

Top View with Cool White LED

Features

- Fluorescence type
- High luminous intensity
- High efficiency
- Emission color: $x=0.29, y=0.30$

Descriptions

- The white LED which was fabricated using a blue LED and a phosphor, and the phosphor is excited by blue light and emits yellow fluorescence. The mixture of blue light and yellow light results in a white emission.

Applications

- OA equipment.
- Backlighting of full color LCD.
- Automotive equipment.
- Replacement of conventional light bulbs and fluorescent lamps.

Device Selection Guide

Part No.	Chip	Lens Color
	Emitted Color	
TSRJ-WT32271B	Cool 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 (Note. 1)	IFP	100	mA
Power Dissipation	Pd	120	mW
Electrostatic Discharge	ESD	1000	V
Operating Temperature	Topr	-40 ~ +80	°C
Storage Temperature	Tstg	-40 ~ +100	°C
Soldering Temperature (Note. 2)	Tsol	260	°C

Notes: 1. Condition: pulse width \leq 10msec and duty \leq 1/10.

2. Soldering time \leq 5 seconds

Electro-Optical Characteristics (Ta=25°C)

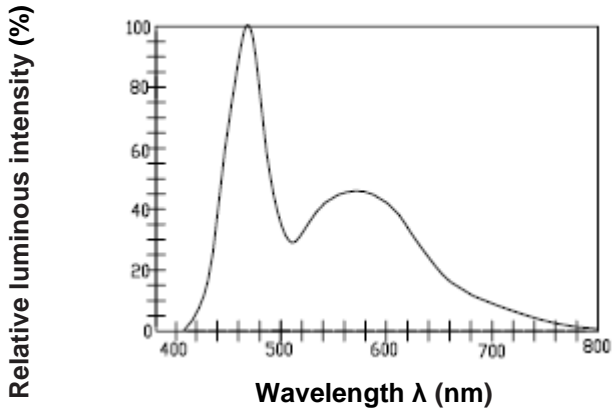
Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
Luminous Intensity	Iv	85	110	-----	mcd	IF=20mA
Viewing Angle	2 θ 1/2	-----	120	-----	deg	
Forward Voltage	VF	-----	3.6	4.0	V	
Chromaticity Coordinates	x	-----	0.29	-----		IF=10mA
	y	-----	0.30	-----		
Reverse Current	IR	-----	-----	10	uA	VR =5V

Notes: 1. The C.I.E. 1931 chromaticity diagram.

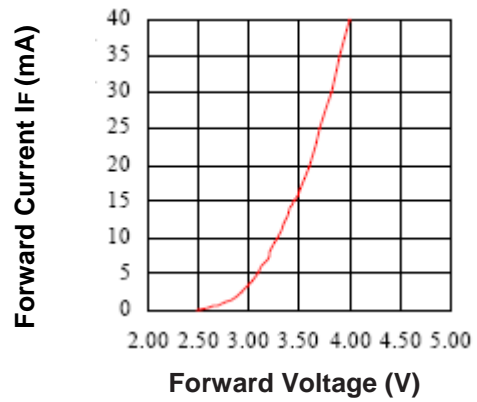
2. The products are sensitive to static electricity and care must be fully taken when handling products.

