

SMT750-23

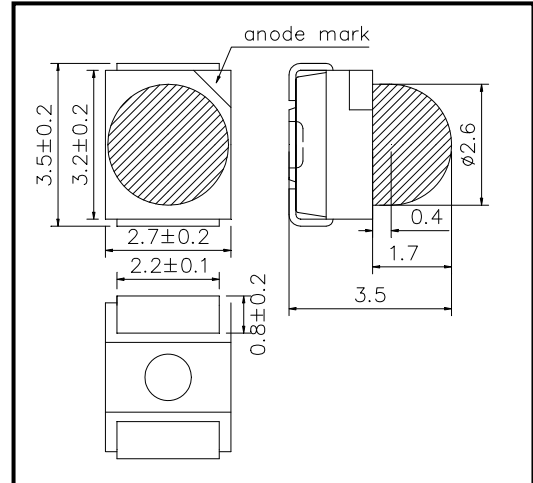
Infrared TOP IR LED with lens

SMT750-23 consists of an AlGaAs LED mounted on the lead frame as TOP LED package with epoxy resin lens and is 35mW/sr typical. It emits a spectral band of radiation at 750nm.

◆ Outer dimension (Unit:mm)

◆ Specifications

1) Product Name	TOP IR LED with lens
2) Type No.	SMT750-23
3) Chip	
(1) Chip Material	AlGaAs
(2) Peak Wavelength	750nm typ.
4) Package	
(1) Lead Frame Die	Silver Plated
(2) Package Resin	PPA Resin
(3) Lens	Epoxy Resin
(4) Diameter	Φ2.6mm



◆ Absolute Maximum Rating

Item	Symbol	Maximum Rated Value	Unit	Ambient Temperature
Power Dissipation	P_D	190	mW	$T_a=25^{\circ}\text{C}$
Forward Current	I_F	100	mA	$T_a=25^{\circ}\text{C}$
Pulse Forward Current	I_{FP}	500	mA	$T_a=25^{\circ}\text{C}$
Reverse Voltage	V_R	5	V	$T_a=25^{\circ}\text{C}$
Junction Temperature	T_J	100	$^{\circ}\text{C}$	
Thermal Resistance	R_{thjp}	200	K/W	
Operating Temperature	T_{OPR}	-30 ~ +80	$^{\circ}\text{C}$	
Storage Temperature	T_{STG}	-40 ~ +80	$^{\circ}\text{C}$	
Soldering Temperature	T_{SOL}	250	$^{\circ}\text{C}$	

‡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 [$T_a=25^{\circ}\text{C}$]

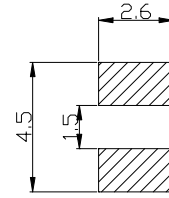
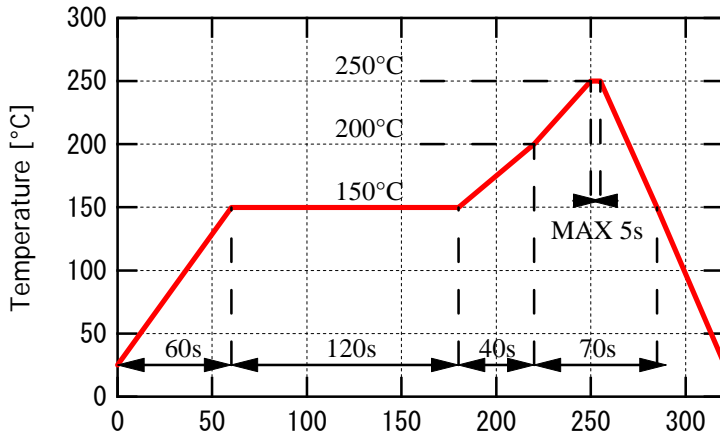
Item	Symbol	Condition	Minimum	Typical	Maximum	Unit
Forward Voltage	V_F	$I_F=50\text{mA}$		1.85	2.00	V
Reverse Current	I_R	$V_R=5\text{V}$			10	μA
Total Radiated Power	P_O	$I_F=50\text{mA}$	12.0	20.0		mW
Radiant Intensity	I_E	$I_F=50\text{mA}$	15.0	35.0		mW/sr
Peak Wavelength	λ_P	$I_F=50\text{mA}$	735	750	765	nm
Half Width	$\Delta\lambda$	$I_F=50\text{mA}$		35		nm
Viewing Half Angle	$\theta_{1/2}$	$I_F=50\text{mA}$		±15		deg.
Rise Time	t_r	$I_F=50\text{mA}$		80		ns
Fall Time	t_f	$I_F=50\text{mA}$		80		ns

‡Total Radiated Power is measured by Photodyne #500

‡Radiant Intensity is measured by Tektronix J-6512.

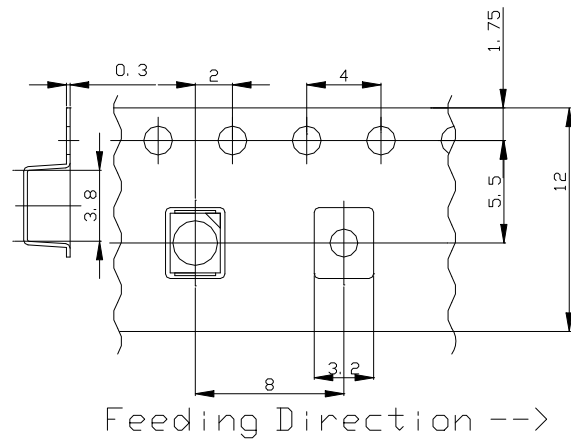
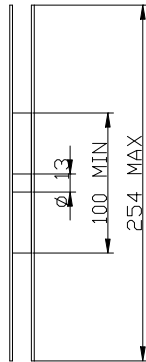
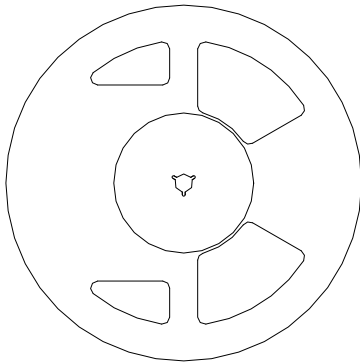
◆ SMD Application
Recommended reflow soldering profile

Recommended Land Layout (Unit: mm)



Don't put stress on SMD and PCB 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.