

# SMT760

High Performance Infrared TOP IR LED

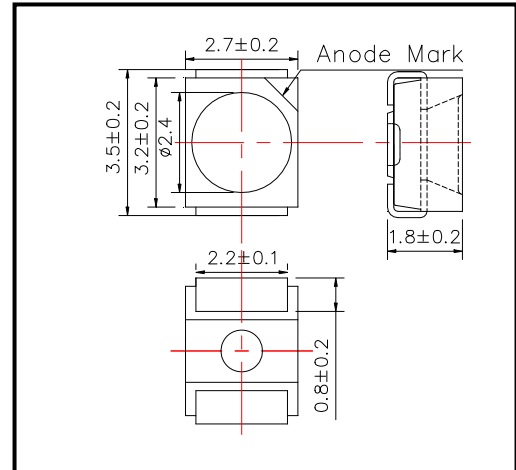
SMT760 consists of an AlGaAs LED mounted on the lead frame as TOP LED package and is 10mW typical of output power.

It emits a spectral band of radiation at 760nm.

### ◆ Specifications

|                     |               |
|---------------------|---------------|
| 1) Product Name     | TOP IR LED    |
| 2) Type No.         | SMT760        |
| 3) Chip             |               |
| (1) Chip Material   | AlGaAs        |
| (2) Peak Wavelength | 760nm typ.    |
| 4) Package          |               |
| (1) Lead Frame Die  | Silver Plated |
| (2) Package Resin   | PPA Resin     |
| (3) Lens            | Epoxy Resin   |

### ◆ Outer dimension (Unit:mm)



### ◆ Absolute Maximum Rating

| Item                  | Symbol           | Maximum Rated Value | Unit | Ambient Temperature  |
|-----------------------|------------------|---------------------|------|----------------------|
| Power Dissipation     | P <sub>D</sub>   | 190                 | 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> | -40 ~ +80           | °C   |                      |
| Storage Temperature   | T <sub>STG</sub> | -40 ~ +80           | °C   |                      |
| Soldering Temperature | T <sub>SOL</sub> | 250                 | °C   |                      |

‡Pulse Forward Current condition: Duty=1% and Pulse Width=10us.

‡Soldering condition: Soldering condition must be completed within 5 seconds at 250°C

### ◆ Electro-Optical Characteristics [T<sub>a</sub>=25°C]

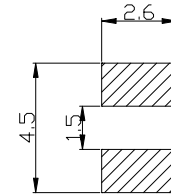
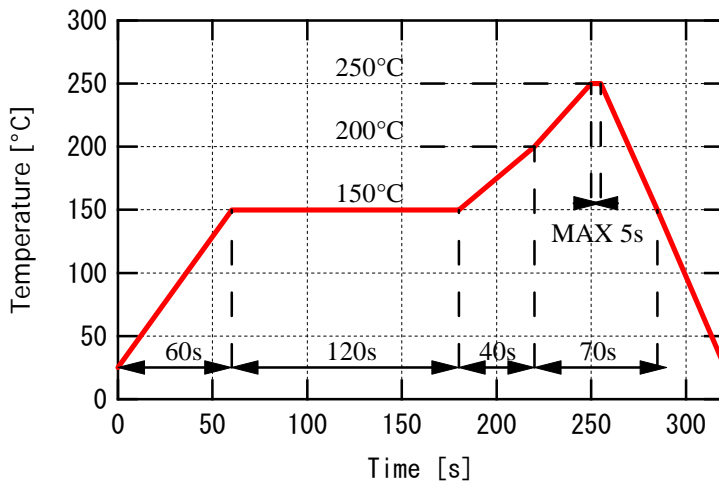
| Item                 | Symbol           | Condition            | Minimum | Typical | Maximum | Unit  |
|----------------------|------------------|----------------------|---------|---------|---------|-------|
| Forward Voltage      | V <sub>F</sub>   | I <sub>F</sub> =50mA |         | 1.75    | 1.95    | 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 | 2.0     | 5.0     |         | mW/sr |
| Peak Wavelength      | λ <sub>P</sub>   | I <sub>F</sub> =50mA |         | 760     |         | nm    |
| Half Width           | Δλ               | I <sub>F</sub> =50mA |         | 35      |         | 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.

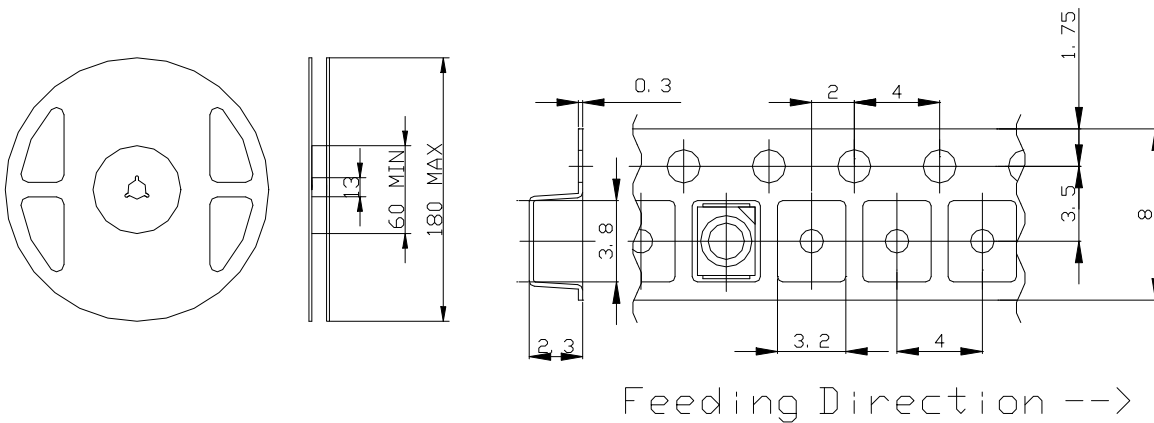
◆ SMD Application  
IR-Reflow Soldering Profile for lead free soldering

Recommended Land Layout (Unit: mm)



Don't put stress on SMD and a circuit board after soldering.

◆ SMD Packing  
Tape and Reel Dimensions (Unit: mm)



◆ Wrapping

Moisture barrier bag aluminum laminated film with a desiccant to keep out the moisture absorption during the transportation and storage.