SMT640

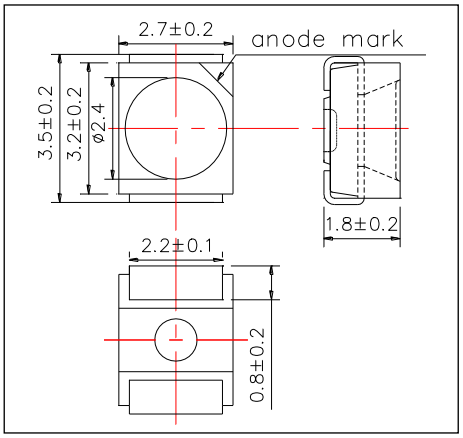
High Performance Red Color TOP LED

SMT640 consists of an AlGaInP LED mounted on the lead frame as TOP LED package and is 800mcd typical of brightness.
It emits a spectral band of radiation at 640nm.

<Specifications>

1. Product Name: TOP LED
2. Type Number: SMT640
3. Chip:
   - Chip Material: AlGaInP
   - Peak Wavelength: 625nm
4. Package
   - Lead Frame Die: Silver Plated
   - Package Resin: PPA Resin
   - Lens: Epoxy

Outer Dimension (Unit:mm)



Absolute Maximum Ratings[Ta=25℃]			
Item	Symbol	Maximum Rated Value	Unit
Power Dissipation	PD	175	mW
Pulse Forward Current*	IF	75	mA
Reverse Voltage	VR	5	V
Operating Temperature	TOPR	-30 ~ +80	℃
Storage Temperature	TSTG	-40 ~ +80	℃
Soldering Temperature**	TSOL	255	℃

* Duty=1% and Pulse Width=10us.
** Soldering condition must be completed within 5 second at 255℃.

Electro-Optical Characteristics [Ta=25℃]						
Item	Symbol	Condition	Minimum	Typical	Maximum	Unit
Forward Voltage	VF	IF=20mA		2.0	2.3	V
	VFP	IF=50mA		2.2	2.5	
Reverse Current	IR	VR=5V			10	uA
Total Radiated Power*	PO	IF=20mA	3.0	6.0		mW
		IF=50mA	7.5	13.5		
Radiant Intensity**	IE	IF=20mA		2.5		mW/sr
		IF=50mA		6.0		
Brightness	IV	IF=20mA		800		mcd
		IF=50mA		1600		
Peak Wavelength	λP	IF=50mA	630	640	650	nm
Dominant wavelength	λD	IF=50mA		628		nm
Half Width	Δλ	IF=20mA		25		nm
Viewing Half Angle	θ1/2	IF=20mA		±55		deg

* Measured by Photodyne #500
** Measured by Tektronix J-6512

RoHS Compliant

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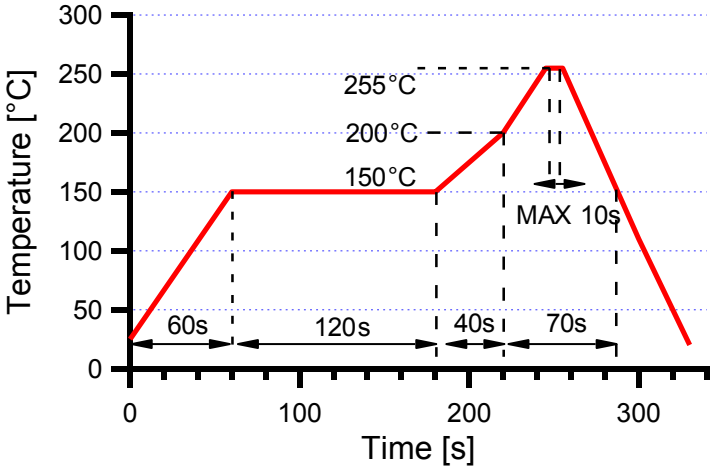
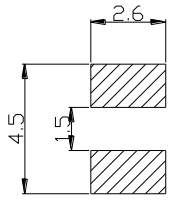
◆ SMD Application

IR-Reflow Soldering Profile for lead free soldering



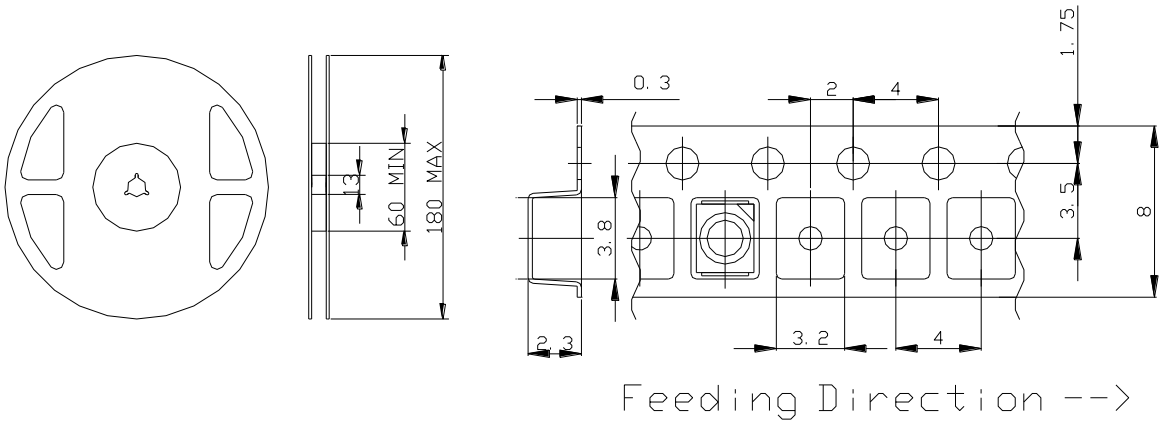
Recommended Land Layout (Unit: mm)



Don't put stress on SMD and a circuit board after soldering.

◆ SMD Packing

Tape and Reel Dimensions (Unit: mm)



◆ Wrapping

Moisture barrier bag aluminum laminated film with a desiccant to keep out the moisture absorption during the transportation and storage.

SMD LED STORAGE AND HANDLING PRECAUTIONS

＜Storage Conditions before Opening a Moisture-Barrier Aluminum Bag＞

- Before opening a moisture-barrier aluminum bag, please store it at <30ºC, <60%RH. Please note that the maximum shelf life is 12 months under these conditions.

＜Storage Conditions after Opening a Moisture-Barrier Aluminum Bag＞

- After opening a moisture-barrier aluminum bag, store the aluminum bag and silica gel in a desiccator.
- After opening the bag, please solder the LEDs within 48 hours in a room with 5 - 30ºC, <50%RH.
- Please put any unused, remaining LEDs and silica gel back in the same aluminum bag and then vacuum-seal the bag.
- It is recommended to keep the re-sealed bag in a desiccator at <30%RH.

＜Notes about Re-sealing a Moisture-Barrier Aluminum Bag＞

- When vacuum-sealing an opened aluminum bag, if you find the moisture-indicator of the silica gel has changed to pink from blue (indicating a relative humidity of 30 % or more), please do not use the unused LEDs, the aluminum bag, or the silica gel.

＜Notes about Opening a Re-sealed Moisture-Barrier Aluminum Bag＞

- When opening a vacuumed and re-sealed aluminum bag in order to use the remaining LEDs stored in the bag, if you find that the moisture-indicator of the silica has changed to pink, please do not use the LEDs.

※The 48-hour- long floor life does not include the time while LEDs are stored in the moisture-barrier aluminum bag.
However, we strongly recommend to solder the LEDs as soon as possible after opening the aluminum bag.