SMT880-25-2D

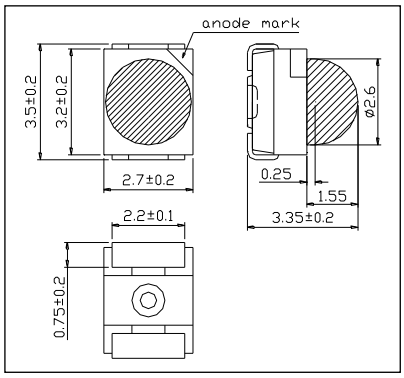
High Performance Infrared TOP IR LED

SMT880-25-2D consists of an AlGaAs LED mounted on the lead frame as TOP LED package with plastic ball lens. It is 44mW typical of output power and 40mW/sr of radiant intensity. It emits a spectral band of radiation at 885nm.

<Specifications>

1. Product Name: TOP IR LED
2. Type Number: SMT880-25-2D
3. Chip:
   - Chip Material: AlGaAs
   - Dimension: 400im x 400nm
   - Peak Wavelength: 885nm
4. Package
   - Lead Frame Die: Silver Plated
   - Package Resin: PPA Resin
   - Lens: Epoxy Resin
   - Diameter: Φ2.6mm

Outer Dimension (Unit:mm)



Absolute Maximum Ratings[Ta=25℃]			
Item	Symbol	Maximum Rated Value	Unit
Power Dissipation	PD	180	mW
Forward Current	IF	100	mA
Pulse Forward Current*	IFP	1000	mA
Reverse Voltage	VR	5	V
Thermal Resistance	Rthja	190	K/W
Junction Temperature	Tj	100	℃
Operating Temperature	TOPR	-20 ~ +80	℃
Storage Temperature	TSTG	-30 ~ +80	℃
Soldering Temperature**	TSOL	255	℃

* Duty=1% and Pulse Width=10us.

**Soldering condition must be completed within 10 second at 255℃.

Electro-Optical Characteristics [Ta=25℃]						
Item	Symbol	Condition	Minimum	Typical	Maximum	Unit
Forward Voltage	VF	IF=50mA DC		1.45	1.60	V
		IF=100mA, tp=20ms		1.55	1.80	
Reverse Current	IR	VR=5V			10	uA
Total Radiated Power*	PO	IF=50mA DC	16	22		mW
		IF=100mA, tp=20ms		44		
Radiant Intensity**	IE	IF=50mA DC		20		mW/sr
		IF=100mA, tp=20ms		40		
Peak Wavelength	λP	IF=50mA DC	875	885	895	nm
Half Width	Δλ	IF=50mA DC		40		nm
Viewing Half Angle	θ1/2	IF=50mA DC		±24		deg
Rise Time	tr	IF=50mA DC		15		ns
Fall TIme	tf	IF=50mA DC		10		ns

* Measured by Photodyne #500

** Measured by Tektronix J-6512

RoHS Compliant

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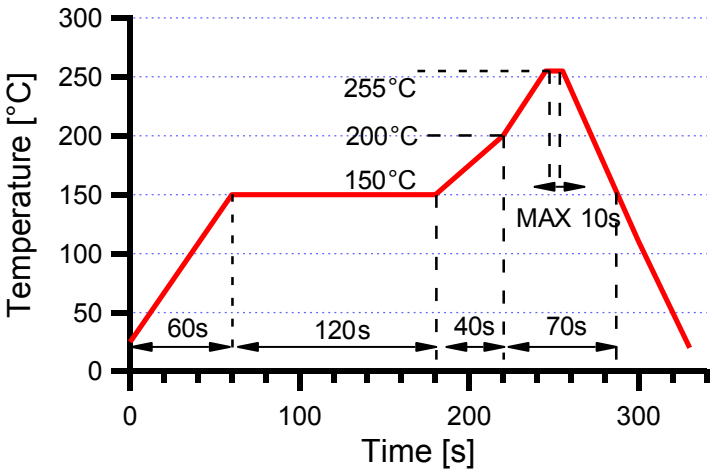
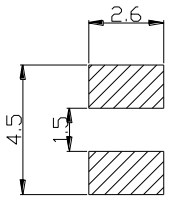
◆ SMD Application

IR-Reflow Soldering Profile for lead free soldering



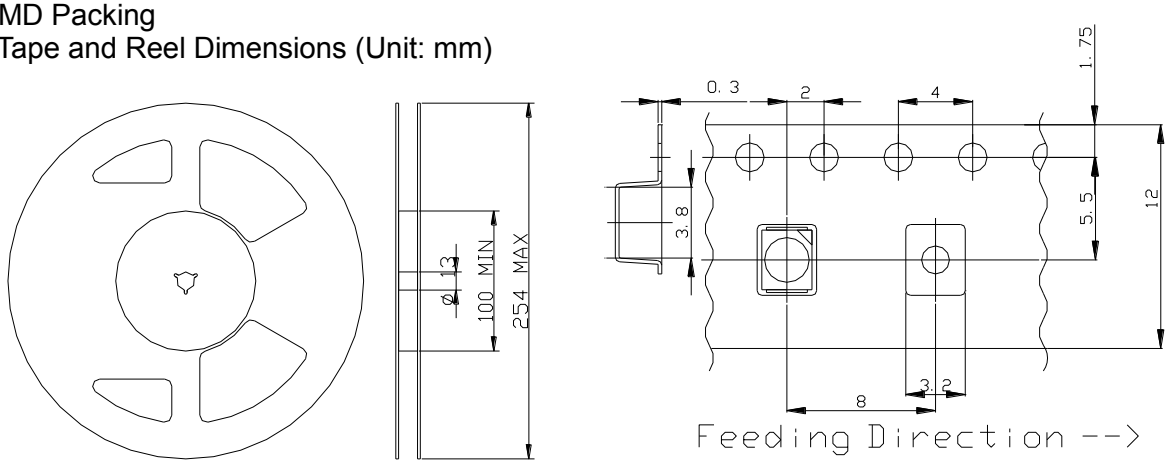
Recommended Land Layout (Unit: mm)



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 72 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 72-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.