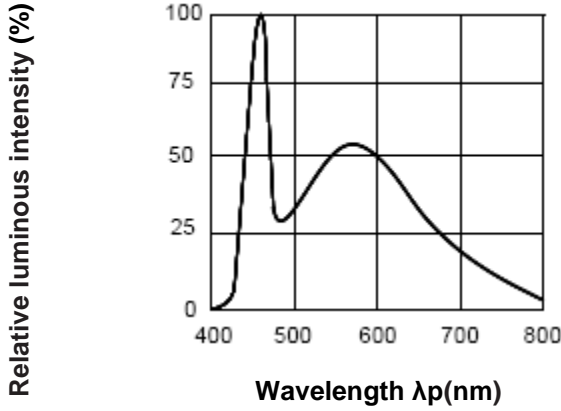
Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
Luminous Intensity	<b>I<sub>v</sub></b>	1800	-----	3600	mcd	IF=30mA
Viewing Angle	<b>2θ<sub>1/2</sub></b>	-----	120	-----	deg	
Forward Voltage	<b>V<sub>F</sub></b>	2.75	-----	3.95	V	

**Notes:** Tolerance of Luminous Intensity: ±10%

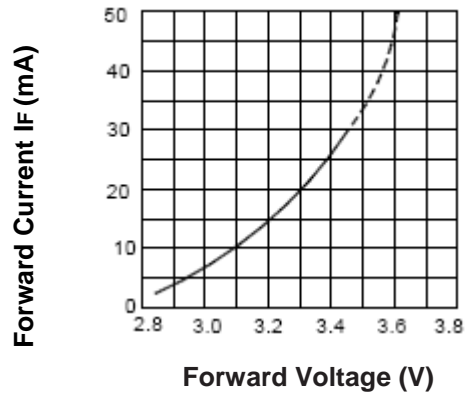
Tolerance of Forward Voltage: ±0.1V

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

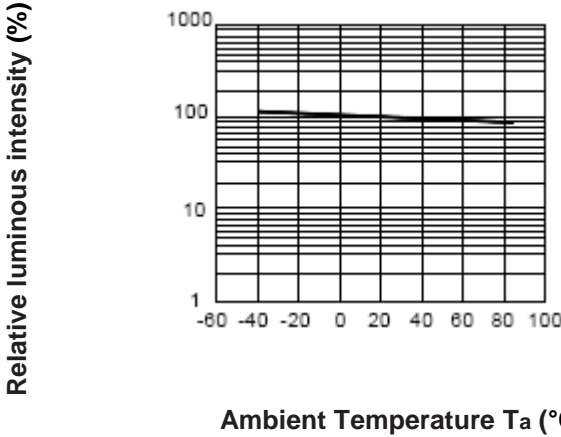
Spectrum Distribution



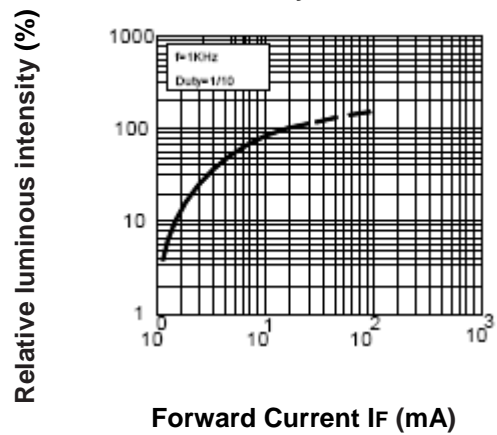
Forward Current vs. Forward Voltage



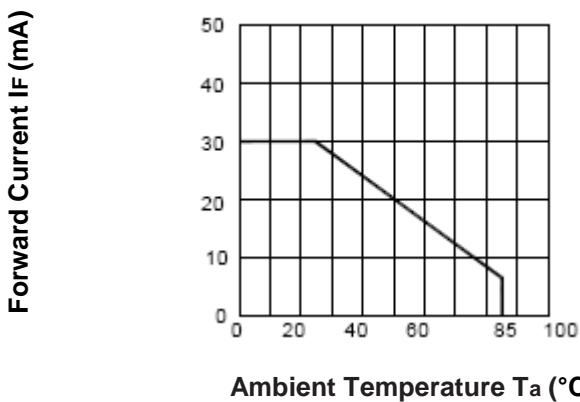
Luminous Intensity vs. Ambient Temperature



