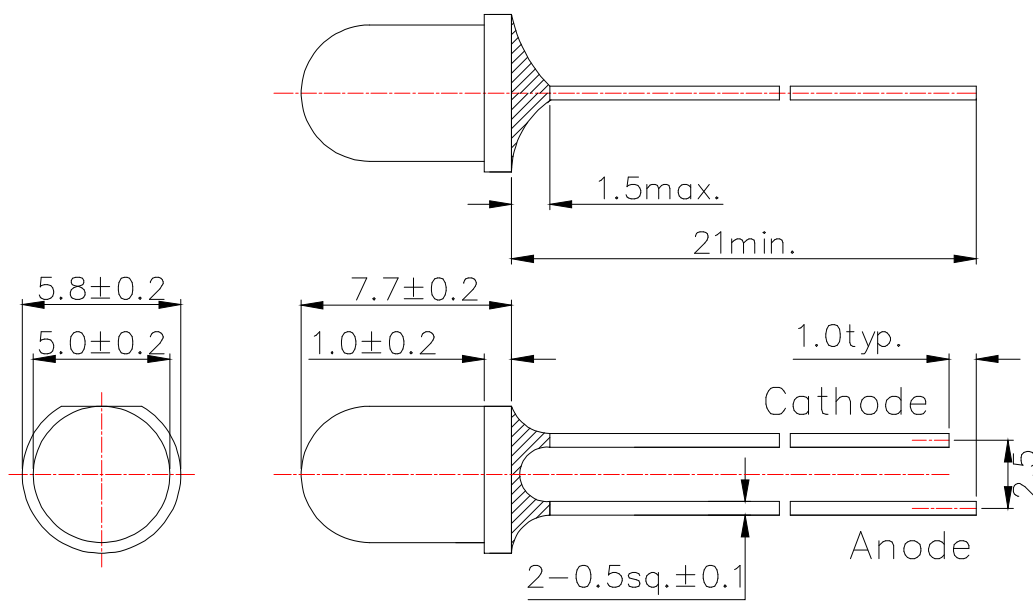


L1070D-04

Infrared LED Lamp

Outline and Internal Circuit



(Unit : mm)

Features

- Chip Material : InGaAsP
- Chip Dimension : 350um * 350um
- Number of Chips : 1pce
- Peak Wavelength : 1070nm typ.
- Package Type : $\phi 5$ mm clear molding
- Lead Frame : Soldered (Lead Free)
- Lens : Epoxy Resin

Absolute Maximum Ratings (Tc=25°C)

| Item | Symbol | Ratings | Unit |
|-----------------------|--------|------------|------|
| Power Dissipation | PD | 150 | mW |
| Forward Current | IF | 100 | mA |
| Pulse Forward Current | IFP | 1000 | mA |
| Reverse Voltage | VR | 5 | V |
| Thermal Resistance | Rthjs | 250 | K/W |
| Junction Temperature | Tj | 120 | °C |
| Operating Temperature | Topr | -40 ~ +85 | °C |
| Storage Temperature | Tstg | -40 ~ +100 | °C |

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

‡Soldering condition : Refer to technical support information on the website.

Optical and Electrical Characteristics (Tc=25°C)

(*: 100% testing, **: reference value)

