

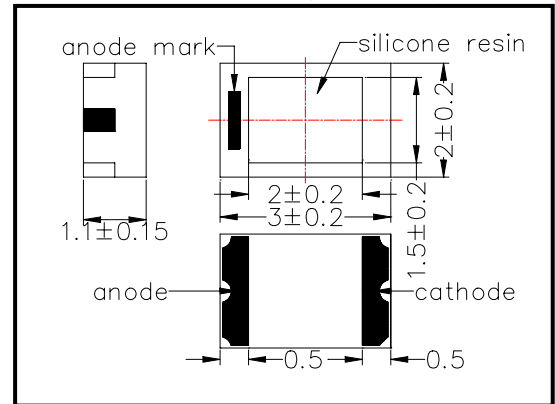
SMC810 High Performance infrared SMD LED on ceramics

SMC810 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 810nm.

◆ Specifications

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|---------------------|-------------------------|
| 1) Product Name | SMD type infrared LED |
| 2) Type No. | SMC810 |
| 3) Chip | |
| (1) Chip Material | AlGaAs |
| (2) Peak Wavelength | 810nm typ. |
| 4) Package | |
| (1) Package | Ceramics |
| (2) Lens | Silicone or Epoxy resin |

◆ Outer dimension (Unit: mm)



◆ Absolute Maximum Ratings

Item	Symbol	Maximum Rated Value	Unit	Ambient Temperature
Power Dissipation	P _D	190	mW	T _a =25°C
Forward Current	I _F	100	mA	T _a =25°C
Pulse Forward Current	I _{FP}	500	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 =50mA		1.60	1.80	V
Reverse Current	I _R	V _R =5V			10	uA
Total Radiated Power	P _O	I _F =50mA	5.0	10.0		mW
Radiant Intensity	I _E	I _F =50mA	3.0	5.0		mW/sr
Peak Wavelength	λ _P	I _F =50mA		810		nm
Half Width	Δλ	I _F =50mA		35		nm
Viewing Half Angle	θ _{1/2}	I _F =50mA		±55		deg.
Rise Time	t _r	I _F =50mA		60		ns
Fall Time	t _f	I _F =50mA		40		ns

‡Total Radiated Power is measured by Photodyne #500

‡Radiant Intensity is measured by Tektronix J-6512.