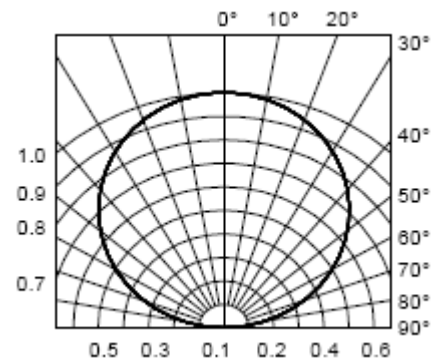
Luminous Intensity vs. Forward Current



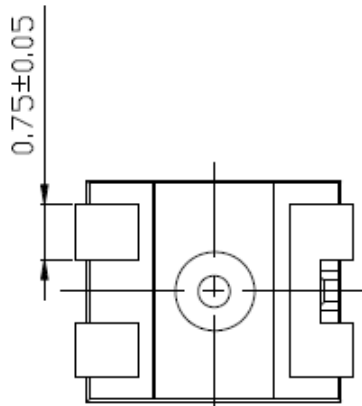
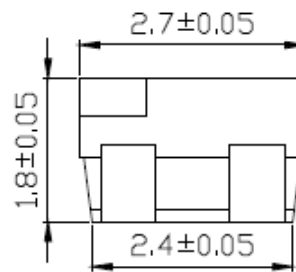
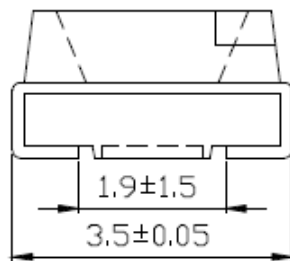
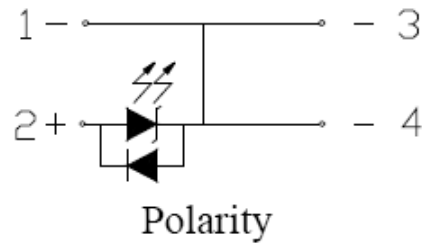
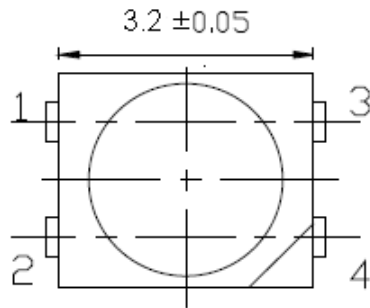
Forward Current Derating Curve



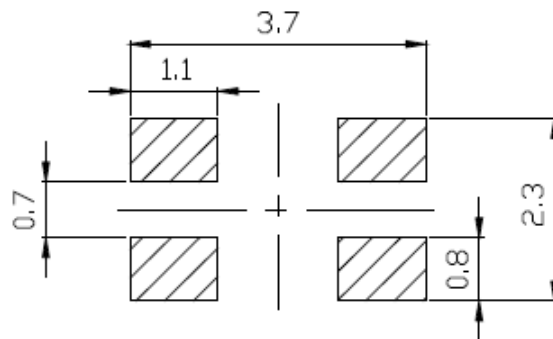
Radiation Diagram



Package Outline Dimensions (Unit=mm)