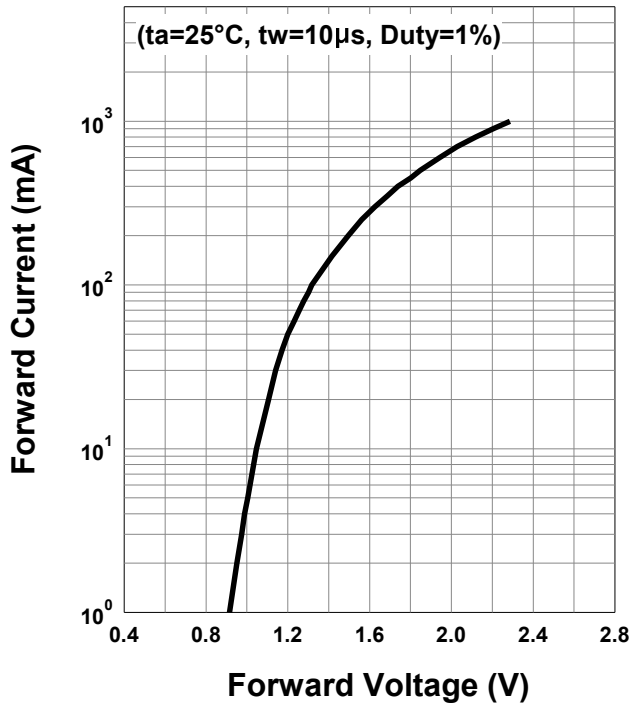
| Parameter | Symbol | Min | Typ | Max | Unit | Test Condition |
|----------------------|-----------------|------|----------|------|-------|----------------|
| Forward Voltage | VF | | 1.2 | 1.5 | V | IF=50mA* |
| | VFP | | 2.3 | | | IFP=1A** |
| Reverse Current | IR | | | 10 | uA | VR=5V* |
| Total Radiated Power | PO | 6.5 | 10 | | mW | IF=50mA* |
| | | | 55 | | | IFP=1A** |
| Radiant Intensity | IE | | 20 | | mW/sr | IF=50mA** |
| | | | 110 | | | IFP=1A** |
| Peak Wavelength | λ_p | 1040 | | 1100 | nm | IF=50mA* |
| Half Width | $\Delta\lambda$ | | 50 | | nm | IF=50mA** |
| Viewing Half Angle | $\theta_{1/2}$ | | ± 10 | | deg. | IF=50mA** |
| Rise Time | tr | | 60 | | ns | IF=50mA** |
| Fall Time | tf | | 30 | | ns | IF=50mA** |

‡ Radiated Power is measured by G8370-85.

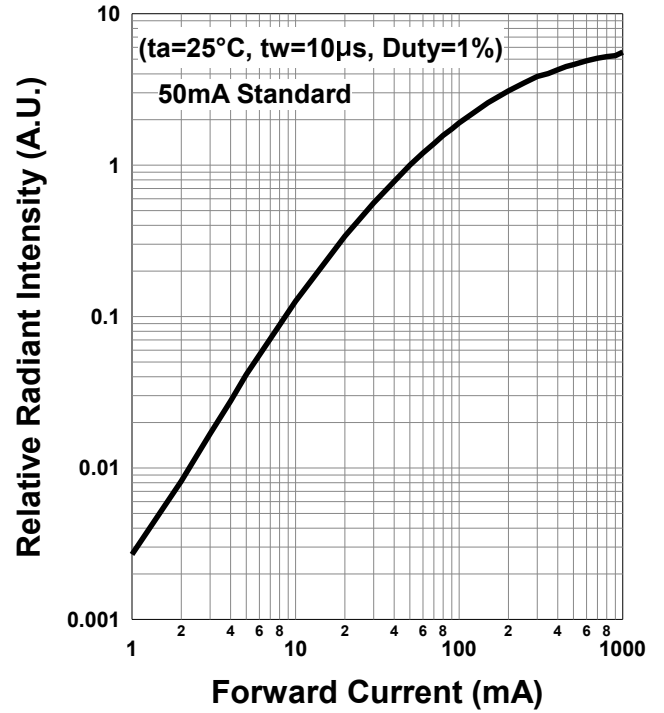
‡ Radiant Intensity is measured by Ando Optical Multi Meter AQ2140 & AQ2742.

