

# SMT670

High Performance Red color TOP LED

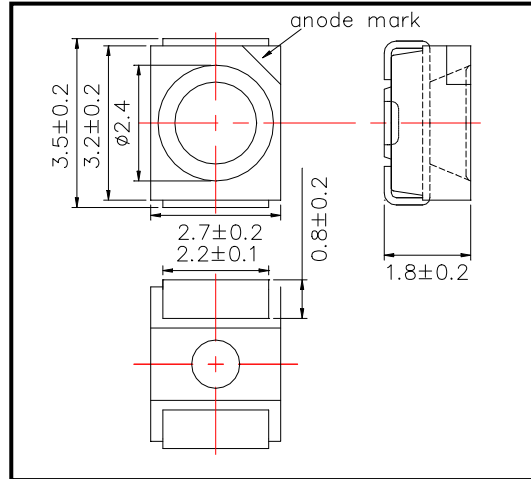
SMT670 consists of an AlGaAs LED mounted on the lead frame as TOP LED package and is 6mW of total radiated power.

It emits a spectral band of radiation at 670nm.

◆ Outer dimension (Unit: mm)

◆ Specifications

1) Product Name	TOP LED
2) Type No.	SMT670
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 <sub>D</sub>	100	mW	T <sub>a</sub> =25°C
Forward Current	I <sub>F</sub>	50	mA	T <sub>a</sub> =25°C
Reverse Voltage	V <sub>R</sub>	5	V	T <sub>a</sub> =25°C
Operating Temperature	T <sub>OPR</sub>	-20 ~ +80	°C	
Storage Temperature	T <sub>STG</sub>	-30 ~ +80	°C	
Soldering Temperature	T <sub>SOL</sub>	250	°C	

‡Soldering condition: Soldering condition must be completed within 5 seconds at 250°C

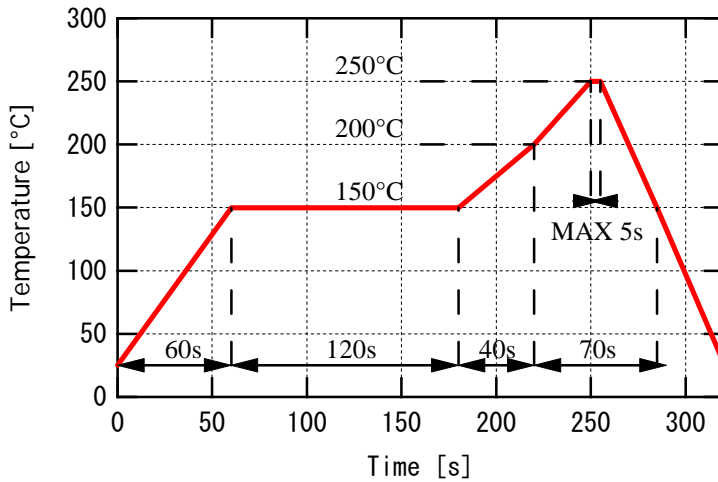
◆ Electro-Optical Characteristics [T<sub>a</sub>=25°C]

Item	Symbol	Condition	Minimum	Typical	Maximum	Unit
Forward Voltage	V <sub>F</sub>	I <sub>F</sub> =20mA		1.75	1.95	V
		I <sub>F</sub> =50mA		1.95	2.30	
Reverse Current	I <sub>R</sub>	V <sub>R</sub> =5V			10	μA
Total Radiated Power	P <sub>O</sub>	I <sub>F</sub> =20mA	4	6		mW
		I <sub>F</sub> =50mA	8	14		
Radiant Intensity	I <sub>E</sub>	I <sub>F</sub> =20mA		3		mW/sr
		I <sub>F</sub> =50mA		6.5		
Peak Wavelength	λ <sub>P</sub>	I <sub>F</sub> =20mA	660	670	680	nm
Half Width	Δλ	I <sub>F</sub> =20mA		20		nm
Viewing Half Angle	θ <sub>1/2</sub>	I <sub>F</sub> =20mA		±55		deg.

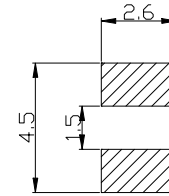
‡Total Radiated Power is measured by Photodyne #500

‡Brightness is measured by Tektronix J-16.

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

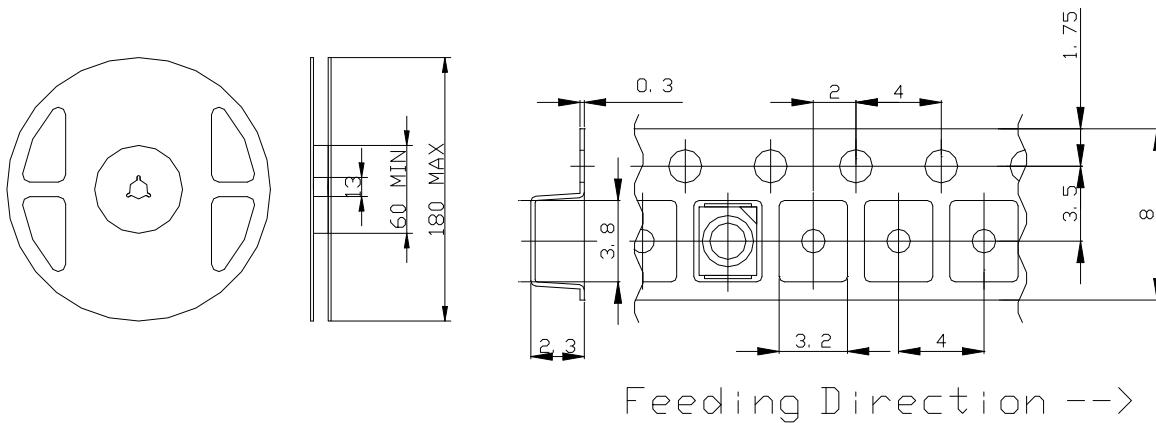


Recommended Land Layout (Unit: mm)



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.