



TOYO LED ELECTRONICS LIMITED

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http://www.toyo-led.com E-mail : sales@toyo-led.com



P/N: TY-3528URT1

3.5 * 2.8mm TOP SMD Series

◆ Features:

- 3.5mm×2.8mm SMT LED, 1.90mm thickness
- PLCC-4 package
- White package
- Suitable for all SMT assembly and solder process
- Available on tape and reel



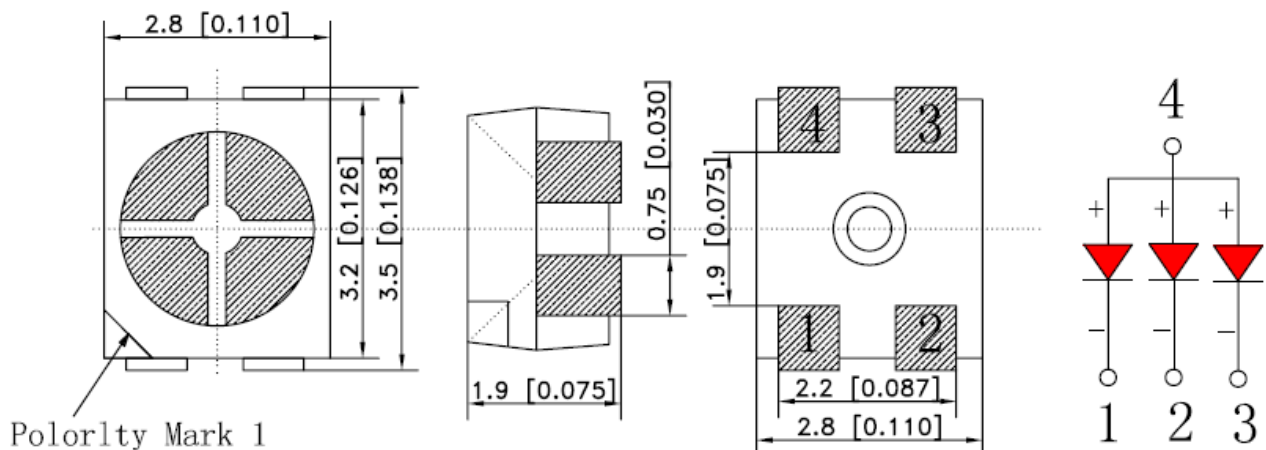
◆ Description

The Red source color devices are made with AlGaInP on sapphire Light Emitting Diode.

◆ Application

- Optical indicator
- Indicator and backlighting in telephone and fax
- Flat backlight for LCD, switch and symbol
- Light pipe application
- General use

◆ Package Dimensions



NOTES:

1. All dimensions are in millimeter[unit];
2. Tolerance is $\pm 0.2\text{mm}$ (0.008 ") especially other specified;
3. Specifications are subject to change without notice.



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Part No.	Emitted Color	Len's Color	Chip Material
TY-3528URT1	Red	Water clear	AlGaInP

✧ Absolute Maximum Ratings(Ta=25°C)

Item	Symbol	Maximum	Unit
Power Dissipation	PD	180	mW
Continuous Forward Current	I _{Fmax}	90	mA
Peak Forward Current(1/10 Duty Cycle 0.1ms Pulse Width)	I _{FP}	150	mA
Peverse Voltage	V _R	5	V
Operating Temperature Range	T _{opr}	-40 to+85	25°C
Storage Temperature Range	T _{stg}	-40 to+85	25°C

✧ Electrical/Optical Characteristics(Ta=25°C)

Item	Symbol	Condition	Min.	Typ.	Max	Unit
Forward Voltage	V _F	I _F =60mA	1.9	2.2	2.4	V
Luminous Intensity	I _v	I _F =60mA	500	700	900	mcd
Luminous Flux	Φ	I _F =60mA	1.7	2.2	2.7	lm
Wavelength	λ	I _F =60mA	620	623	630	nm
Typical Correlated Color Temperature	T _c	I _F =60mA	--	1500	--	K
Chromaticity Coordinates	X	I _F =60mA	--	--	--	--
	Y	I _F =60mA	--	--	--	--
Viewing Angle	2θ _{1/2}	I _F =60mA	--	120	--	Deg
Capacitance	C	V _F =0V, f=1MHZ	--	110	--	pF
Reverse Current	I _R	V _R =5V	--	5	10	uA