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

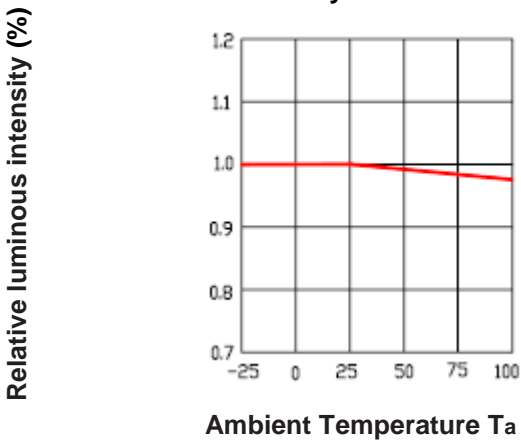
Spectrum Distribution



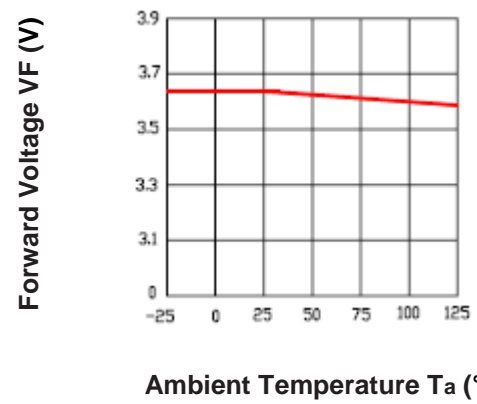
Forward Current vs. Forward Voltage



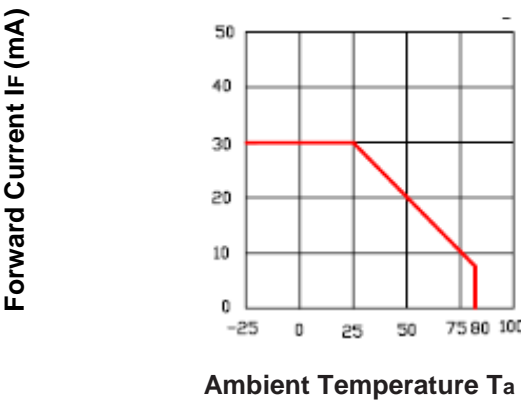
Luminous Intensity vs. Ambient Temperature



