

Lead (Pb) Free Product RoHS compliant

SMC680

High Performance infrared SMD LED on ceramics

SMC680 consists of an AlGaAs LED mounted on the ceramics package and is sealed with silicone or epoxy resin. It emits a spectral band of radiation at 680nm.

◆ Specifications

1) Product Name	SMD type infrared LED
2) Type No.	SMC680
3) Chip	
(1) Chip Material	AlGaAs
(2) Peak Wavelength	680nm typ.
4) Package	
(1) Package	Ceramics
(2) Lens	Silicone or Epoxy resin

◆ Absolute Maximum Ratings

Item	Symbol	Maximum Rated Value	Unit	Ambient Temperature
Power Dissipation	P _D	110	mW	T _a =25°C
Forward Current	I _F	50	mA	T _a =25°C
Pulse Forward Current	I _{FP}	200	mA	T _a =25°C
Reverse Voltage	V _R	5	V	T _a =25°C
Operating Temperature	T _{OPR}	-20 ~ +80	°C	
Storage Temperature	T _{STG}	-30 ~ +80	°C	
Soldering Temperature	T _{SOL}	240	°C	

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

‡Soldering condition: Soldering condition must be completed within 3 seconds at 240°C

◆ Electro-Optical Characteristics [T_a=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		680		nm
Half Width	Δλ	I _F =20mA		20		nm
Viewing Half Angle	θ _{1/2}	I _F =20mA		±55		deg.
Rise Time	t _r	I _F =20mA		80		ns
Fall Time	t _f	I _F =20mA		80		ns

‡Total Radiated Power is measured by Photodyne #500

‡Radiant Intensity is measured by Tektronix J-6512.

◆ Outer dimension (Unit : mm)

