

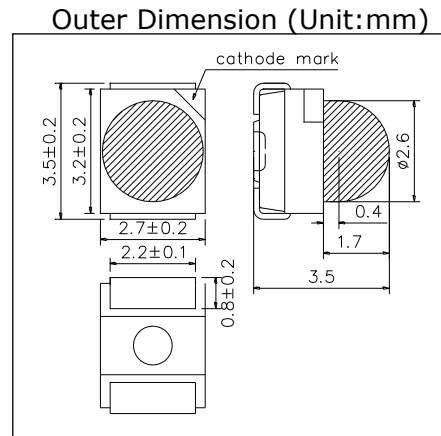
SMT830N-35-25

High Performance Infrared TOP IR LED with Lens

SMT830N-35-25 consists of a AlGaAs LED mounted on the lead frame as TOP LED package with plastic ball lens. It is 22mW typical of output power and 25mW/sr of radiant intensity. It emits a spectral band of radiation at 830nm.

<Specifications>

1. Product Name: TOP IR LED
2. Type Number: SMT830N-35-25
3. Chip:
 - Chip Material: AlGaAs
 - Dimension: 350um x 350nm
 - Peak Wavelength: 830nm
4. Package
 - Lead Frame Die: Silver Plated
 - Package Resin: PPA Resin
 - Lens: Epoxy Resin
 - Diameter: $\Phi 2.6$ mm



Absolute Maximum Ratings[Ta=25°C]			
Item	Symbol	Maximum Rated Value	Unit
Power Dissipation	PD	175	mW
Forward Current	IF	100	mA
Pulse Forward Current*	IFP	750	mA
Reverse Voltage	VR	5	V
Thermal Resistance	Rthja	200	K/W
Junction Temperature	Tj	100	°C
Operating Temperature	TOPR	-40 ~ +80	°C
Storage Temperature	TSTG	-40 ~ +80	°C
Soldering Temperature**	TSOL	250	°C

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

**Soldering condition must be completed within 5 second at 250 °C.

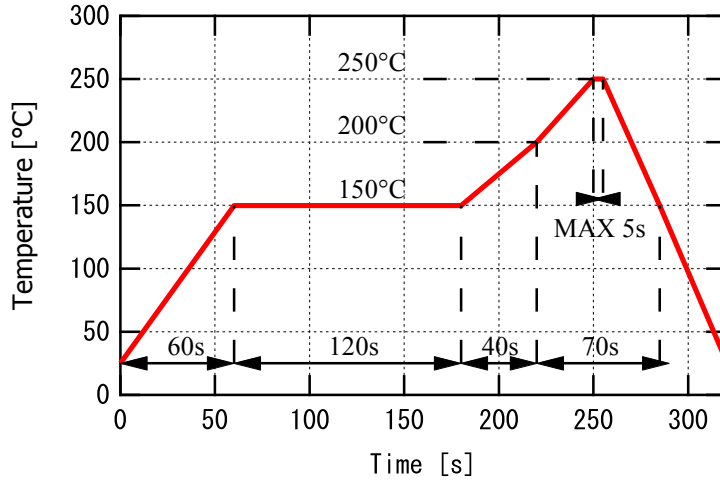
Electro-Optical Characteristics [Ta=25°C]						
Item	Symbol	Condition	Minimum	Typical	Maximum	Unit
Forward Voltage	VF	IF=50mA		1.50	1.70	V
Reverse Current	IR	VR=5V			10	uA
Total Radiated Power*	PO	IF=50mA	18	22		mW
Radiant Intensity**	IE	IF=50mA	15	25		mW/sr
Peak wavelength	λP	IF=50mA	820	830	840	nm
Half Width	$\Delta\lambda$	IF=50mA		40		nm
Viewing Half Angle	$\theta 1/2$	IF=50mA		± 18		deg
Rise Time	tr	IF=50mA		25		ns
Fall Time	tf	IF=50mA		20		ns

* Measured by Photodyne #500

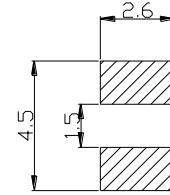
** Measured by Tektronix J-6512



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

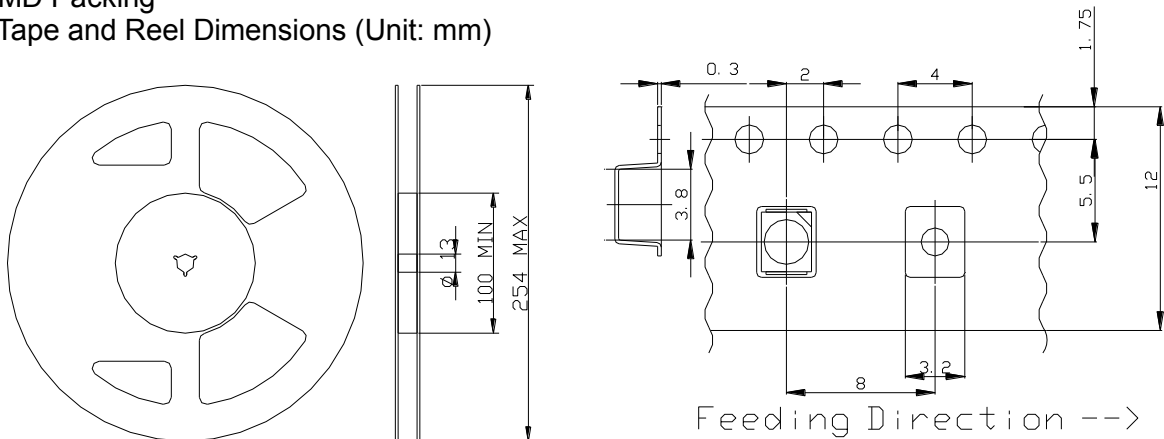


Recommended Land Layout (Unit: mm)



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.