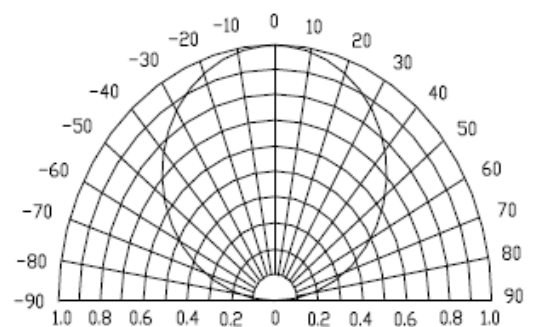
Forward Voltage vs. Ambient Temperature



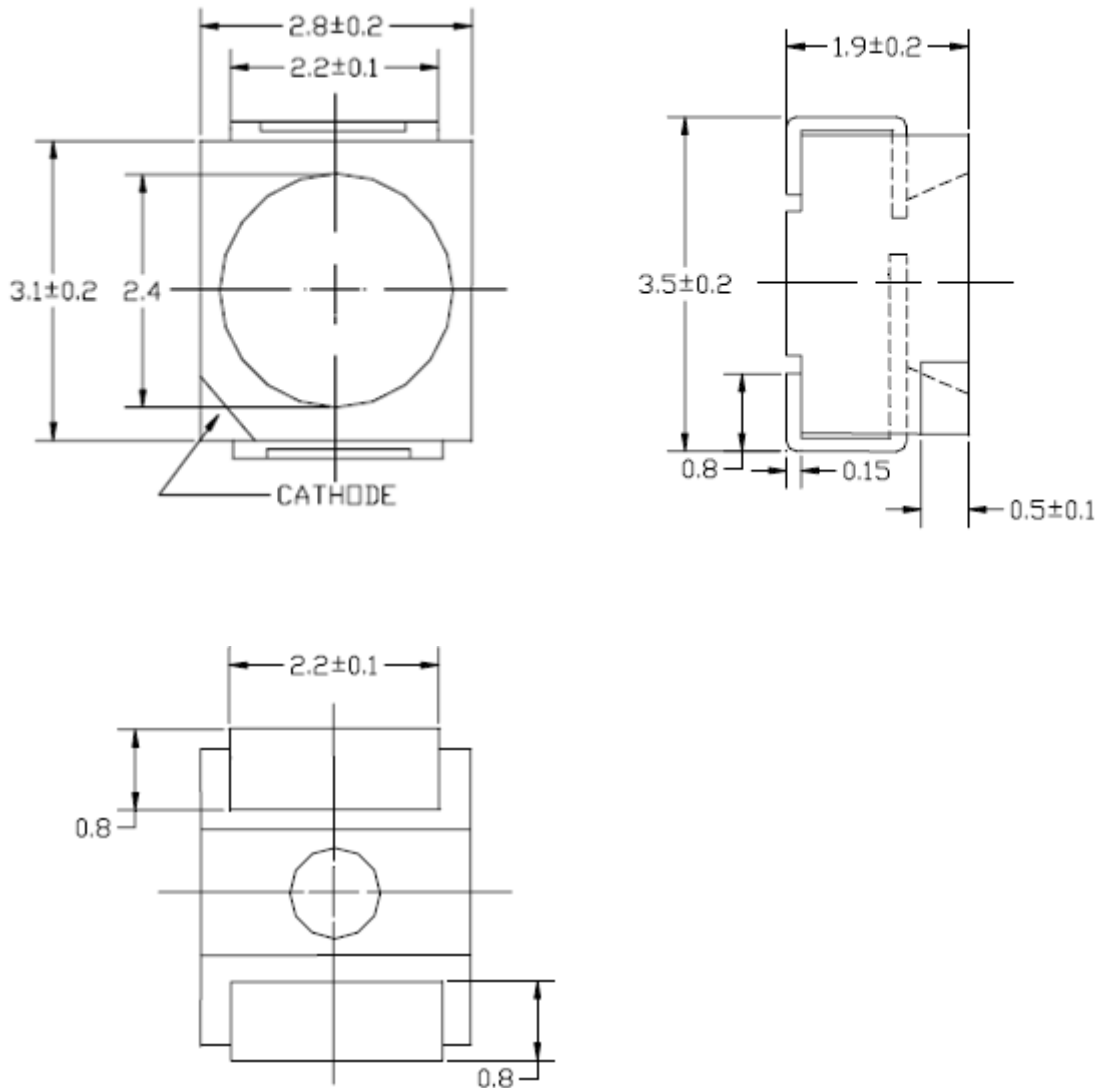
Forward Current Derating Curve



Radiation Diagram

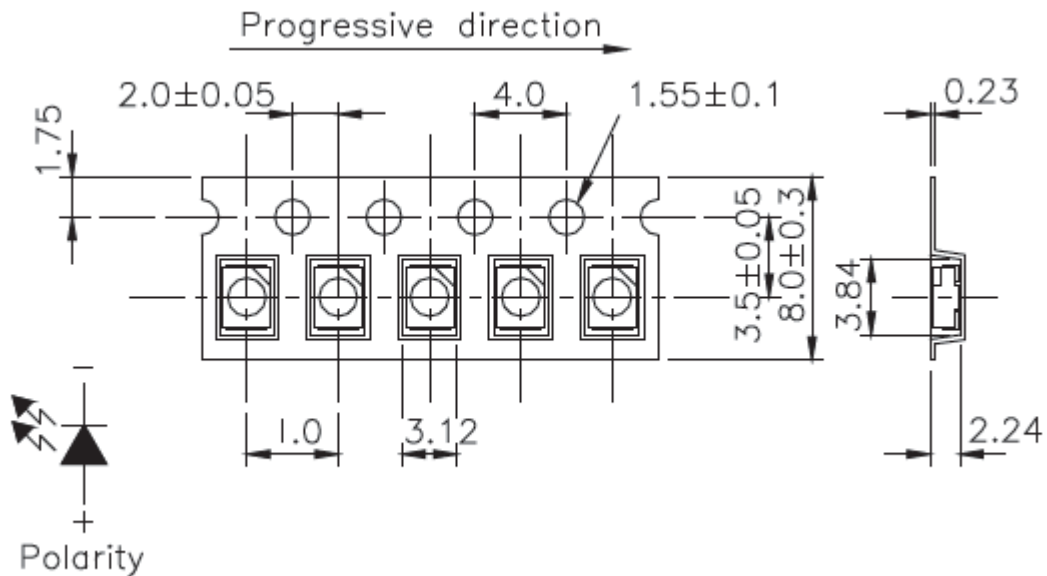


Package Outline Dimensions (Unit=mm)



