

L770-03AU

Infrared LED Lamp

L770-03AU 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 770nm.

Features

- High Power Infrared LED
- Peak wavelength typ. 770 nm
- Very High radiant Intensity
- Emission angle $\pm 10^\circ$

Applications

- ETC LED Array
- Industrial emitters



Safety Advices

Depending on the application, these devices which emit infrared light may exceed over Accessible Emission Limit and cause the damage to the human eye.

Keep the safety precautions given in IEC 60825-1 and IEC 625471 before using.

Absolute Maximum Ratings

| Item | Symbol | Maximum Rated Value | Unit | Ambient Temperature |
|-----------------------|--------|---------------------|------|---------------------|
| Power Dissipation | PD | 190 | mW | Ta=25°C |
| Forward Current | IF | 100 | mA | Ta=25°C |
| Pulse Forward Current | IFP | 500 | mA | Ta=25°C |
| Reverse Voltage | VR | 5 | V | Ta=25°C |
| Operating Temperature | TOPR | -30~ +85 | °C | |
| Storage Temperature | TSTG | -40 ~ +100 | °C | |
| Soldering Temperature | TSOL | 265 | °C | |

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

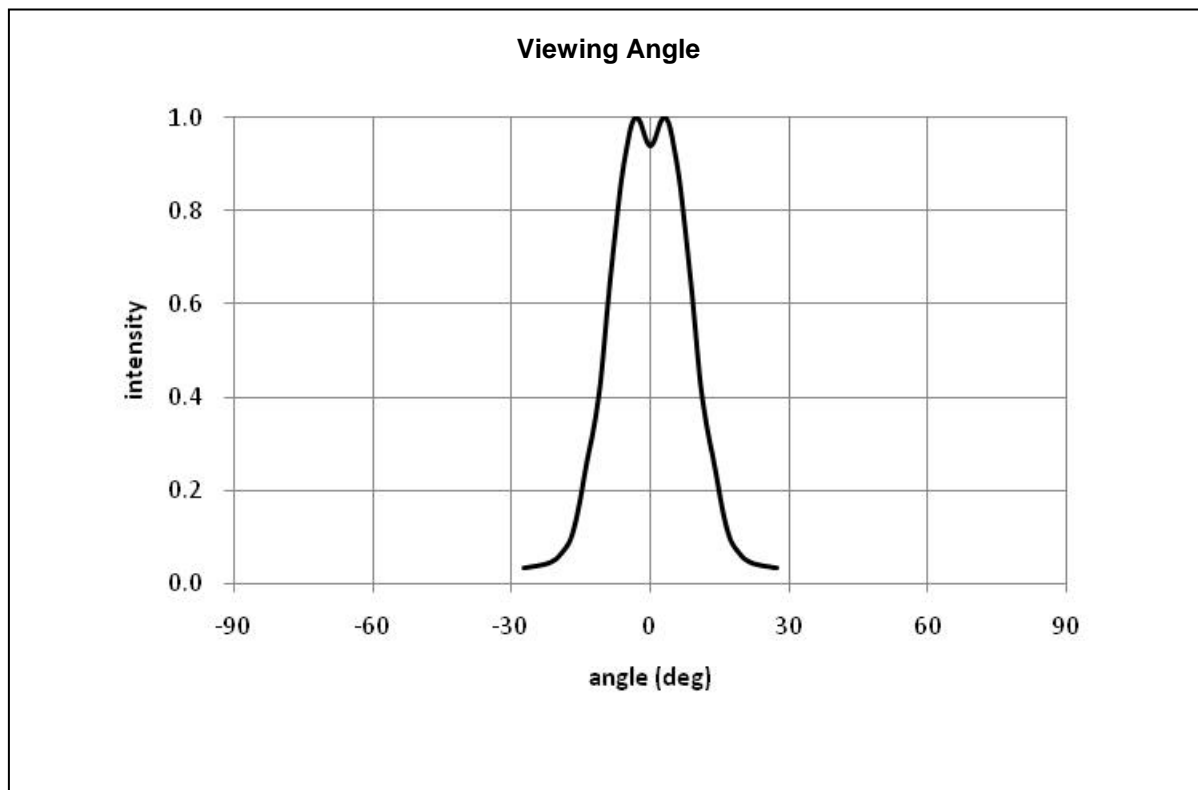
‡Soldering condition: Soldering condition must be completed within 3 seconds at 265°C

