

Data Sheet

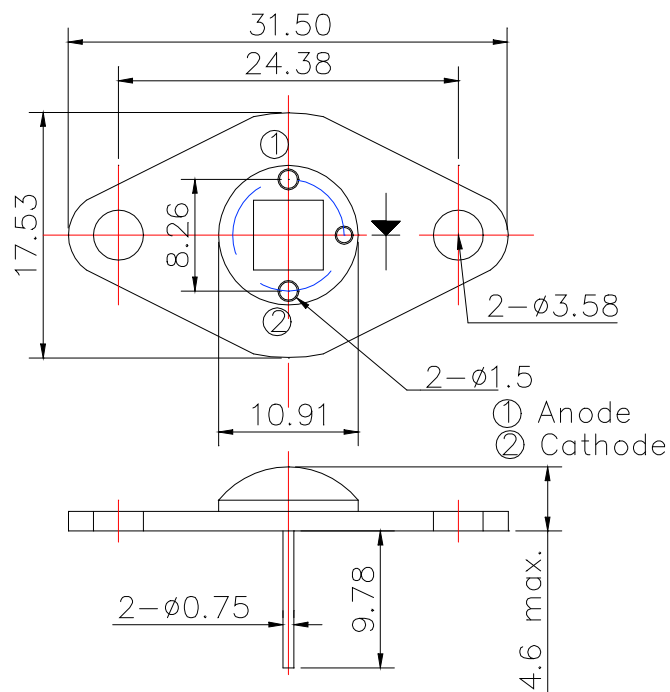
PRELIMINARY

L1450S-66-16100

Infrared illuminator

USHIO

Outline and Internal Circuit



(Unit : mm)

Features

- Chip Material : InGaAsP
- Chip Dimension : 1000um * 1000um
- Number of Chips : 16pcs
- Peak Wavelength : 1450nm typ.
- Stem : TO-66 stem
- Lens : Silicone and/or Epoxy resin

Application

Absolute Maximum Ratings (Tc=25°C)

| Item | Symbol | Ratings | Unit |
|-----------------------|--------|------------|------|
| Power Dissipation | PD | 16 | W |
| Forward Current | IF | 2.8 | A |
| Reverse Voltage | VR | 12 | V |
| Thermal Resistance | Rthja | 2 | K/W |
| Junction Temperature | Tj | 120 | °C |
| Operating Temperature | Topr | -40 ~ +85 | °C |
| Storage Temperature | Tstg | -40 ~ +100 | °C |
| Soldering Temperature | TSOL | 265 | °C |

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

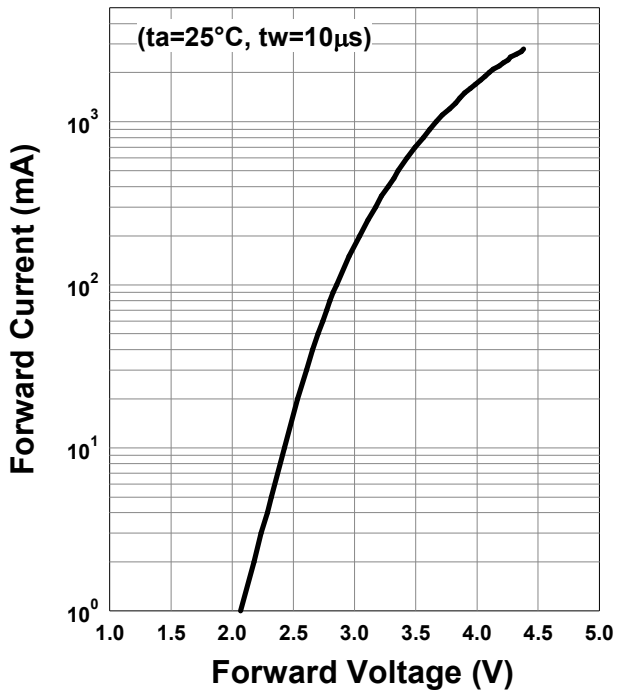
Optical and Electrical Characteristics (Tc=25°C)

| Parameter | Symbol | Min | Typ | Max | Unit | Test Condition |
|----------------------|-----------------|------|-----|------|------|----------------|
| Forward Voltage | VF | | 4.1 | 5.6 | V | IF=2A |
| Total Radiated Power | PO | | 110 | | mW | IF=2A |
| Peak Wavelength | λ_p | 1400 | | 1500 | nm | IF=2A |
| Half Width | $\Delta\lambda$ | | 85 | | nm | IF=2A |
| Viewing Half Angle | $\theta_{1/2}$ | | ±67 | | deg. | IF=100mA |
| Rise Time | tr | | 40 | | ns | IF=2A |
| Fall Time | tf | | 80 | | ns | IF=2A |

