

PRELIMINARY

Lead (Pb) Free Product RoHS compliant

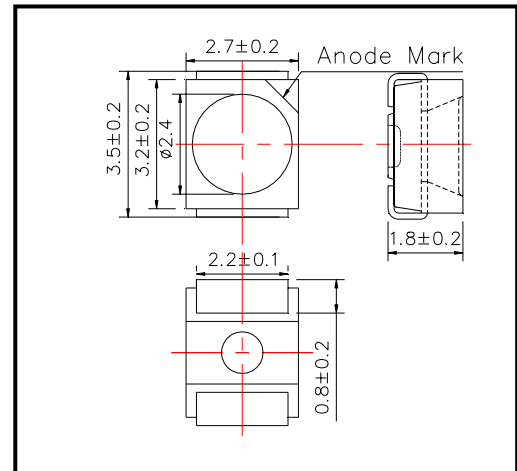
SMT680

High Performance Infrared TOP IR LED

SMT680 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 680nm.

◆ Outer dimension (Unit:mm)



◆ Specifications

1) Product Name	TOP IR LED
2) Type No.	SMT680
3) Chip	
(1) Chip Material	AlGaAs
(2) Peak Wavelength	680nm 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	PD	100	mW	Ta=25°C
Forward Current	IF	50	mA	Ta=25°C
Pulse Forward Current	IFP	200	mA	Ta=25°C
Reverse Voltage	VR	5	V	Ta=25°C
Operating Temperature	TOPR	-20 ~ +80	°C	
Storage Temperature	TSTG	-30 ~ +80	°C	
Soldering Temperature	TSOL	240	°C	

‡Pulse Forward Current condition: Duty=1% and Pulse Width=10us.

‡Soldering condition: Soldering condition must be completed within 3 seconds at 230°C

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

Item	Symbol	Condition	Minimum	Typical	Maximum	Unit
Forward Voltage	VF	IF=50mA		1.90	2.30	V
Reverse Current	IR	VR=5V			10	uA
Total Radiated Power	PO	IF=50mA	1.5	3.0		mW
Radiant Intensity	IE	IF=50mA	1.0	2.0		mW/sr
Peak Wavelength	λ_P	IF=50mA		680		nm
Half Width	$\Delta\lambda$	IF=50mA		20		nm
Viewing Half Angle	$\theta_{1/2}$	IF=50mA		±55		deg.
Rise Time	tr	IF=50mA		80		ns
Fall Time	tf	IF=50mA		80		ns

‡Total Radiated Power is measured by Photodyne #500

‡Radiant Intensity is measured by Tektronix J-6512.