

## L940D-02

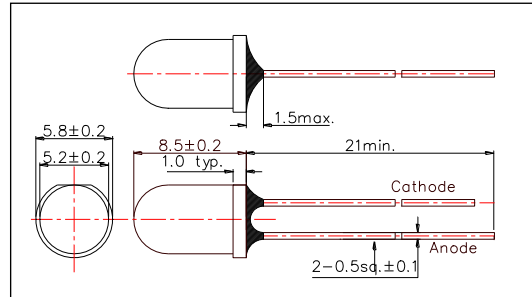
### Infrared LED Lamp

L940D-02 is an AlGaAs LED mounted on a lead frame with a clear epoxy lens. On forward bias it emits a spectral band of radiation which peaks at 940nm.

#### <Specifications>

1. Product Name: Infrared LED Lamp
2. Type Number: L940D-02
3. Chip:
  - Chip material: AlGaAs
  - Peak Wavelength: 940nm typ.
4. Package
  - Type: Φ5mm Clear Molding
  - Resin Material: Epoxy Resin
  - Lead Frame: Soldered (Lead Free)

Outer Dimension (Unit:mm)



| Absolute Maximum Ratings[Ta=25°C] |        |                     |      |
|-----------------------------------|--------|---------------------|------|
| Item                              | Symbol | Maximum Rated Value | Unit |
| Power Dissipation                 | PD     | 170                 | mW   |
| Forward Current                   | IF     | 100                 | mA   |
| Pulse Forward Current*            | IFP    | 1000                | mA   |
| Reverse Voltage                   | VR     | 5                   | V    |
| Junction Temperature              | Tj     | 120                 | °C   |
| Thermal Resistance                | Rthja  | 180                 | K/W  |
| Operating Temperature             | TOPR   | -40 ~ +100          | °C   |
| Storage Temperature               | TSTG   | -40 ~ +100          | °C   |
| Soldering Temperature**           | TSOL   | 250                 | °C   |

\* Duty=1% and Pulse Width=10us.

\*\* Soldering condition must be completed within 5 second at 250 °C.

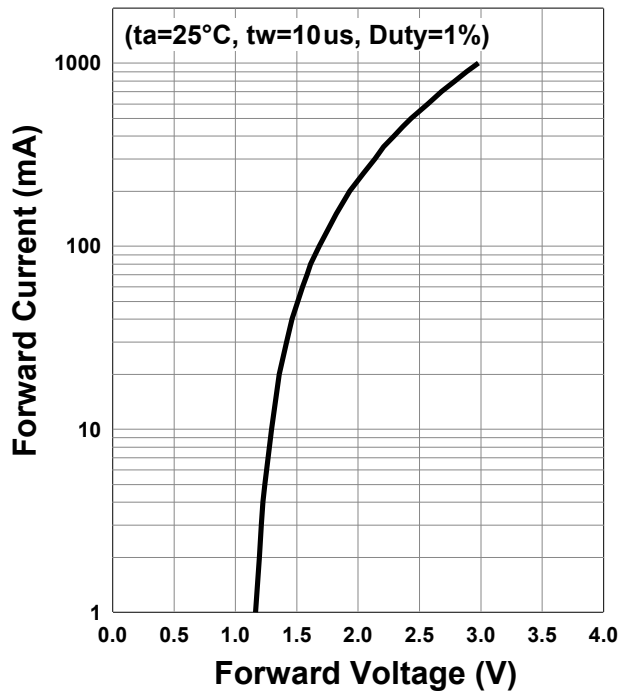
| Electro-Optical Characteristics [Ta=25°C ] |        |           |         |         |         |       |
|--------------------------------------------|--------|-----------|---------|---------|---------|-------|
| Item                                       | Symbol | Condition | Minimum | Typical | Maximum | Unit  |
| Forward Voltage                            | VF     | IF=50mA   |         | 1.5     | 1.7     | V     |
| Total Radiated Power*                      | PO     | IF=50mA   |         | 25      |         | mW    |
| Radiant Intensity**                        | IE     | IF=50mA   |         | 300     |         | mW/sr |
| Peak wavelength                            | λP     | IF=50mA   | 930     | 940     | 950     | nm    |
| Half Width                                 | Δλ     | IF=50mA   |         | 40      |         | nm    |
| Viewing Half Angle                         | θ1/2   | IF=50mA   |         | ±4      |         | deg   |
| Rise Time                                  | tr     | IF=50mA   |         | 22      |         | ns    |
| Fall Time                                  | tf     | IF=50mA   |         | 25      |         | ns    |

