

Side View with White LED (0.8mm Height)

Features

- Side view white LED
- White SMT package
- Lead frame package with individual pins
- Wide viewing angle
- Soldering methods: IR reflow soldering
- RoHS Compliant



M2512



Descriptions

- Due to the package design, this LED has wide viewing angle, low power consumption and white LED are devices that are materialized by combining blue chips and special phosphor. This feature makes the LED ideal for light guide application.

Applications

- LCD back light
- Mobile phones
- Indicators
- Illuminations
- Switch lights

Device Selection Guide

Part No.	Chip		Lens Color
	Material	Emitted Color	
TSRR-WS2512-363977	InGaN	White	Water Clear

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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
Electrostatic Discharge (HBM)*	ESD	2000	V
Operating Temperature	Topr	-40 ~ +85	°C
Storage Temperature	Tstg	-40 ~ +90	°C
Soldering Temperature	Tsol	Reflow soldering: 260°C for 10 seconds	
		Hand soldering: 350°C for 3 seconds	

Notes *: This part is sensitive to static electricity and must be carefully taken when handling products.

Electro-Optical Characteristics (Ta=25°C)

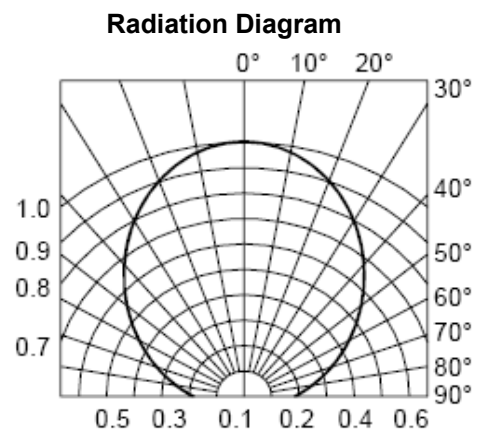
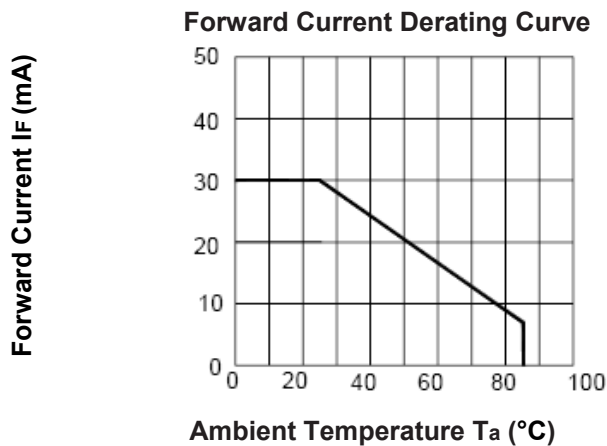
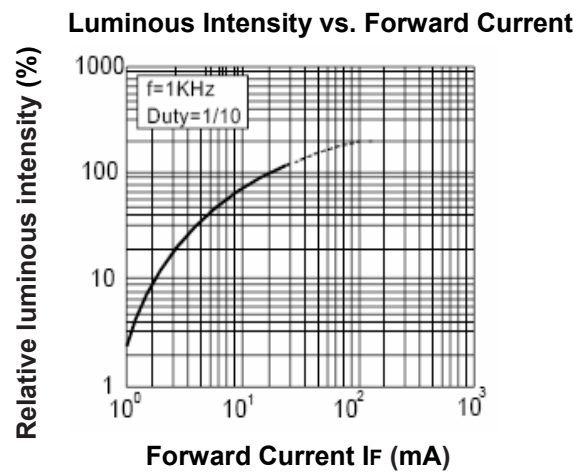
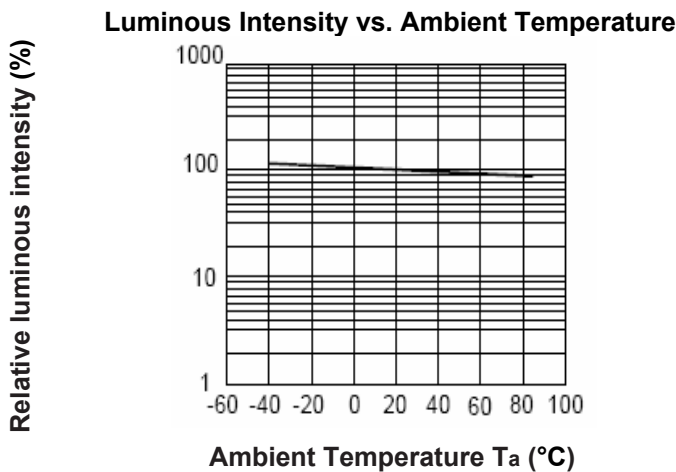
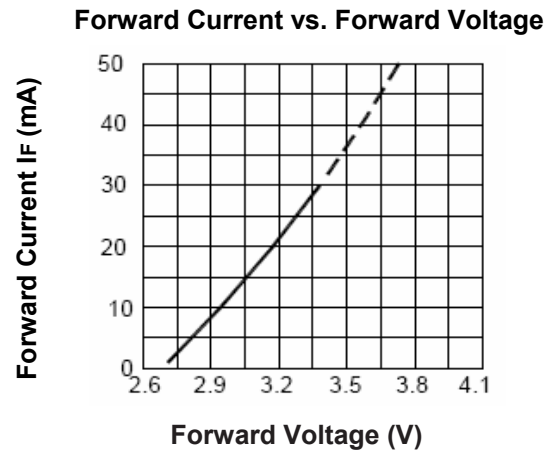
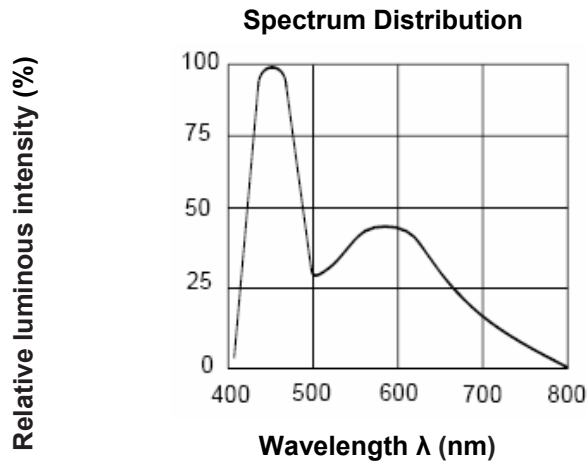
Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
Luminous Intensity	Iv	1900	-----	2100	mcd	IF=20mA
Viewing Angle	2θ1/2	-----	110	-----	deg	
Forward Voltage	VF	2.95	3.20	3.55	V	
Reverse Current	IR	-----	-----	50	uA	VR=5V
Chromaticity Coordinates	x	-----	0.29	-----	-----	IF=20mA
	y	-----	0.30	-----	-----	