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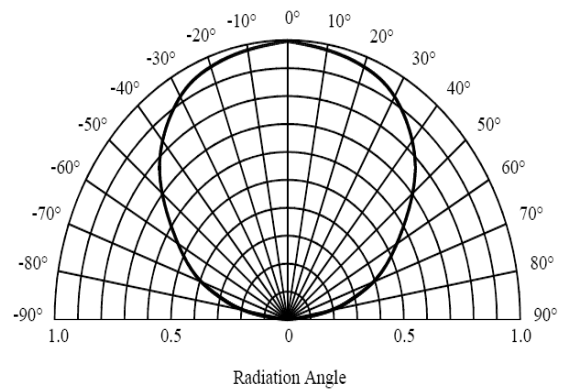
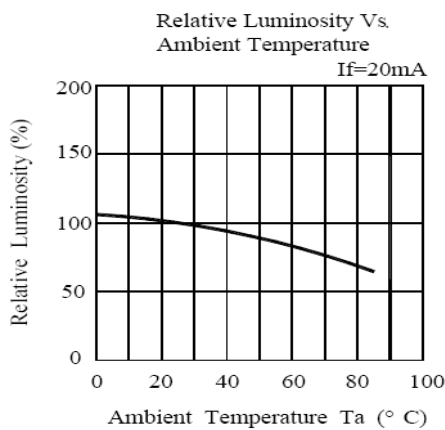
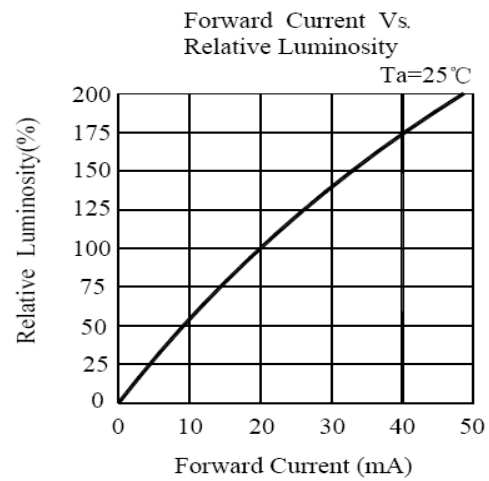
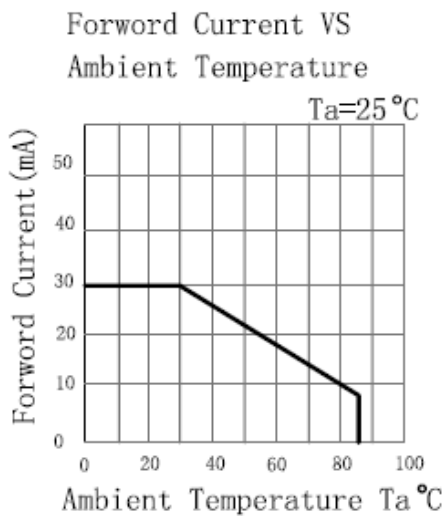
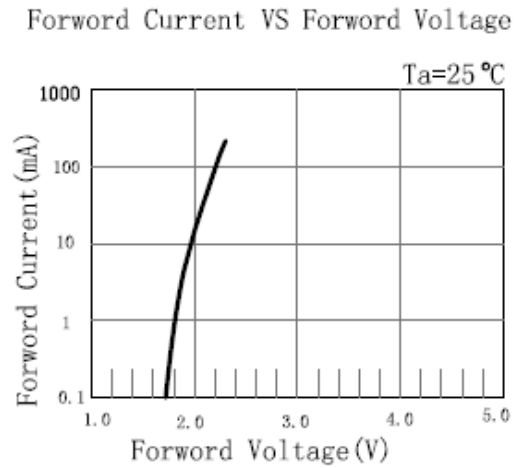
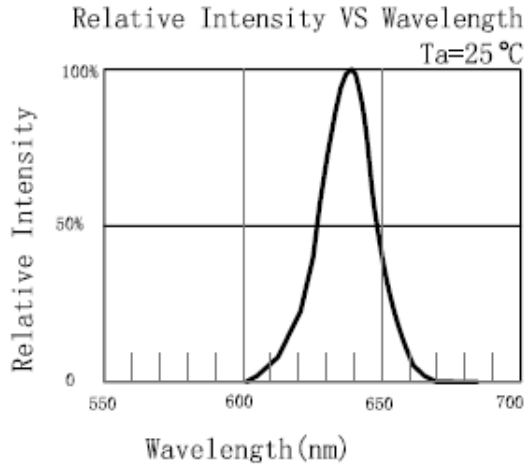
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◇ Typical Electro-Optical Characteristics Curves





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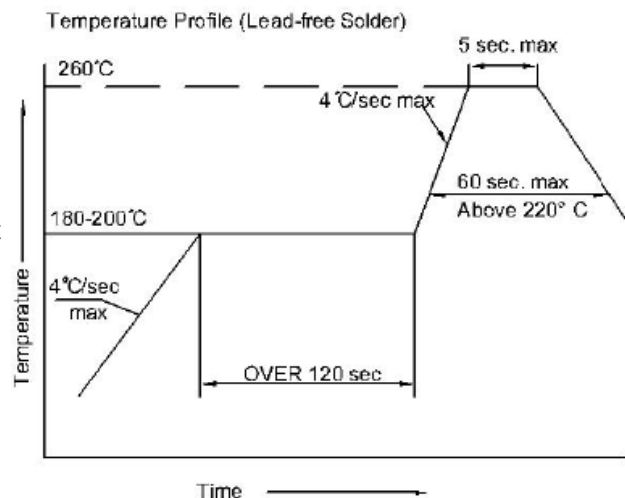
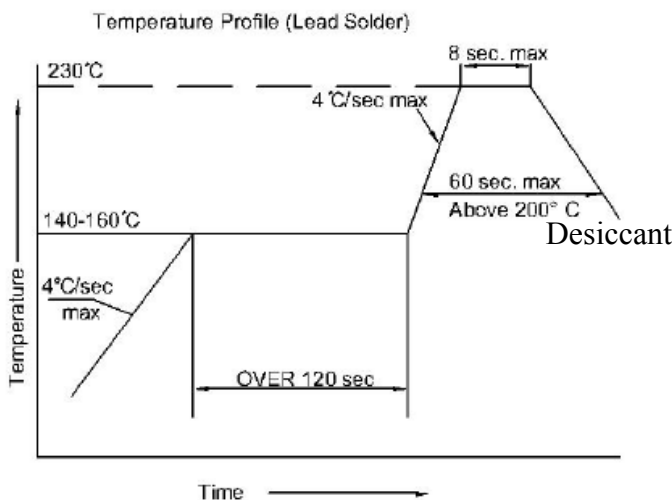
◇ Reliability Test Items And Conditions