Typical Characteristic Curves

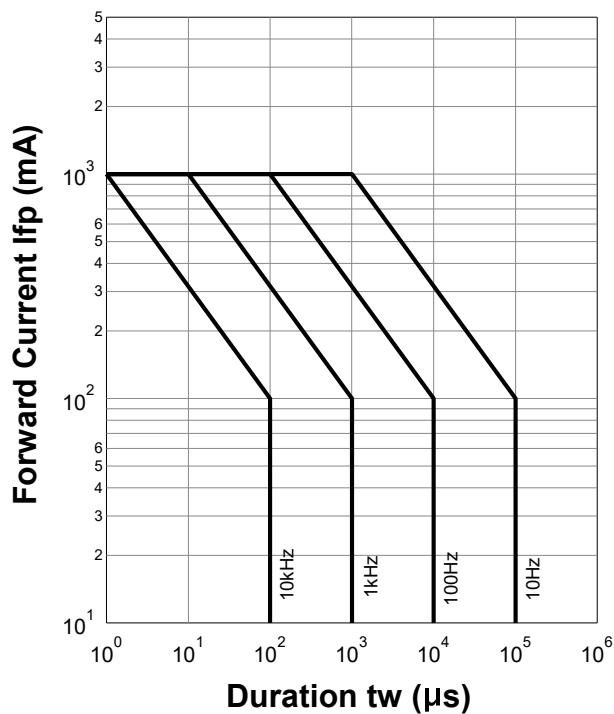
Forward Current - Forward Voltage



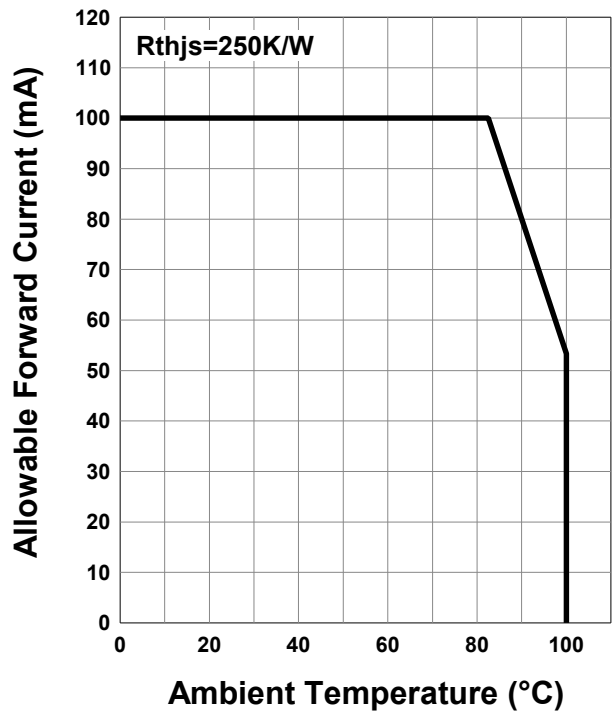
Relative Radiant Intensity - Forward Current