\* Measured by S3584-08

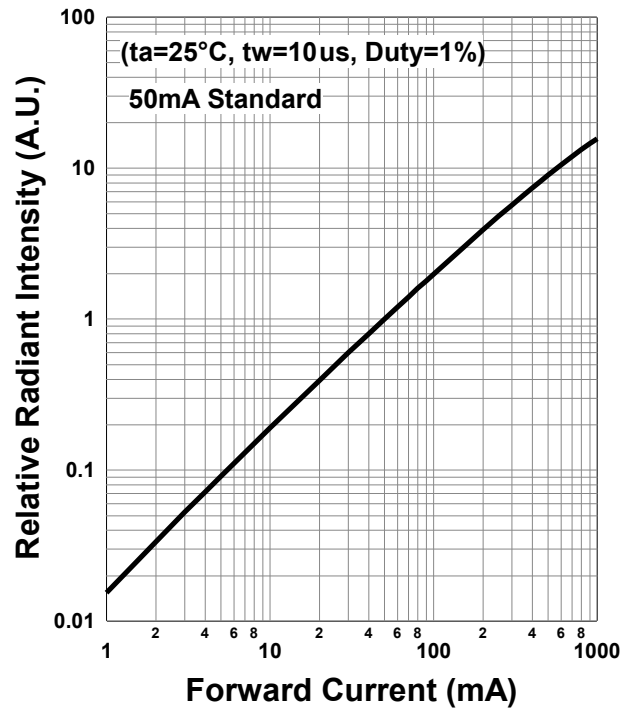
\*\* Measured by CIE127-2007 Condition B