Notes: Tolerance of Luminous Intensity: ±10%

Tolerance of Chromatic Coordinates: ±0.01

Tolerance of Forward Voltage: ±0.1V

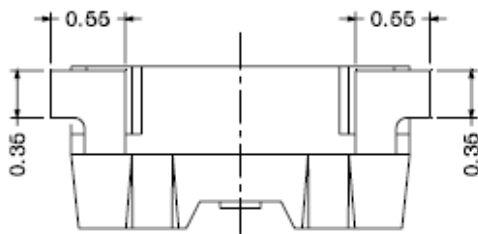
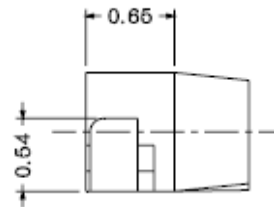
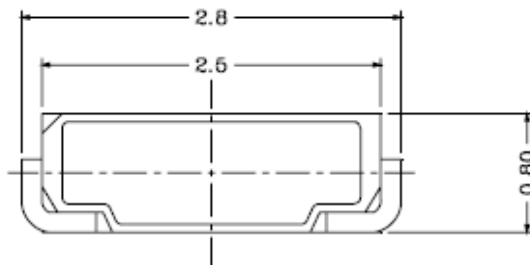
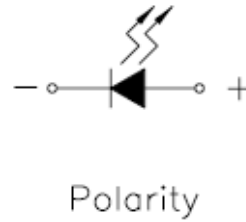
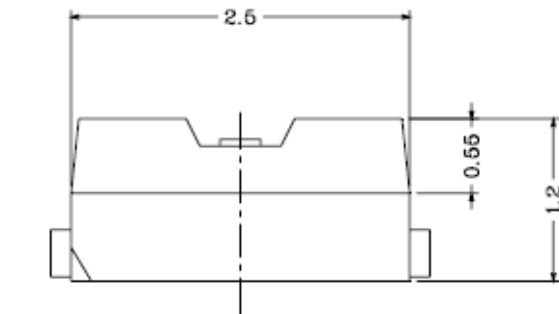
Typical Electro-Optical Characteristics Curves (Ta=25°C)