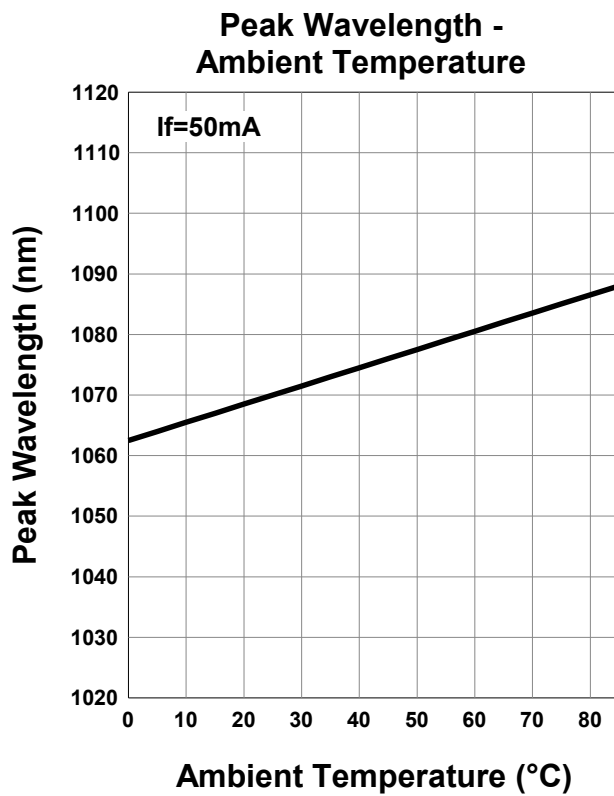
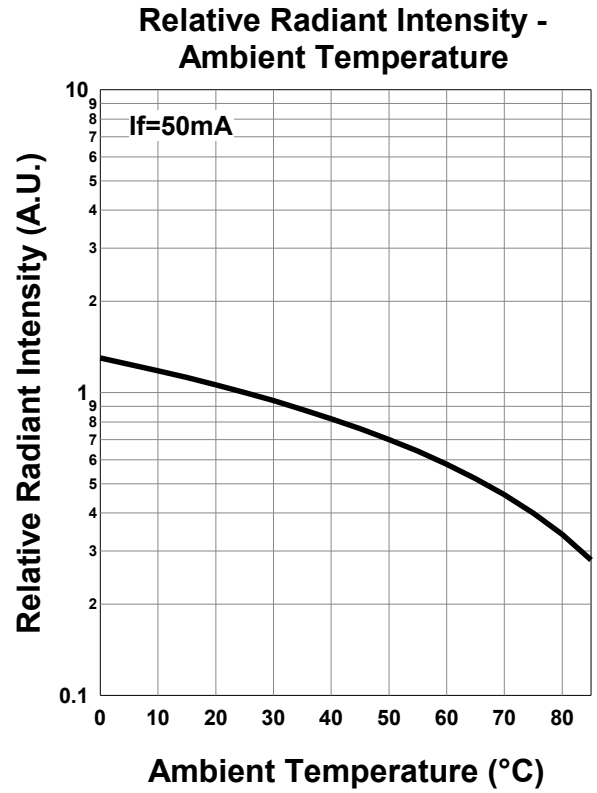
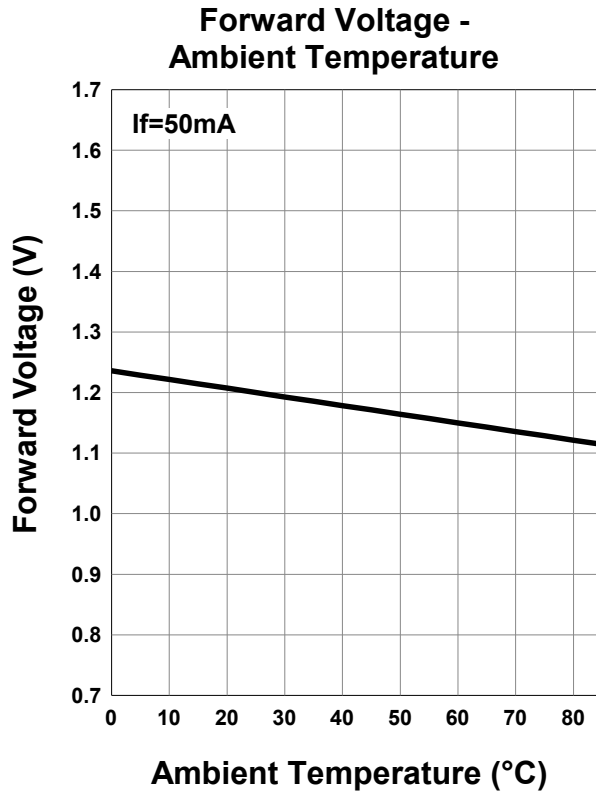


