

SMT940-25

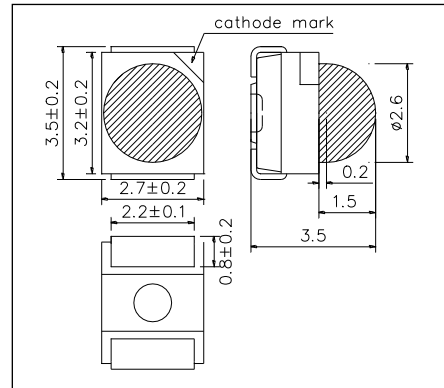
High Performance Infrared TOP IR LED with Lens

SMT940-25 consists of a GaAs LED mounted on the lead frame as TOP LED package with plastic ball lens. It is 34mW typical of output power and 26mW/sr of radiant intensity. It emits a spectral band of radiation at 940nm.

<Specifications>

1. Product Name: TOP IR LED
2. Type Number: SMT940-25
3. Chip:
 - Chip Material: GaAs
 - Dimension: 400un x 400nm
 - Peak Wavelength: 940nm
4. Package
 - Lead Frame Die: Silver Plated
 - Package Resin: PPA Resin
 - Lens: Epoxy Resin
 - Diameter: $\Phi 2.6$ mm

Outer Dimension (Unit:mm)



Absolute Maximum Ratings[Ta=25°C]			
Item	Symbol	Maximum Rated Value	Unit
Power Dissipation	PD	140	mW
Forward Current	IF	100	mA
Pulse Forward Current*	IFP	1000	mA
Reverse Voltage	VR	5	V
Thermal Resistance	Rthja	260	K/W
Junction Temperature	Tj	100	°C
Operating Temperature	TOPR	-20 ~ +80	°C
Storage Temperature	TSTG	-30 ~ +80	°C
Soldering Temperature**	TSOL	255	°C

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

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

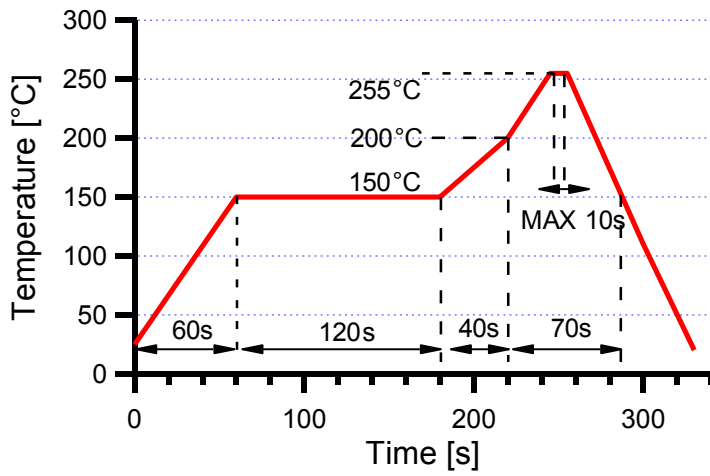
Electro-Optical Characteristics [Ta=25°C]						
Item	Symbol	Condition	Minimum	Typical	Maximum	Unit
Forward Voltage	VF	IF=50mA DC		1.30	1.45	V
		IF=100mA, tp=20ms		1.38	1.60	
Reverse Current	IR	VR=5V			10	uA
Total Radiated Power*	PO	IF=50mA DC	12	17		mW
		IF=100mA, tp=20ms		34		
Radiant Intensity**	IE	IF=50mA DC	8	13		mW/sr
		IF=100mA, tp=20ms		26		
Peak Wavelength	λP	IF=50mA DC	930	940	955	nm
Half Width	$\Delta\lambda$	IF=50mA DC		50		nm
Viewing Half Angle	$\theta_{1/2}$	IF=50mA DC		± 23		deg
Rise Time	tr	IF=50mA DC		1000		ns
Fall Time	tf	IF=50mA DC		500		ns

* Measured by Photodyne #500

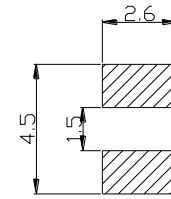
** Measured by Tektronix J-6512



- ◆ SMD Application
IR-Reflow Soldering Profile for lead free soldering

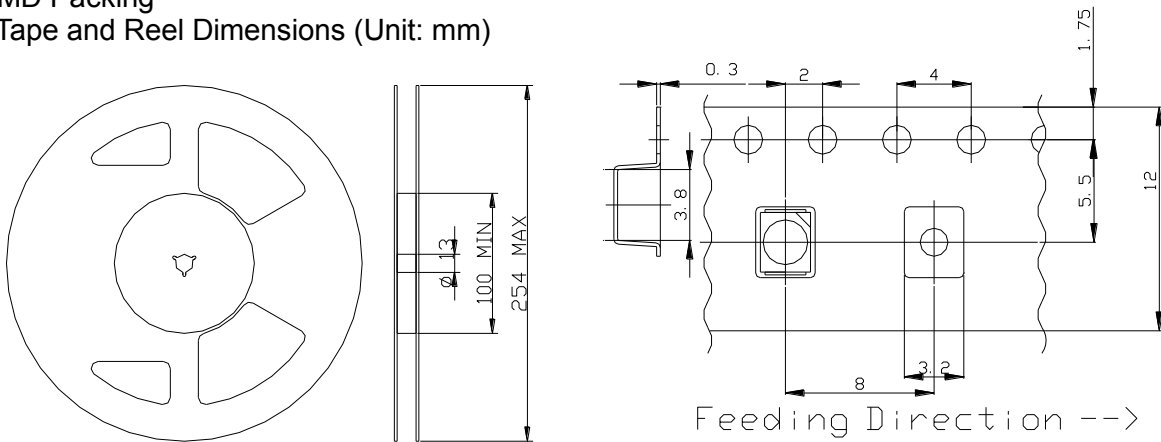


Recommended Land Layout (Unit: mm)



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.