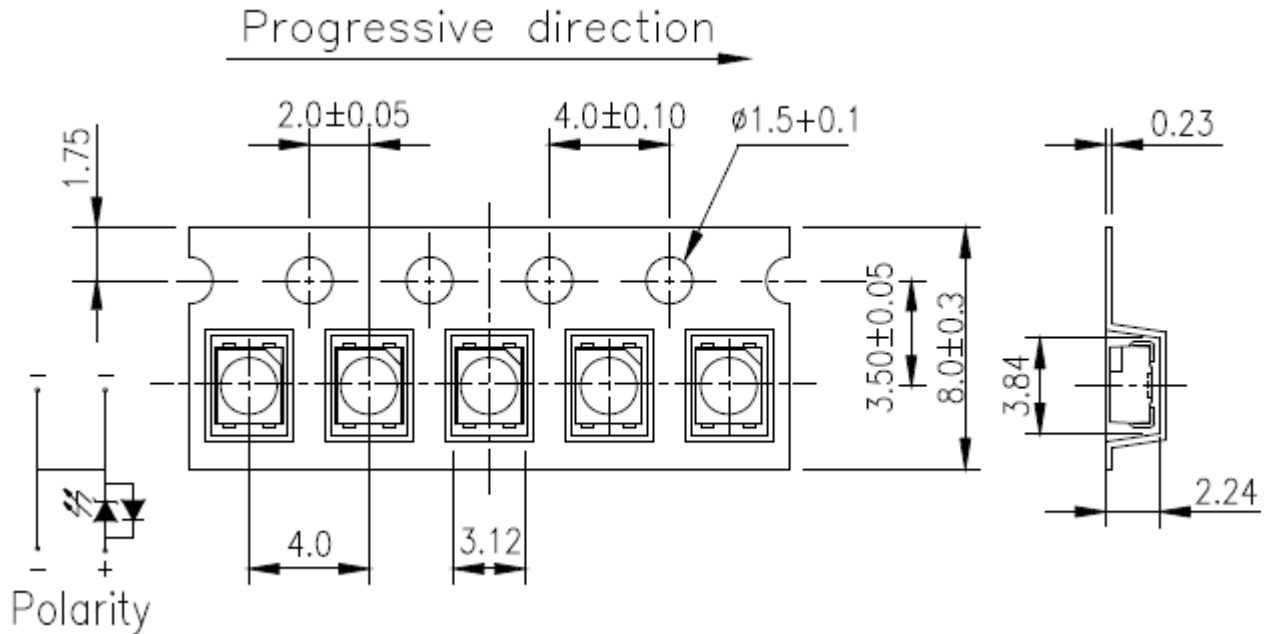


Recommended soldering pad design



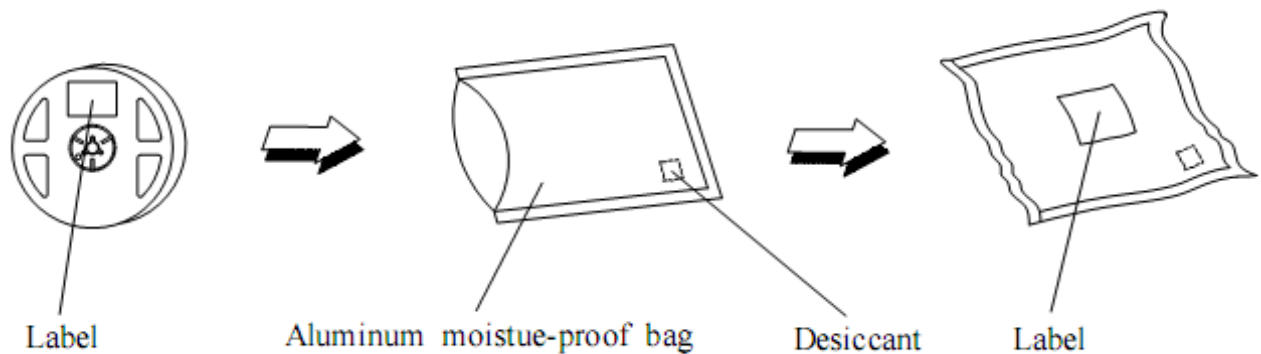
Note: The tolerances unless mentioned is  $\pm 0.1$ mm.