NO.	Item	Test Condition	Test Hr/cycle/time	Sample Q'ty	Ac/Re
1	Reflow	TEMP:260±5°C; Min.5Sec	6 min	22pcs	0/1
2	Temperature Cycle	H:+100°C 15mins To(5mins) L:-40°C 15mins	300 cycles	22pcs	0/1
3	Thermal Shock	H:+100°C 15mins To(5mins) L:-40°C 15mins	300 cycles	22pcs	0/1
4	High Temperature Storage	TEMP:+260°C	1000hrs	22pcs	0/1
5	Low Temperature Storage	TEMP:-40°C	1000hrs	22pcs	0/1
6	DC Operating Life	IF=20MA	1000hrs	22pcs	0/1
7	High Temperature	85°C	1000hrs	22pcs	0/1
8	High Humidity	85%R.H.	1000hrs	22pcs	0/1

◇ SMT Reflow Soldering Instructions

Number of reflow process shall be than 2 times and cooling

Process to normal temperature is required between first and second soldering process





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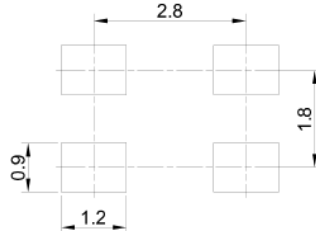
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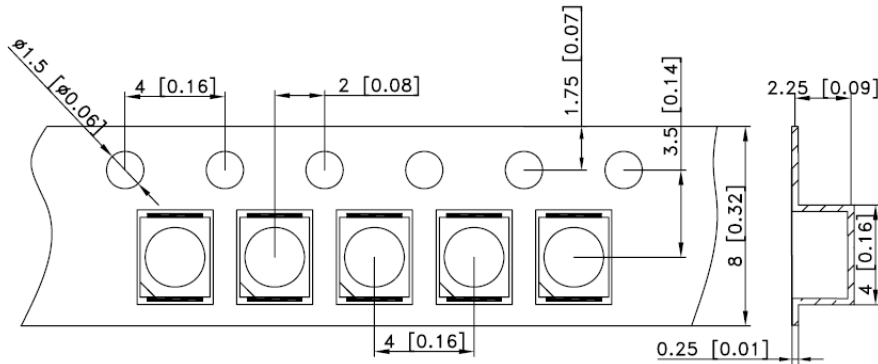
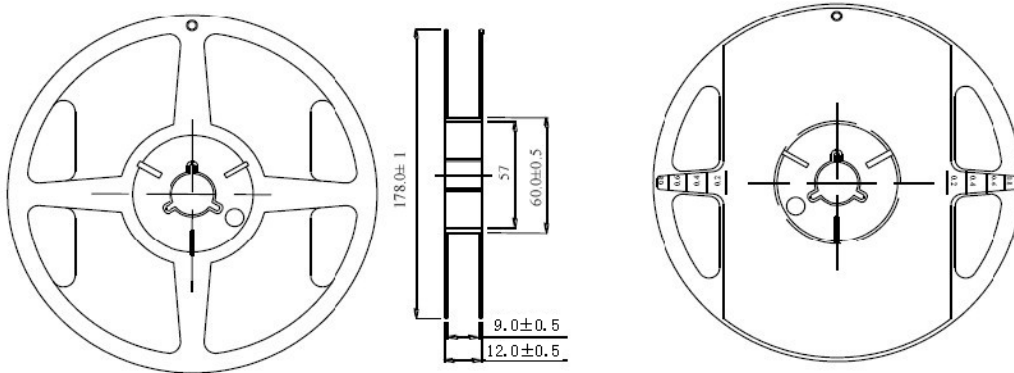
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◇ Recommended Soldering Pad Dimensions



◇ Tape Specification: 2,000PCS per reel



◇ Package Label

SMD LED	
PART NO: _____	QA Pass
LOT NO : _____	
Q' TY : _____	
VF : _____ IV : _____	
WL : _____ BIN: _____	Pb
DATA : _____	
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❖ Package & Shipping Instructions