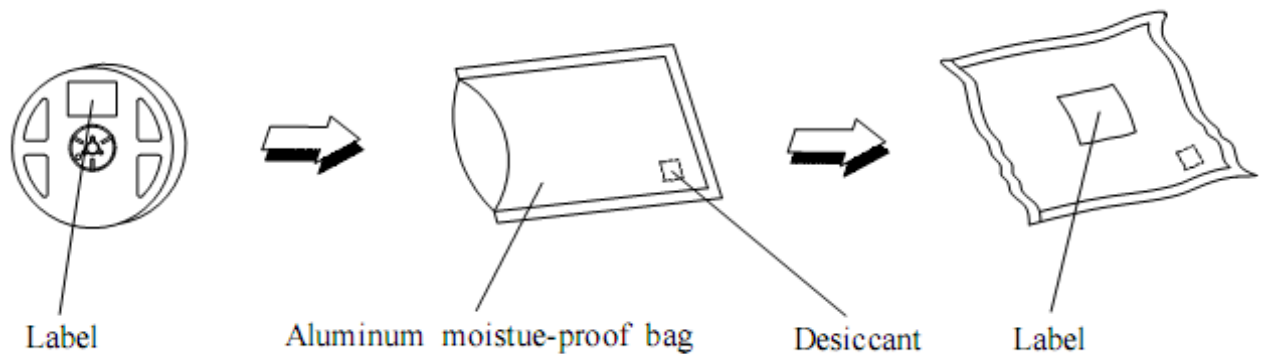
Note: The tolerances unless mentioned is ± 0.1 mm.

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

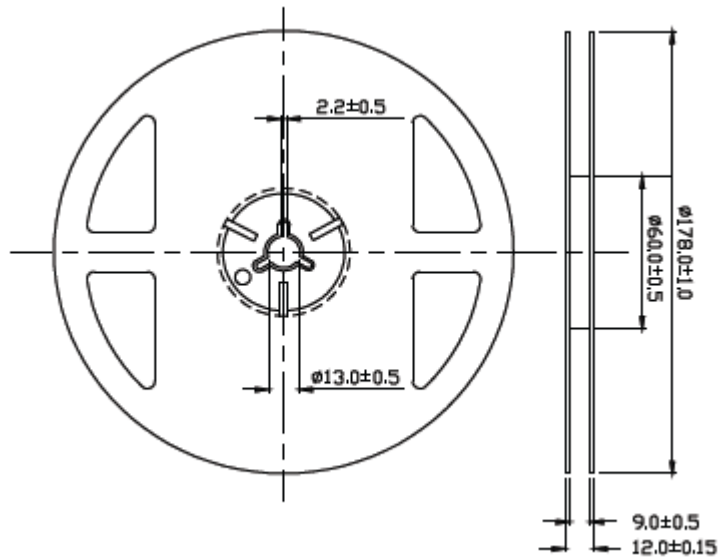


Note: The tolerances unless mentioned is ± 0.1 mm.

Moisture Resistant Packaging

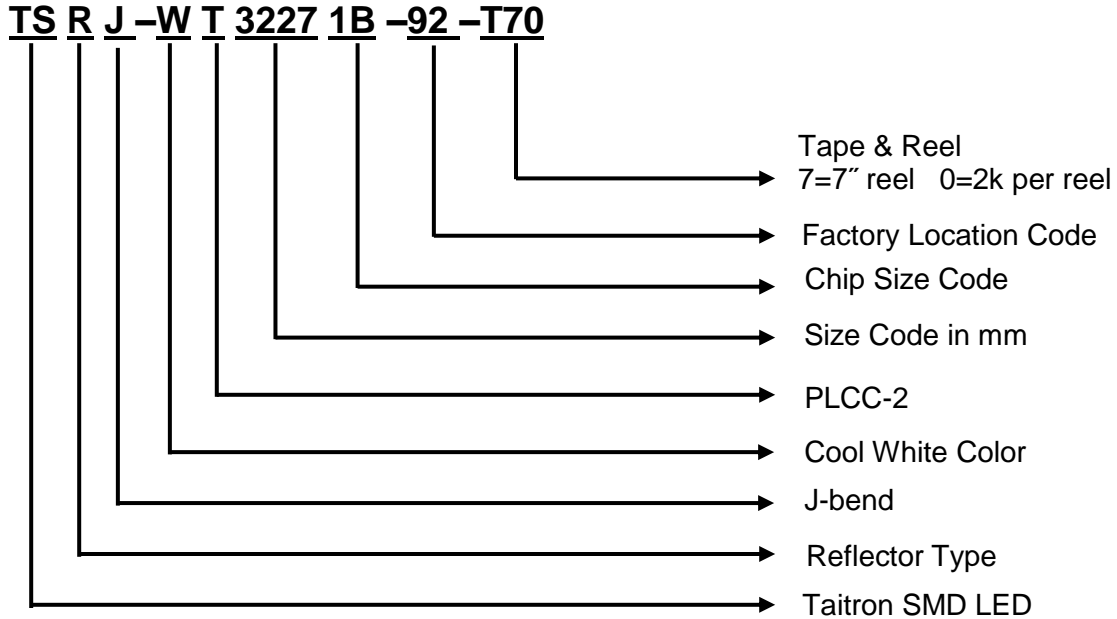


Reel Dimensions (Unit=mm):



Note: The tolerances unless mentioned is ± 0.1 mm.

