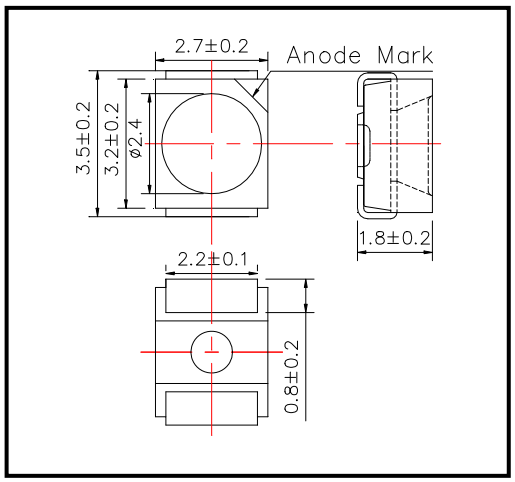
Lead (Pb) Free Product – RoHS Compliant

SMT700

High Performance Infrared TOP IR LED

SMT700 consists of an AlGaAs LED mounted on the lead frame as TOP LED package and is sealed with epoxy resin.
It emits a spectral band of radiation at 700nm.

♦Outer dimension (Unit: mm)



♦Specifications

1) Product Name	TOP IR LED
2) Type No.	SMT700
3) Chip	
(1) Chip Material	AlGaAs
(2) Peak Wavelength	700nm typ.
4) Package	
(1) Lead Frame Die	Silver Plated
(2) Package Resin	PPA Resin
(3) Lens	Epoxy Resin

♦Absolute Maximum Rating

Item	Symbol	Maximum Rated Value	Unit	Ambient Temperature
Power Dissipation	P_D	100	mW	Ta=25°C
Forward Current	I_F	50	mA	Ta=25°C
Pulse Forward Current	I_{FP}	200	mA	Ta=25°C
Reverse Voltage	V_R	5	V	Ta=25°C
Operating Temperature	T_{OPR}	-20 ~ +80	°C	
Storage Temperature	T_{STG}	-30 ~ +80	°C	
Soldering Temperature	T_{SOL}	250	°C	

‡Pulse Forward Current condition: Duty=1% and Pulse Width=10us.
‡Soldering condition: Soldering condition must be completed within 5 seconds at 250°C

♦Electro-Optical Characteristics [Ta=25°C]

Item	Symbol	Condition	Minimum	Typical	Maximum	Unit
Forward Voltage	V_F	I_F=20mA		1.90	2.30	V
Reverse Current	I_R	V_R=5V			10	uA
Total Radiated Power	P_O	I_F=20mA	1.5	3.0		mW
Radiant Intensity	I_E	I_F=20mA	1.0	2.0		mW/sr
Peak Wavelength	λ_P	I_F=20mA		700		nm
Half Width	$\Delta\lambda$	I_F=20mA		20		nm
Viewing Half Angle	$\theta_{1/2}$	I_F=20mA		±55		deg.
Rise Time	tr	I_F=20mA		80		ns
Fall Time	tf	I_F=20mA		80		ns

‡Total Radiated Power is measured by Photodyne #500
‡Radiant Intensity is measured by Tektronix J-6512.

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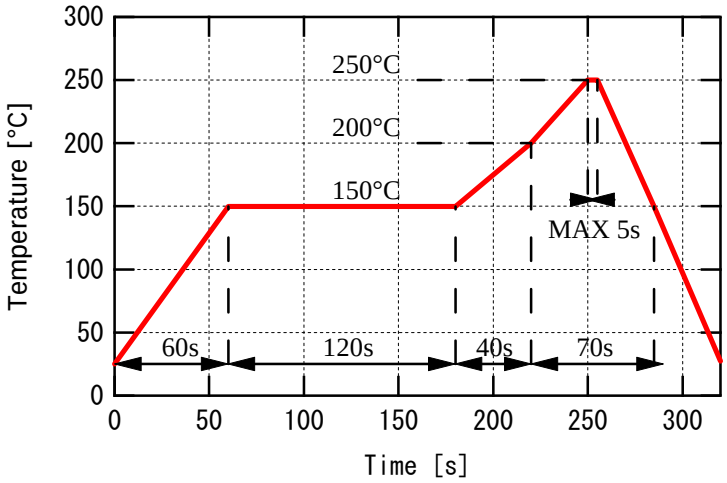
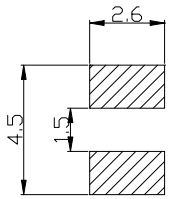
♦SMD Application

IR-Reflow Soldering Profile for lead free soldering



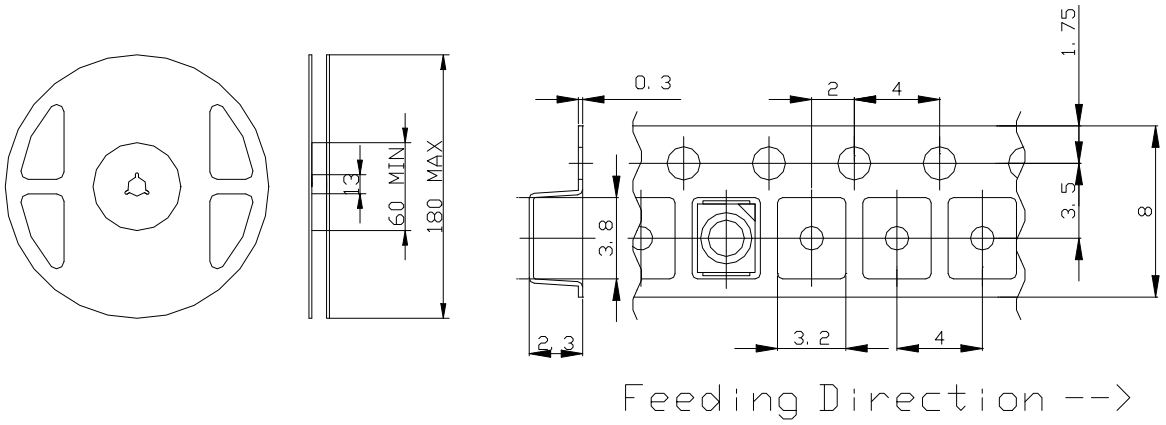
Recommended Land Layout (Unit: mm)



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.

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