

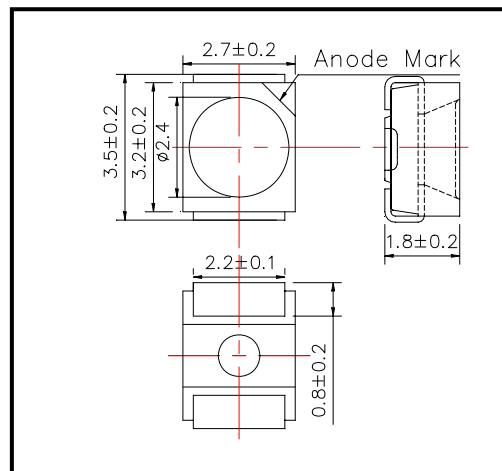
## SMT910 High Performance Infrared TOP IR LED

SMT910 consists of an AlGaAs LED mounted on the lead frame as TOP LED package and is 2.5mW typical of output power. It emits a spectral band of radiation at 910nm.

◆Outer dimension(Unit:mm)

◆Specifications

- |                     |               |
|---------------------|---------------|
| 1) Product Name     | TOP IR LED    |
| 2) Type No.         | SMT910        |
| 3) Chip             |               |
| (1) Chip Material   | AlGaAs        |
| (2) Peak Wavelength | 910nm 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     | P <sub>D</sub>   | 160                 | 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 230°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    | 1.50    | 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 | 1.5     | 2.5     |         | mW    |
| Radiant Intensity    | I <sub>E</sub>   | I <sub>F</sub> =50mA |         | 2.0     |         | mW/sr |
| Peak Wavelength      | λ <sub>P</sub>   | I <sub>F</sub> =50mA | 900     | 910     | 930     | nm    |
| Half Width           | Δλ               | I <sub>F</sub> =50mA |         | 60      |         | 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 |         | 400     |         | ns    |

‡Total Radiated Power is measured by Photodyne #500

‡Radiant Intensity is measured by Tektronix J-6512.