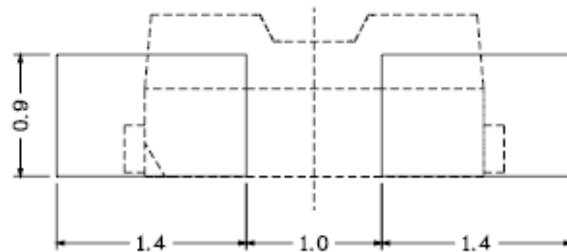
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Package Outline Dimensions (Unit=mm)



Recommended soldering pad design

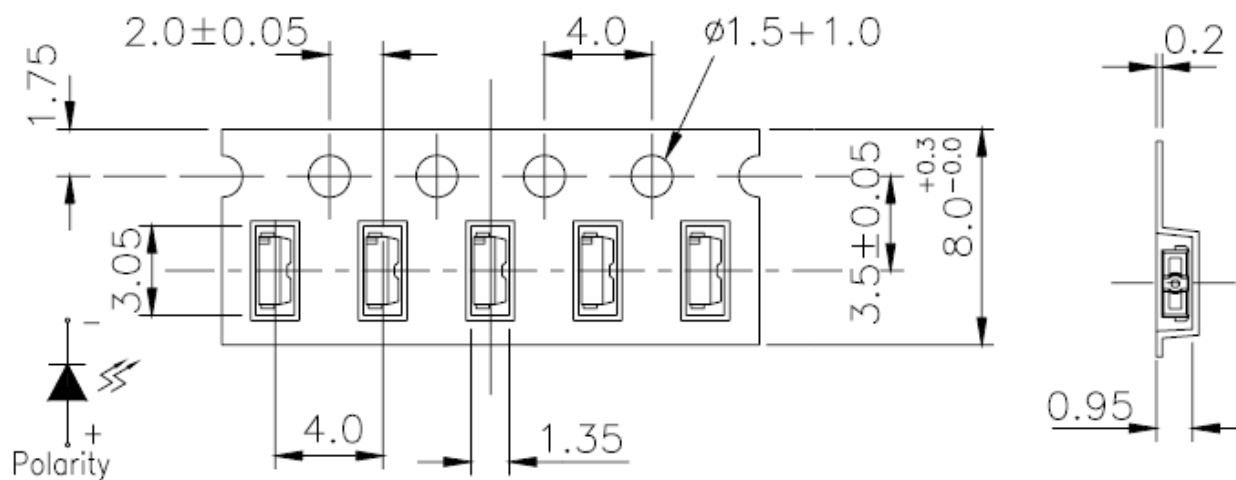


Note: The tolerances unless mentioned is $\pm 0.1\text{mm}$.

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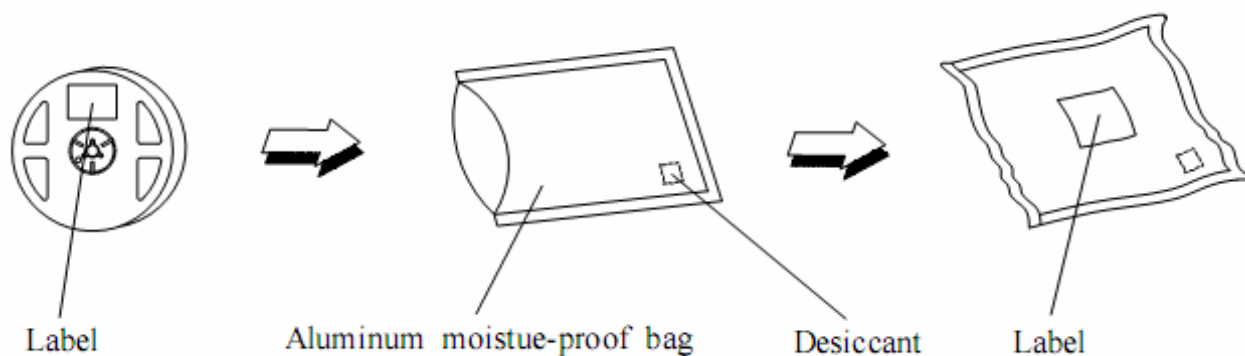
TSRR-WS2512-363977

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



Note: The tolerances unless mentioned is ± 0.1 mm.