Electro-Optical Characteristics (Ta=25°C)

| Item | Symbol | Condition | Minimum | Typical | Maximum | Unit |
|----------------------|-----------------|-----------|---------|----------|---------|-------|
| Forward Voltage | VF | IF=50mA | | 1.7 | 2.0 | V |
| Reverse Current | IR | VR=5V | | | 10 | uA |
| Total Radiated Power | PO | IF=50mA | 15 | 20 | | mW |
| Radiant Intensity | IE | IF=50mA | | 100 | | mW/sr |
| Peak Wavelength | λP | IF=50mA | | 770 | | nm |
| Half Width | $\Delta\lambda$ | IF=50mA | | 30 | | nm |
| Viewing Half Angle | $\theta_{1/2}$ | IF=50mA | | ± 10 | | deg. |
| Rise Time | tr | IF=50mA | | 50 | | ns |
| Fall Time | tr | IF=50mA | | 25 | | ns |

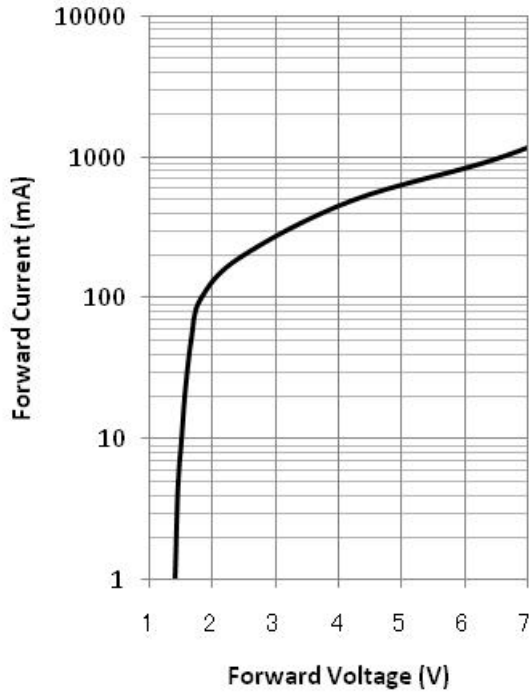
‡Total Radiated Power is measured by Photodyne #500.

‡Radiant Intensity is measured by Tektronix J-6512.



Forward current-Forward Voltage

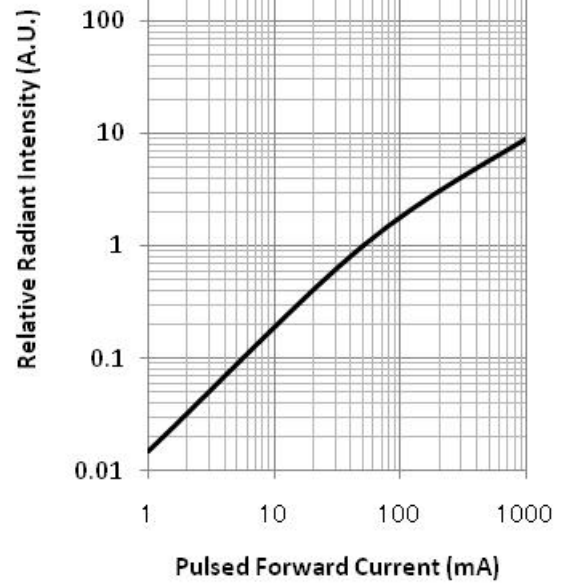
$T_a = 25^\circ\text{C}$, $t_w = 10\mu\text{s}$, Duty = 1%



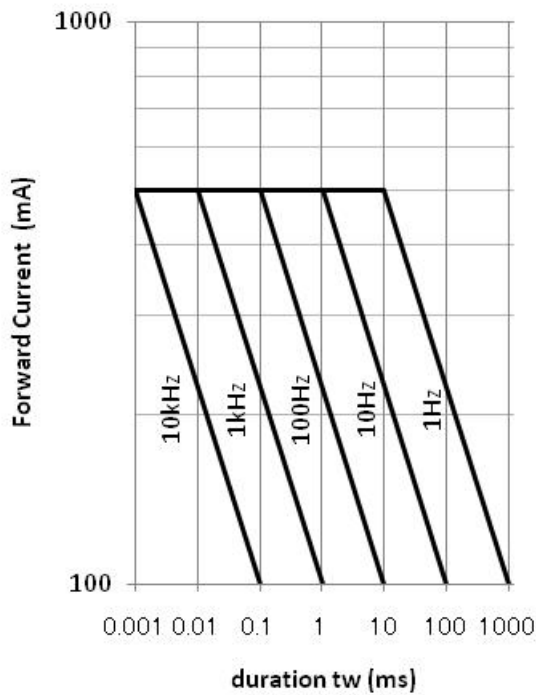
Relative Radiant Intensity - Pulsed Forward Current