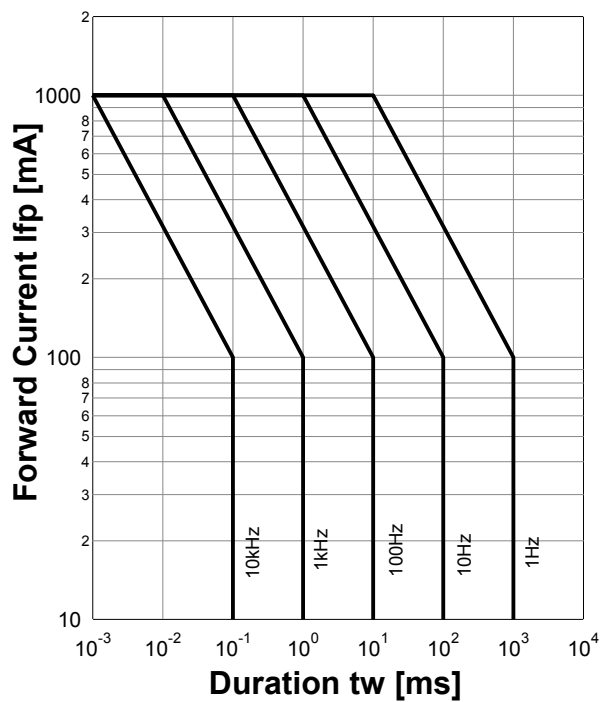
**Forward Current - Forward Voltage**



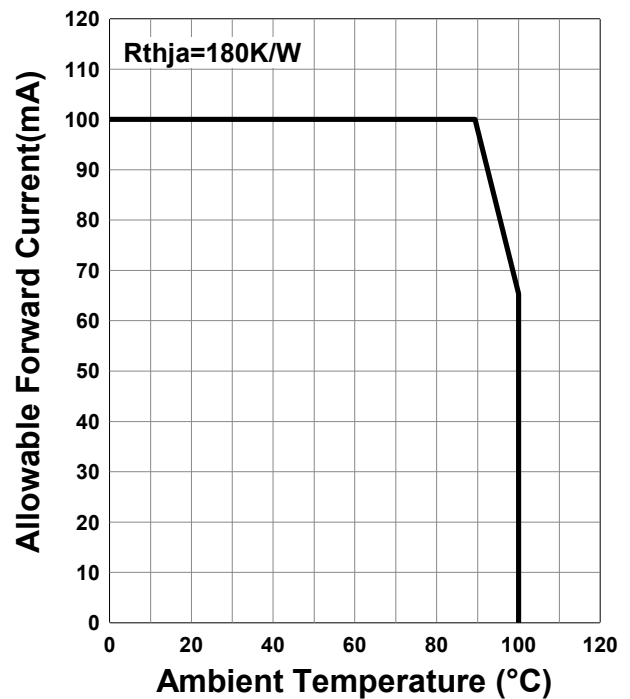
**Relative Radiant Intensity - Forward Current**

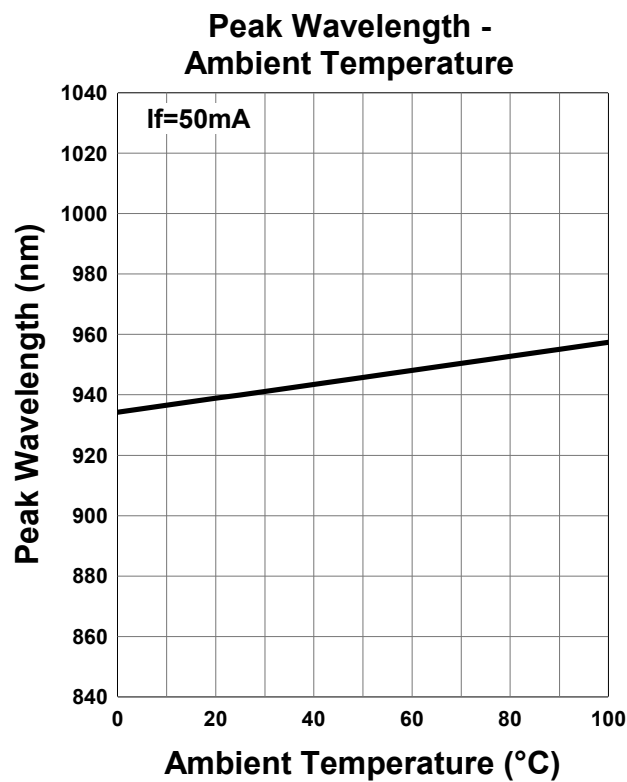
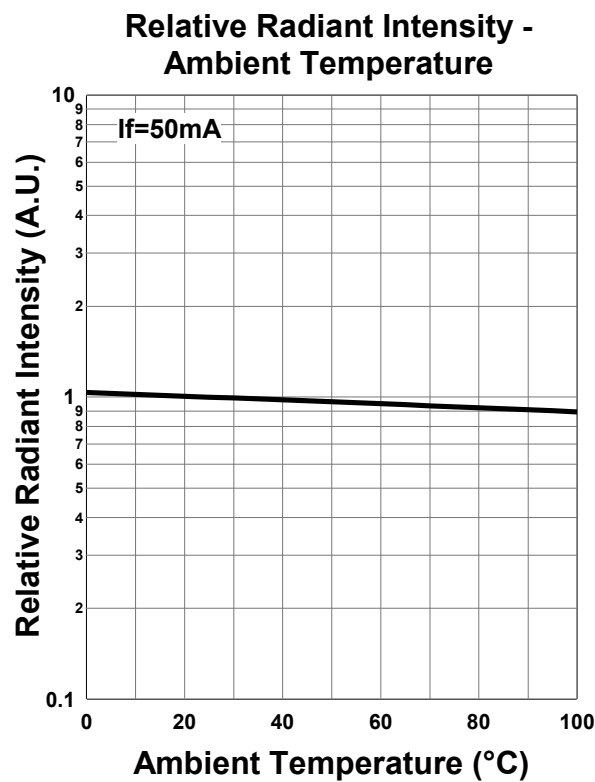
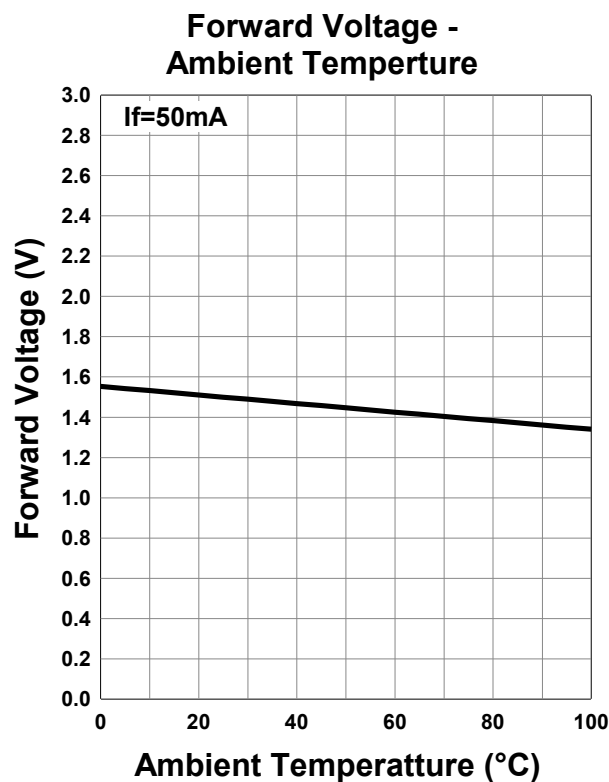