Ordering Information

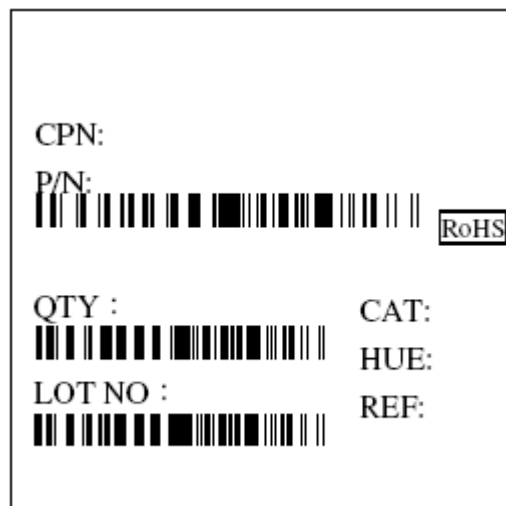


Label Explanation

CAT: Luminous Intensity Rank

HUE: Chromaticity Coordinates

REF: Forward Voltage Rank

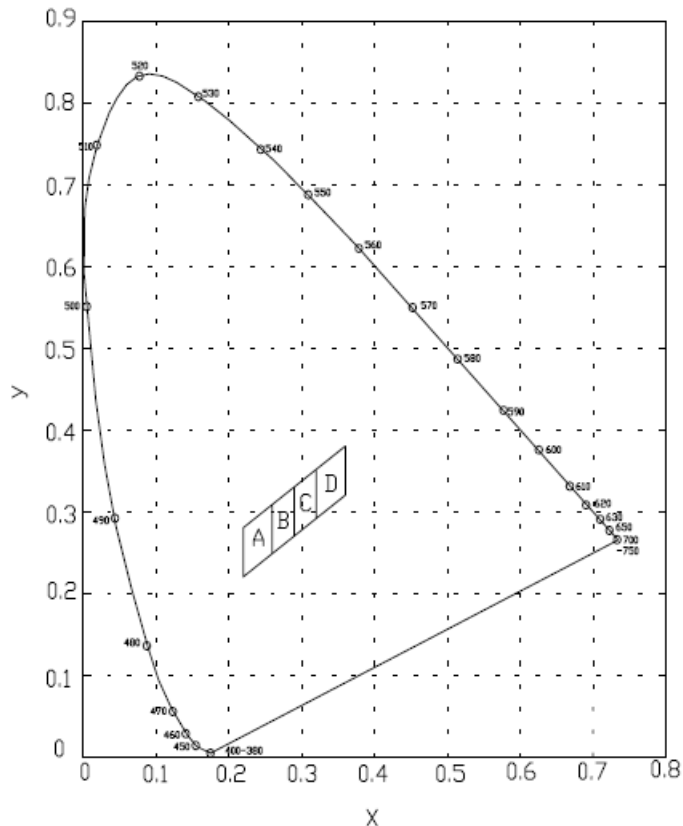


Chromaticity Coordinates Specifications for Bin Grading

Bin Code	CIE_x	CIE_y	Bin Code	CIE_x	CIE_y	Condition
A	0.220	0.220	B	0.260	0.250	IF=20mA
	0.220	0.280		0.260	0.310	
	0.260	0.310		0.290	0.330	
	0.260	0.250		0.290	0.270	
C	0.290	0.270	D	0.320	0.290	
	0.290	0.330		0.320	0.350	
	0.320	0.350		0.360	0.380	
	0.320	0.290		0.360	0.320	

Notes: Tolerance of Chromaticity Coordinates ± 0.02

CIE Chromaticity Diagram



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