$(T_a = 25^\circ\text{C}, t_w = 10\mu\text{s}, \text{Duty} = 1\%)$

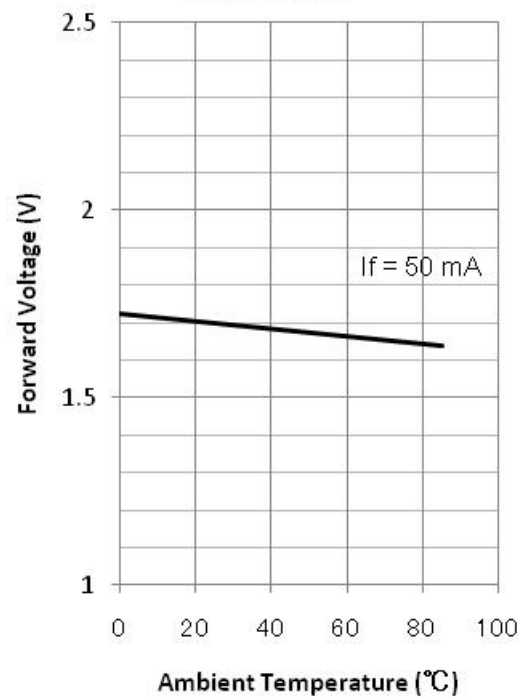
50mA standard

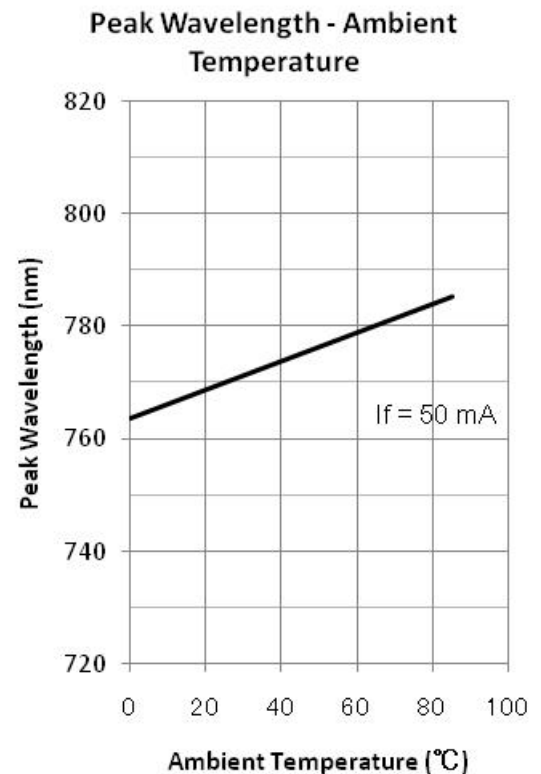
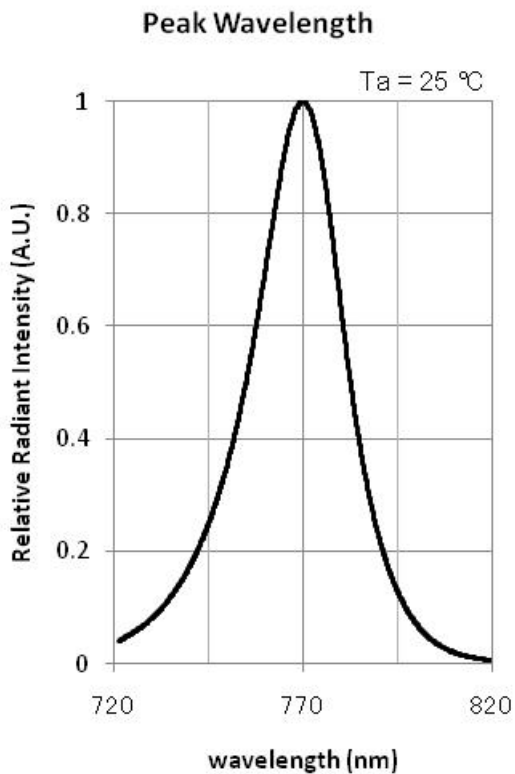
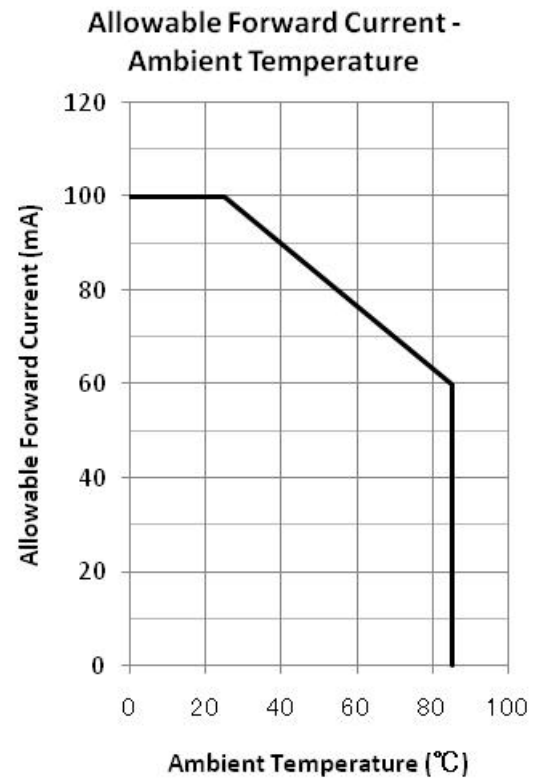
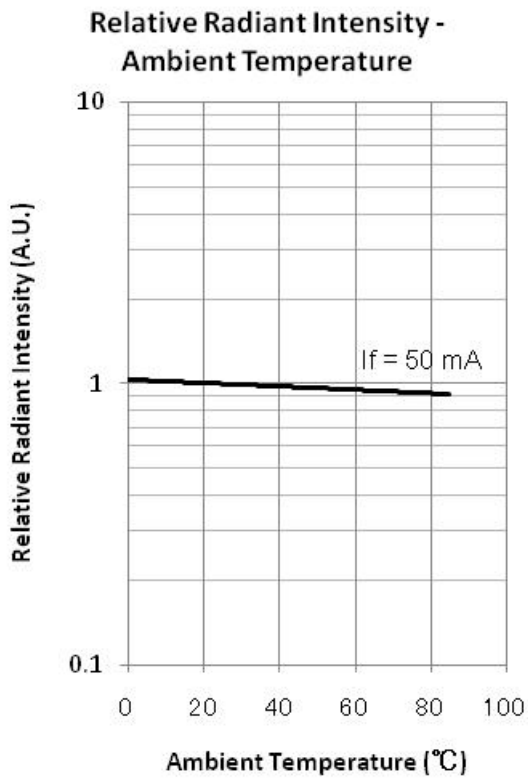