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

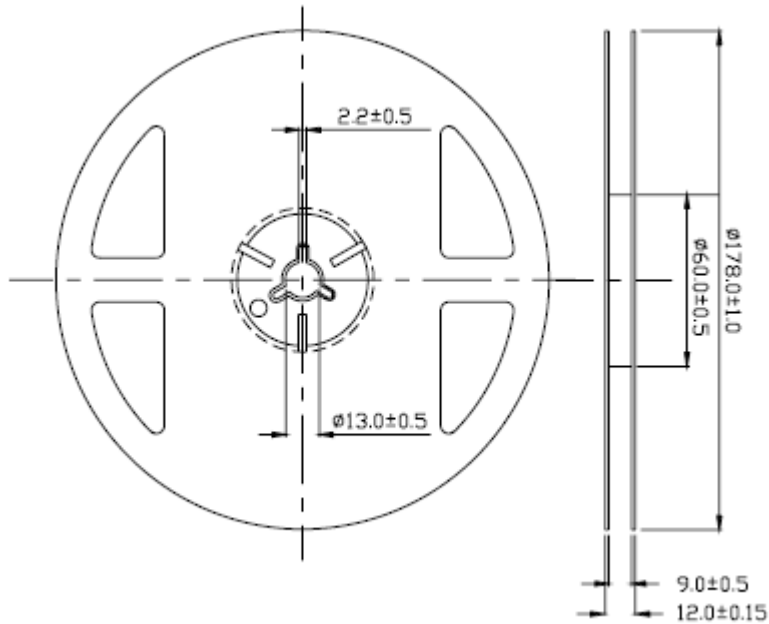


Note: The tolerances unless mentioned is  $\pm 0.1$ mm.

Moisture Resistant Packaging

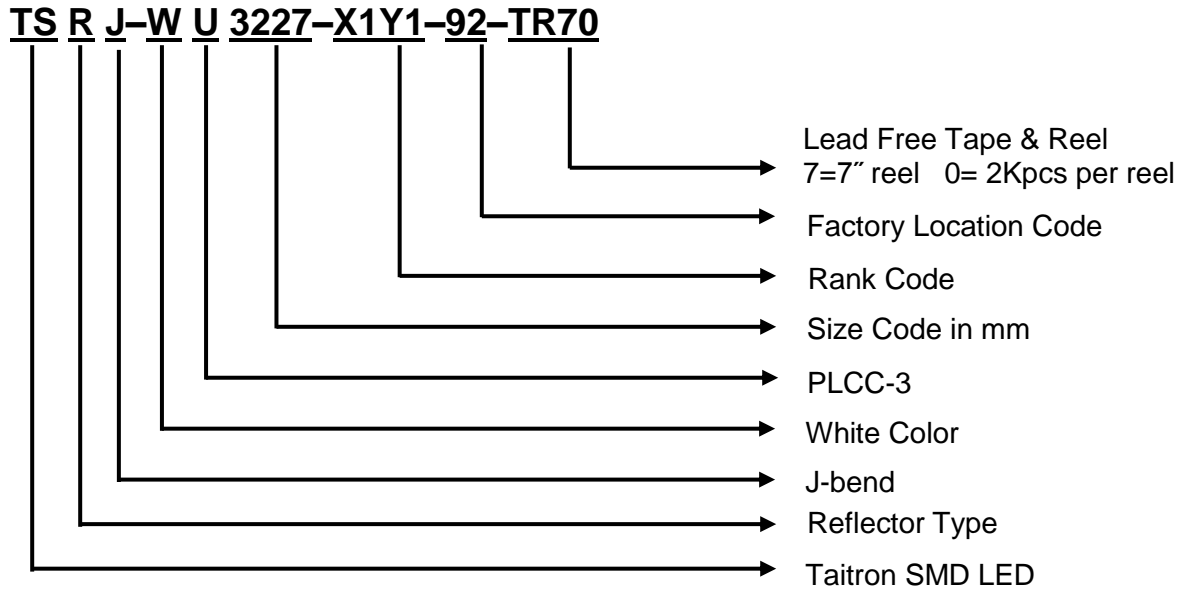


Reel Dimensions (Unit=mm):



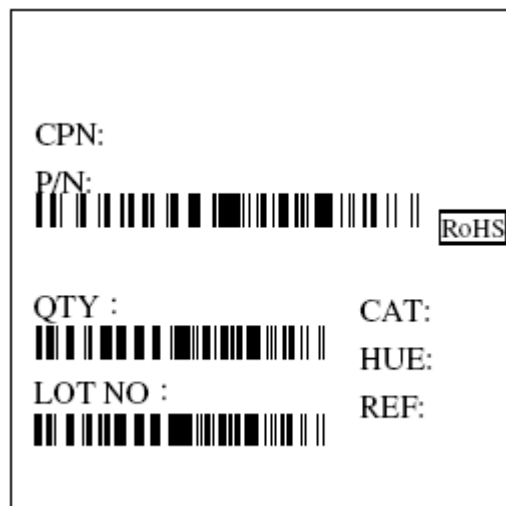
**Note:** The tolerances unless mentioned is  $\pm 0.1$ mm.