Forward Current - Pulse Duration

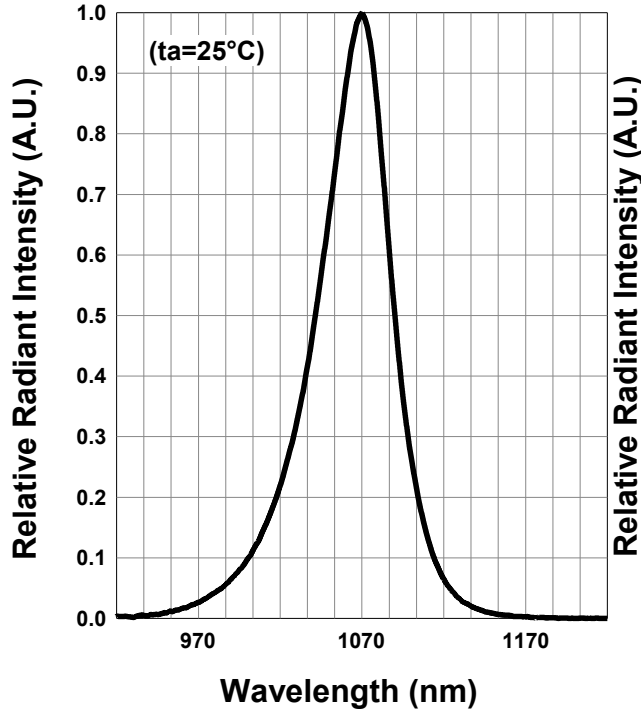


Allowable Forward Current - Ambient Temperature

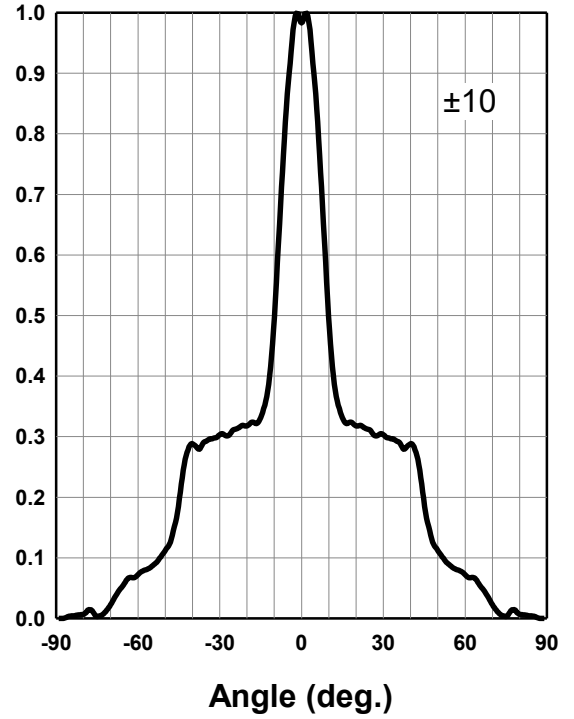




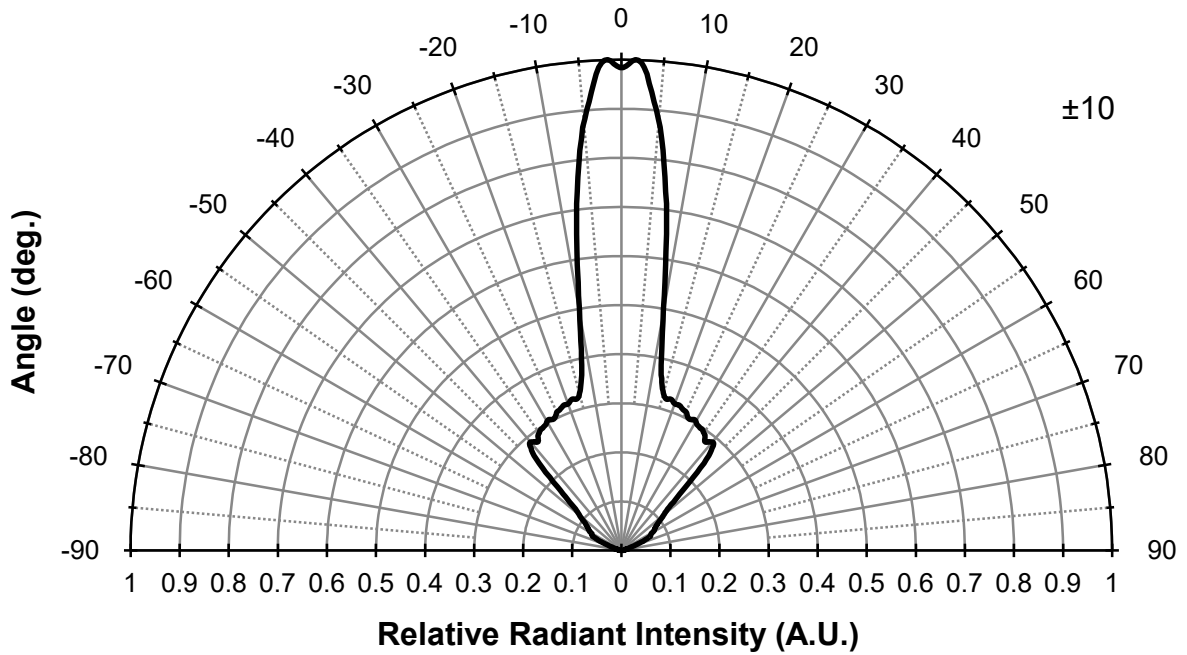
Relative Spectral Emission



Radiation Characteristics



Radiation Characteristics



Disclaimer

Product specifications and data shown in this product catalog are subject to change without notice for the purposes of improving product performance, reliability, design, or otherwise.

Product data and parameters in this catalog are typical values based on reasonably up-to-date measurements.

Product data and parameters may vary by user application and over time.

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