**Forward Current - Pulse Duration**

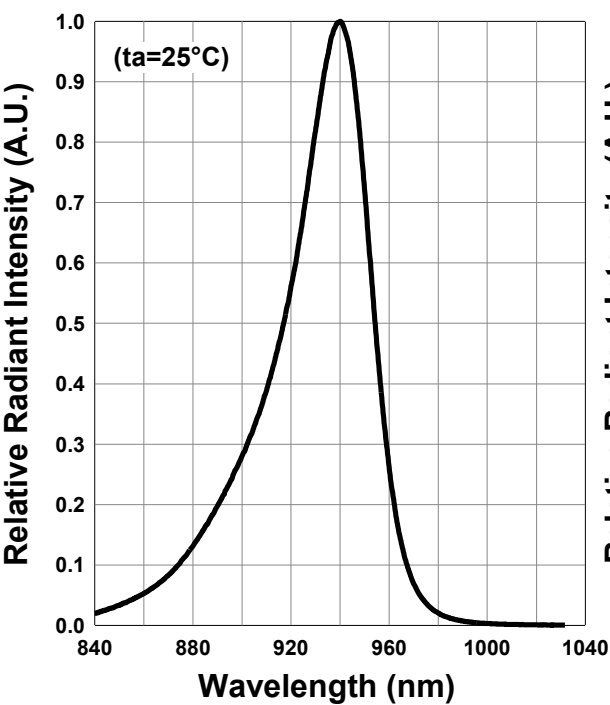


**Allowable Forward Current - Ambient Temperature**

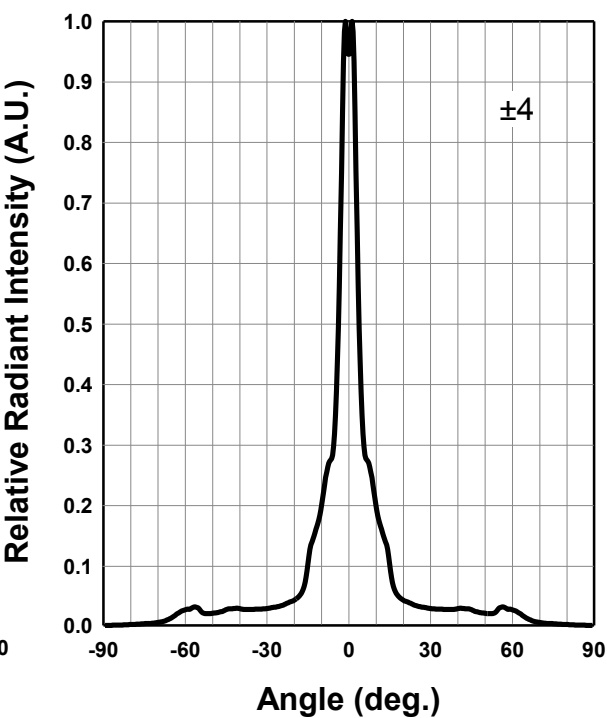




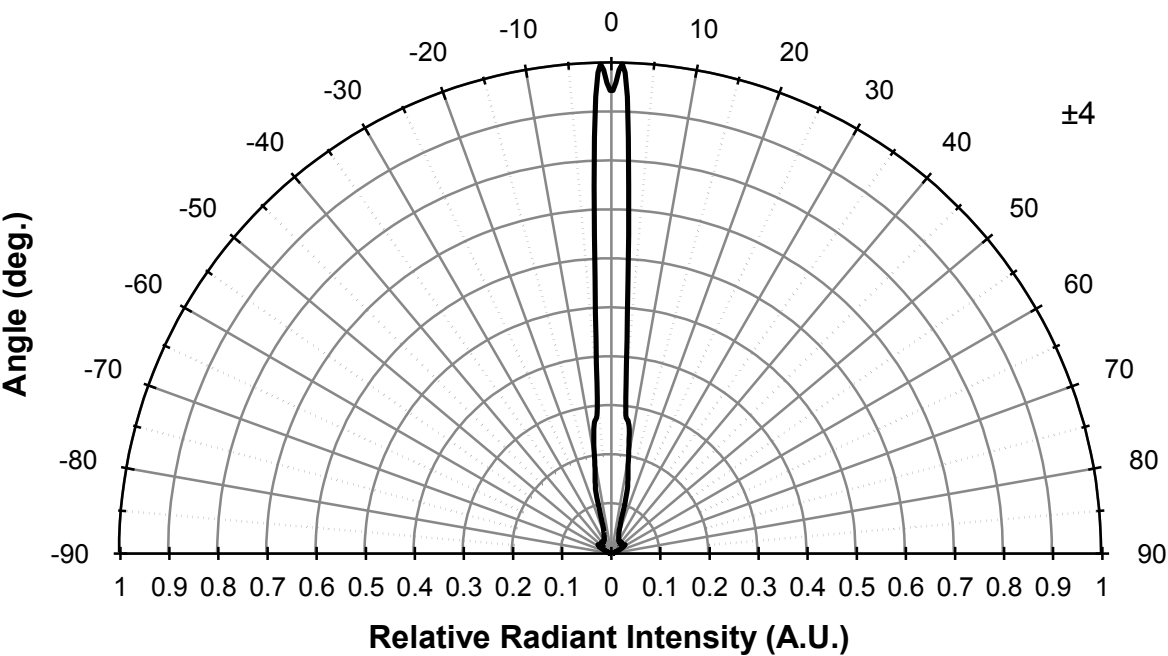
Relative Spectral Emission



Radiation Characteristics



Radiation Characteristics



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