### Ordering Information



### Label Explanation

- CAT: Luminous Intensity Rank
- HUE: Chromaticity Coordinates
- REF: Forward Voltage Rank





### Rank Combinations

#### Bin Range of Luminous Intensity

Bin Code	Min	Max	Unit	Condition
X1	1800	2250	mcd	IF=30mA
X2	2250	2850		
Y1	2850	3600		

#### Bin Range of Forward Voltage

Group	Bin Code	Min	Max	Unit	Condition
M	5	2.75	3.05	V	IF=30mA
	6	3.05	3.35		
	7	3.35	3.65		
	8	3.65	3.95		

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

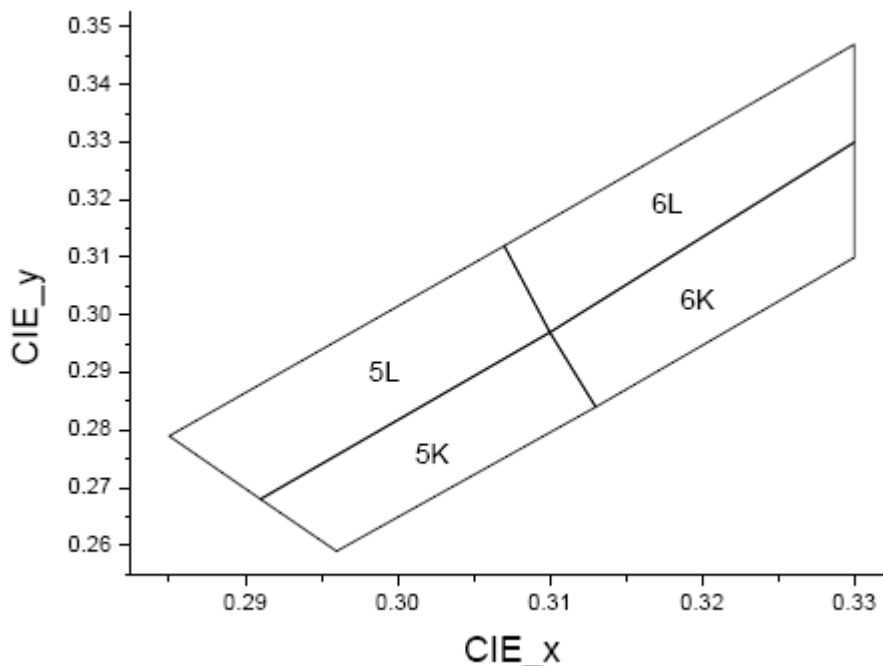
Tolerance of Forward Voltage:  $\pm 0.1V$

### Chromaticity Coordinates Specifications for Bin Grading

Group	Bin Code	CIE_x	CIE_y	Bin Code	CIE_x	CIE_y
V	5K	0.2960	0.2590	5L	0.2910	0.2680
		0.2910	0.2680		0.2850	0.2790
		0.3100	0.2970		0.3070	0.3120
		0.3130	0.2840		0.3100	0.2970
	6K	0.3130	0.2840	6L	0.3100	0.2970
		0.3100	0.2970		0.3070	0.3120
		0.3300	0.3300		0.3300	0.3470
		0.3300	0.3100		0.3300	0.3300

**Notes:** Tolerance of Chromaticity Coordinates:  $\pm 0.01$

### CIE Chromaticity Diagram



**How to contact us**

**USA HEADQUARTERS**

28040 WEST HARRISON PARKWAY, VALENCIA, CA 91355-4162

Tel: (800)-TAITRON (800)-824-8766 (661)-257-6060

Fax: (800)-TAITFAX (800)-824-8329 (661)-257-6415

Email: [taitron@taitroncomponents.com](mailto:taitron@taitroncomponents.com)

Http://[www.taitroncomponents.com](http://www.taitroncomponents.com)

**TAITRON COMPONENTS INCORPORATED TAIWAN BRANCH**

6F., NO.190, SEC. 2, ZHONGXING RD., XINDIAN DIST., NEW TAIPEI CITY 23146, TAIWAN R.O.C.

Tel: 886-2-2913-6238

Fax: 886-2-2913-6239

**TAITRON COMPONENT TECHNOLOG SHANGHAI CORPORATION**

SUITE 1503, METROBANK PLAZA, 1160 WEST YAN'AN ROAD, SHANGHAI, 200052, CHINA

Tel: +86-21-5424-9942

Fax: +86-21-2302-5027