

tentative

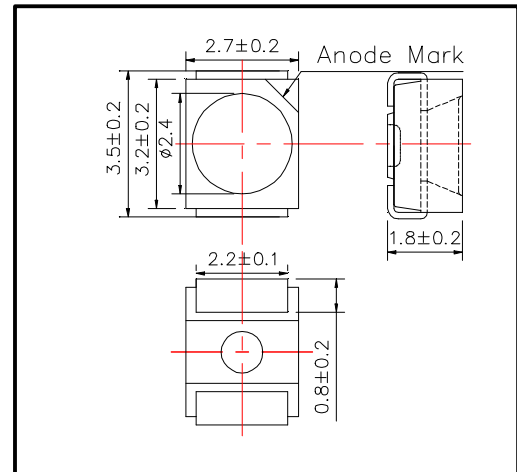
# SMT700

High Performance Infrared TOP IR LED

SMT700 consists of an AlGaAs LED mounted on the lead frame as TOP LED package and is sealed with epoxy resin.

It emits a spectral band of radiation at 700nm.

Outer dimension(Unit:mm)



## Specifications

- |                     |               |
|---------------------|---------------|
| 1) Product Name     | TOP IR LED    |
| 2) Type No.         | SMT700        |
| 3) Chip             |               |
| (1) Chip Material   | AlGaAs        |
| (2) Peak Wavelength | 700nm 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>   | 100                 | mW   | T <sub>a</sub> =25°C |
| Forward Current       | I <sub>F</sub>   | 50                  | mA   | T <sub>a</sub> =25°C |
| Pulse Forward Current | I <sub>FP</sub>  | 200                 | 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 260°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 |         | 1.90    | 2.30    | 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     | 3.0     |         | mW    |
| Radiant Intensity    | I <sub>E</sub>   | I <sub>F</sub> =50mA | 1.0     | 2.0     |         | mW/sr |
| Peak Wavelength      | λ <sub>P</sub>   | I <sub>F</sub> =50mA |         | 700     |         | nm    |
| Half Width           | Δλ               | I <sub>F</sub> =50mA |         | 20      |         | 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 |         | 80      |         | ns    |
| Fall Time            | t <sub>f</sub>   | I <sub>F</sub> =50mA |         | 80      |         | ns    |

‡Total Radiated Power is measured by Photodyne #500

‡Radiant Intensity is measured by Tektronix J-6512.

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