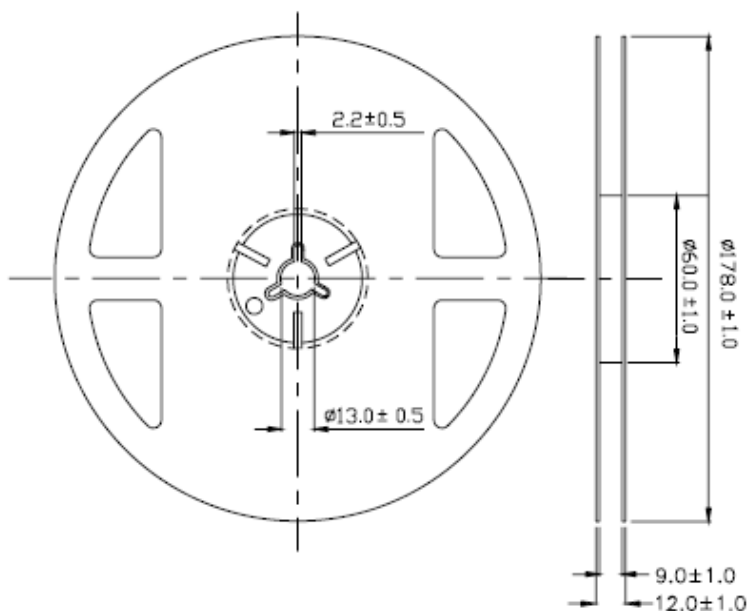
Moisture Resistant Packaging



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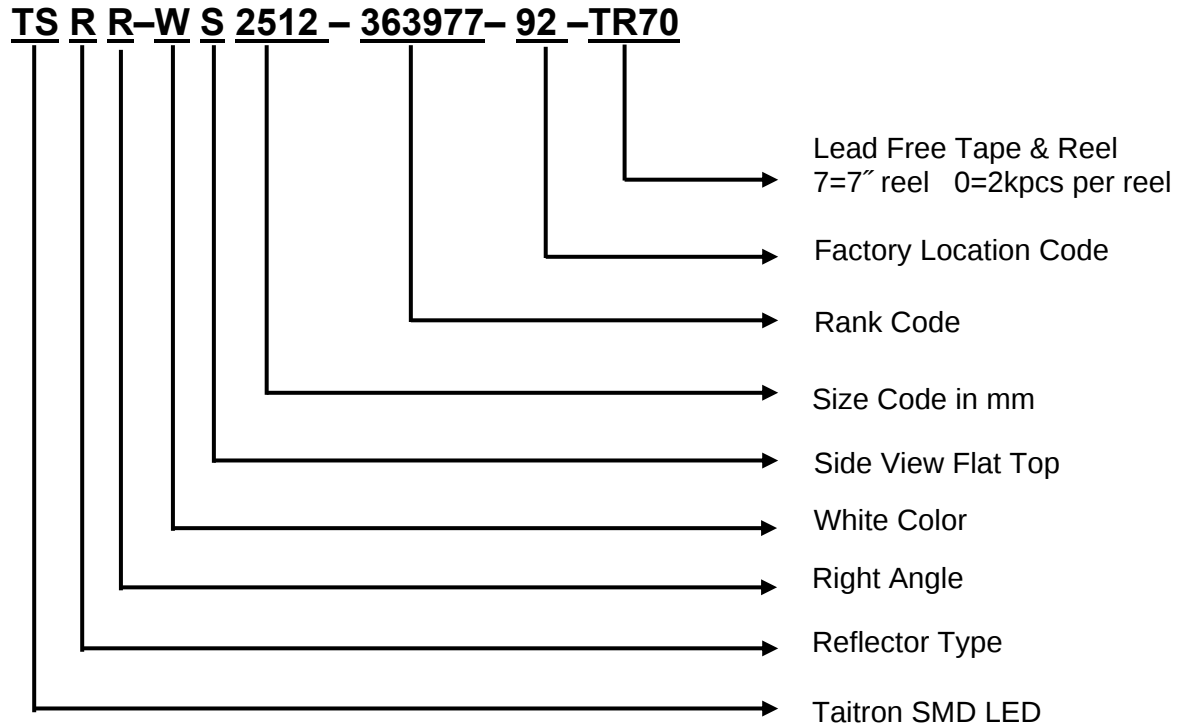
Reel Dimensions (Unit=mm):



