

# L1070-03 Infrared LED Lamp

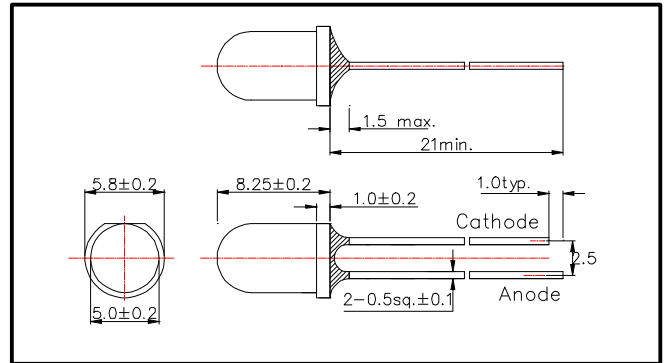
L1070-03 is a GaAs LED mounted on a lead frame with a clear epoxy lens.

On forward bias it emits a spectral band of radiation, which peaks at 1070nm.

## Specifications

- 1) Product Name Infrared LED Lamp
- 2) Type No. L1070-03
- 3) Chip
  - (1) Chip Material GaAs
  - (2) Peak Wavelength 1070nm typ.
- 4) Package
  - (1) Type f5mm clear molding
  - (2) Resin Material Epoxy Resin
  - (3) Lead Frame Soldered

## Outer dimension (Unit: mm)



## Absolute Maximum Ratings

| Item                  | Symbol           | Maximum Rated Value | Unit | Ambient Temperature  |
|-----------------------|------------------|---------------------|------|----------------------|
| Power Dissipation     | P <sub>D</sub>   | 130                 | 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> | -30 ~ +85           | °C   |                      |
| Storage Temperature   | T <sub>STG</sub> | -30 ~ +100          | °C   |                      |
| Soldering Temperature | T <sub>SOL</sub> | 260                 | °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 |         | 1.25    | 1.55    | V    |
| Reverse Current    | I <sub>R</sub>   | V <sub>R</sub> =5V   |         |         | 10      | uA   |
| Radiated Power     | P <sub>O</sub>   | I <sub>F</sub> =50mA | 1.0     | 2.5     |         | mW   |
| Peak Wavelength    | λ <sub>P</sub>   | I <sub>F</sub> =50mA | 1020    | 1070    | 1120    | nm   |
| Half Width         | Δλ               | I <sub>F</sub> =50mA |         | 55      |         | nm   |
| Viewing Half Angle | Q <sub>1/2</sub> | I <sub>F</sub> =50mA |         | ±15     |         | deg. |
| Rise Time          | t <sub>r</sub>   | I <sub>F</sub> =50mA |         | 10      |         | ns   |
| Fall Time          | t <sub>f</sub>   | I <sub>F</sub> =50mA |         | 10      |         | ns   |

‡ Total Radiated Power is measured by Photodyne #500

(‡ Radiated Power is measured by Ando Optical Multi Meter AQ2140 & AQ2742)