

Lead (Pb) Free Product RoHS compliant

# SMC940

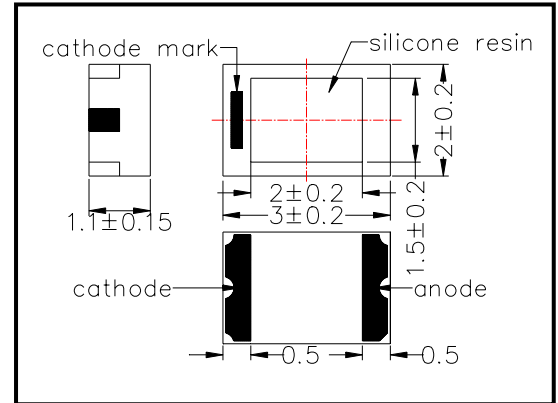
High Performance infrared SMD LED on ceramics

SMC940 consists of a GaAs LED mounted on the ceramics package and is sealed with silicone or epoxy resin. It emits a spectral band of radiation at 940nm.

### ◆ Specifications

- |                     |                         |
|---------------------|-------------------------|
| 1) Product Name     | SMD type IR LED         |
| 2) Type No.         | SMC940                  |
| 3) Chip             |                         |
| (1) Chip Material   | GaAs                    |
| (2) Peak Wavelength | 940nm 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 <sub>D</sub>	140	mW	T <sub>a</sub> =25°C
Forward Current	I <sub>F</sub>	100	mA	T <sub>a</sub> =25°C
Pulse Forward Current	I <sub>FP</sub>	500	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>	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<sub>a</sub>=25°C]

Item	Symbol	Condition	Minimum	Typical	Maximum	Unit
Forward Voltage	V <sub>F</sub>	I <sub>F</sub> =50mA		1.30	1.45	V
Reverse Current	I <sub>R</sub>	V <sub>R</sub> =5V			10	uA
Total Radiated Power	P <sub>O</sub>	I <sub>F</sub> =50mA	5.0	10.0		mW
Radiant Intensity	I <sub>E</sub>	I <sub>F</sub> =50mA		4.0		mW/sr
Peak Wavelength	λ <sub>P</sub>	I <sub>F</sub> =50mA	930	940	950	nm
Half Width	Δλ	I <sub>F</sub> =50mA		50		nm
Viewing Half Angle	θ <sub>1/2</sub>	I <sub>F</sub> =50mA		±55		deg.
Rise Time	t <sub>r</sub>	I <sub>F</sub> =50mA		1000		ns
Fall Time	t <sub>f</sub>	I <sub>F</sub> =50mA		500		ns

‡Total Radiated Power is measured by Photodyne #500

‡Radiant Intensity is measured by Tektronix J-6512.