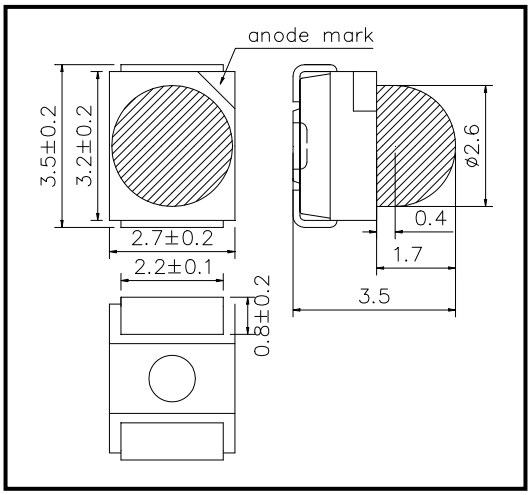
Lead (Pb) Free Product – RoHS Compliant

SMT670-23 High Performance Red color TOP LED

SMT670-23 consists of an AlGaAs LED mounted on the lead frame as TOP LED package with plastic ball lens and is 6mW typical of output power and 13mW/sr of radiant intensity. It emits a spectral band of radiation at 670nm.

♦Outer dimension (Unit: mm)



♦Specifications

1) Product Name	TOP LED
2) Type No.	SMT670-23
3) Chip	
(1) Chip Material	AlGaAs
(2) Peak Wavelength	670nm typ.
4) Package	
(1) Lead Frame Die	Silver Plated
(2) Package Resin	PPA Resin
(3) Lens	Epoxy Resin

♦Absolute Maximum Ratings

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
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	

‡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		1.80	2.30	V
Reverse Current	I_R	V_R=5V			10	uA
Total Radiated Power	P_O	I_F=20mA		6		mW
Radiant Intensity	I_E	I_F=20mA		13		mW/sr
Peak Wavelength	λ_P	I_F=20mA	660	670	680	nm
Half Width	$\Delta\lambda$	I_F=20mA		20		nm
Viewing Half Angle	$\theta_{1/2}$	I_F=20mA		±15		deg.

‡Total Radiated Power is measured by Photodyne #500
‡Brightness is measured by Tektronix J-16.

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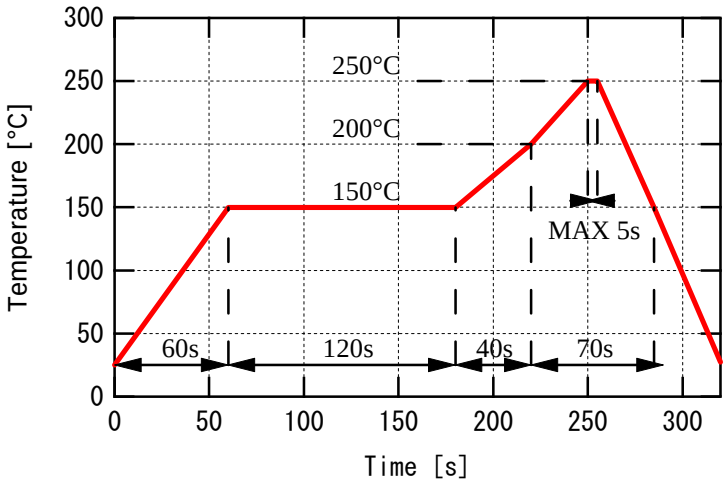
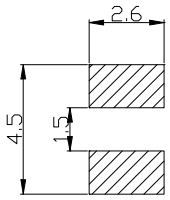
♦SMD Application

Recommended reflow soldering profile



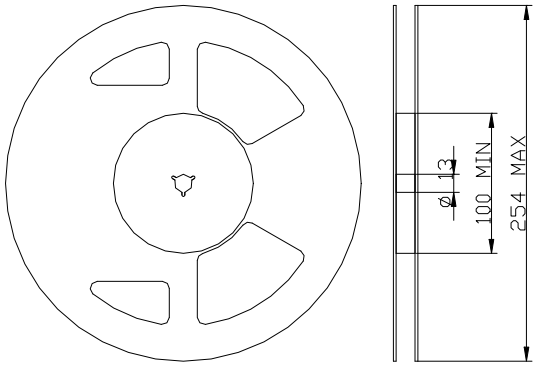
Recommended Land Layout (Unit: mm)

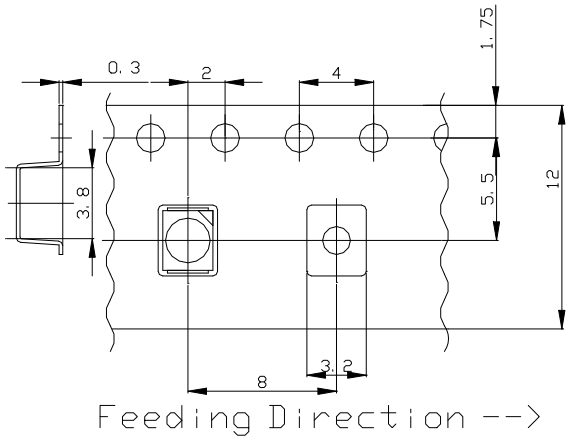


Don’t put stress on SMD and a circuit board after soldering.

♦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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