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Ordering Information

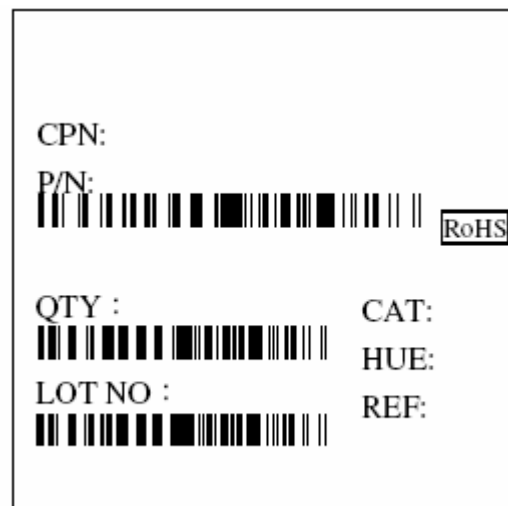


Label Explanation

CAT: Luminous Intensity Rank

HUE: Chromaticity Coordinates

REF: Forward Voltage Rank



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Rank Combinations

Bin Range of Luminous Intensity

Bin Code	Min	Max	Unit	Condition
36	1900	1950	mcd	IF=20mA
37	1950	2000		
38	2000	2050		
39	2050	2100		

Bin Range of Forward Voltage

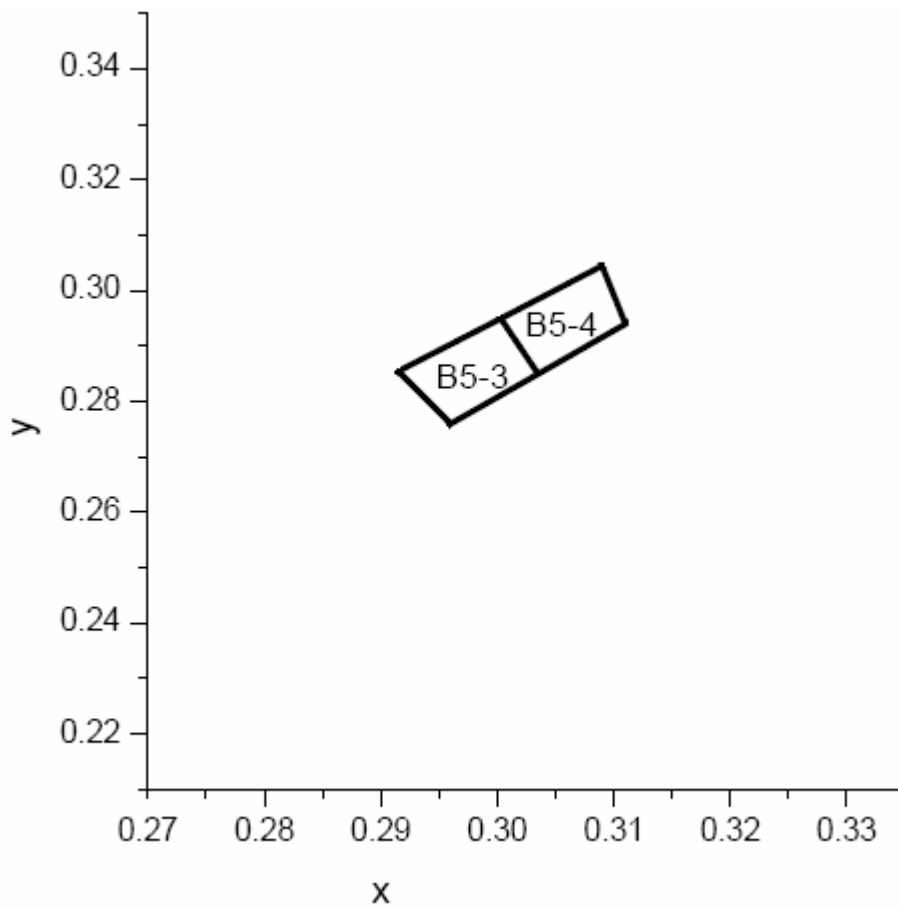
Bin Group	Bin Code	Min.	Max.	Unit	Condition
0	6-1	2.95	3.05	V	IF=20 mA
	6-2	3.05	3.15		
	7-1	3.15	3.25		
	7-2	3.25	3.35		
	8-1	3.35	3.45		
	8-2	3.45	3.55		

Notes: Tolerance of Luminous Flux: $\pm 10\%$
Tolerance of Forward Voltage: $\pm 0.1V$

Chromaticity Coordinates Specifications for Bin Group

Bin Group	Bin Code	Chromaticity Coordinates				
77	B5-3	x	0.2960	0.2915	0.3003	0.3035
		y	0.2760	0.2855	0.2950	0.2850
	B5-4	x	0.3035	0.3003	0.3090	0.3110
		y	0.2850	0.2950	0.3045	0.2940

CIE Chromaticity Coordinates Diagram



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