

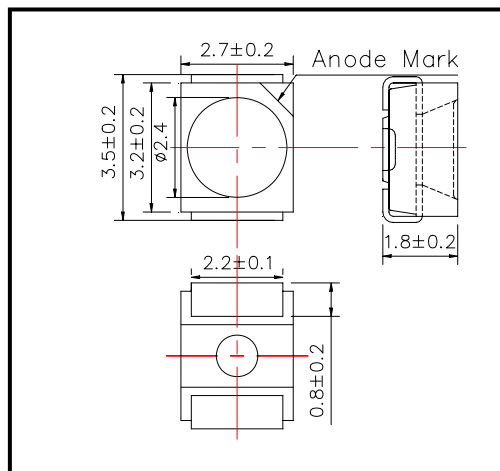
## SMT890 High Performance Infrared TOP IR LED

SMT890 consists of an AlGaAs LED mounted on the lead frame as TOP LED package and is 8mW typical of output power. It emits a spectral band of radiation at 880nm.

◆Outer dimension (Unit: mm)

◆Specifications

- |                     |               |
|---------------------|---------------|
| 1) Product Name     | TOP IR LED    |
| 2) Type No.         | SMT890        |
| 3) Chip             |               |
| (1) Chip Material   | AlGaAs        |
| (2) Peak Wavelength | 880nm typ.    |
| 4) Package          |               |
| (1) Lead Frame Die  | Silver Plated |
| (2) Package Resin   | PPA Resin     |
| (3) Lens            | Epoxy Resin   |



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

Item	Symbol	Maximum Rated Value	Unit	Ambient Temperature
Power Dissipation	P <sub>D</sub>	150	mW	Ta=25°C
Forward Current	I <sub>F</sub>	100	mA	Ta=25°C
Pulse Forward Current	I <sub>FP</sub>	500	mA	Ta=25°C
Reverse Voltage	V <sub>R</sub>	5	V	Ta=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 230°C

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

Item	Symbol	Condition	Minimum	Typical	Maximum	Unit
Forward Voltage	V <sub>F</sub>	I <sub>F</sub> =50mA		1.45	1.70	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	4.0	8.0		mW
Radiant Intensity	I <sub>E</sub>	I <sub>F</sub> =50mA	2.0	4.0		mW/sr
Peak Wavelength	λ <sub>P</sub>	I <sub>F</sub> =50mA	865	880	895	nm
Half Width	Δλ	I <sub>F</sub> =50mA		75		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		800		ns
Fall Time	t <sub>f</sub>	I <sub>F</sub> =50mA		400		ns

‡Total Radiated Power is measured by Photodyne #500

‡Radiant Intensity is measured by Tektronix J-6512.