Forward Current - Pulse Duration

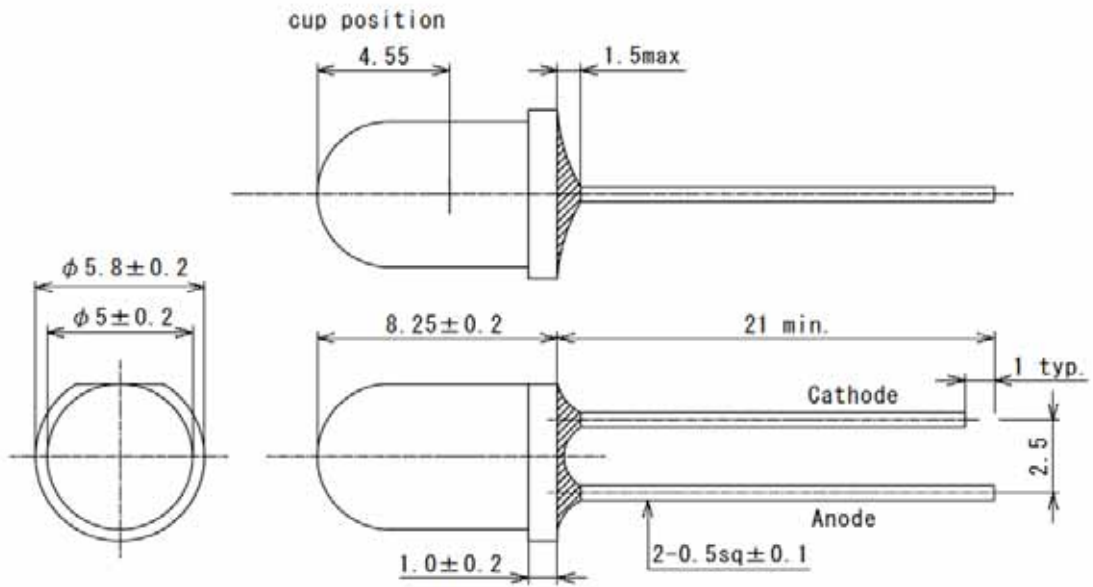


Forward Voltage - Ambient Temperature





Outer Dimension (Unit: mm)



Recommended Land Layout (unit: mm)