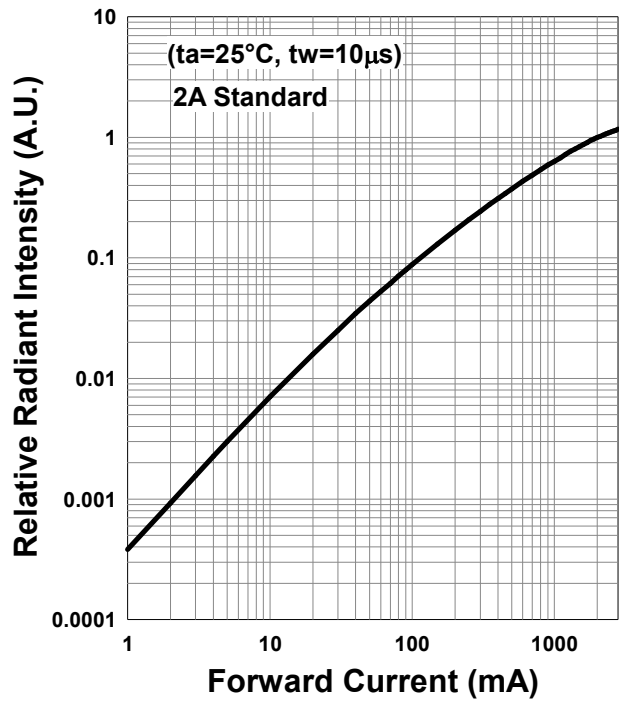
‡ Radiated Power is measured by G8370-85.

Typical Characteristic Curves

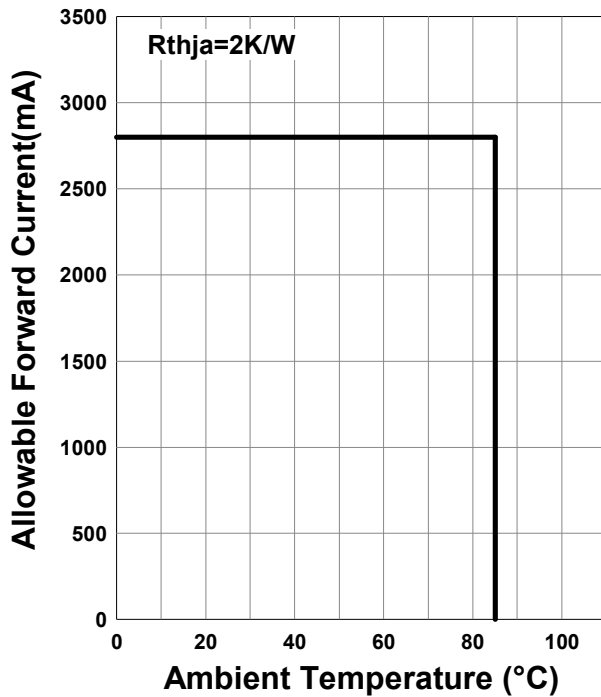
Forward Current - Forward Voltage



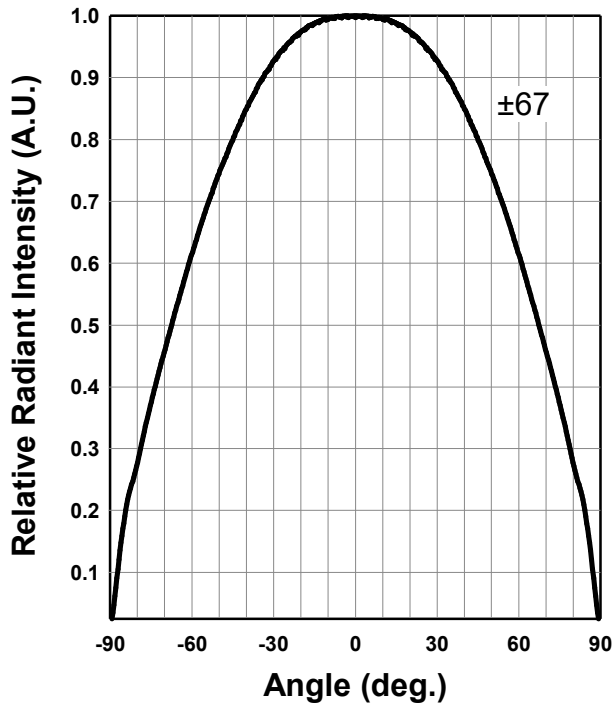
Relative Radiant Intensity - Forward Current



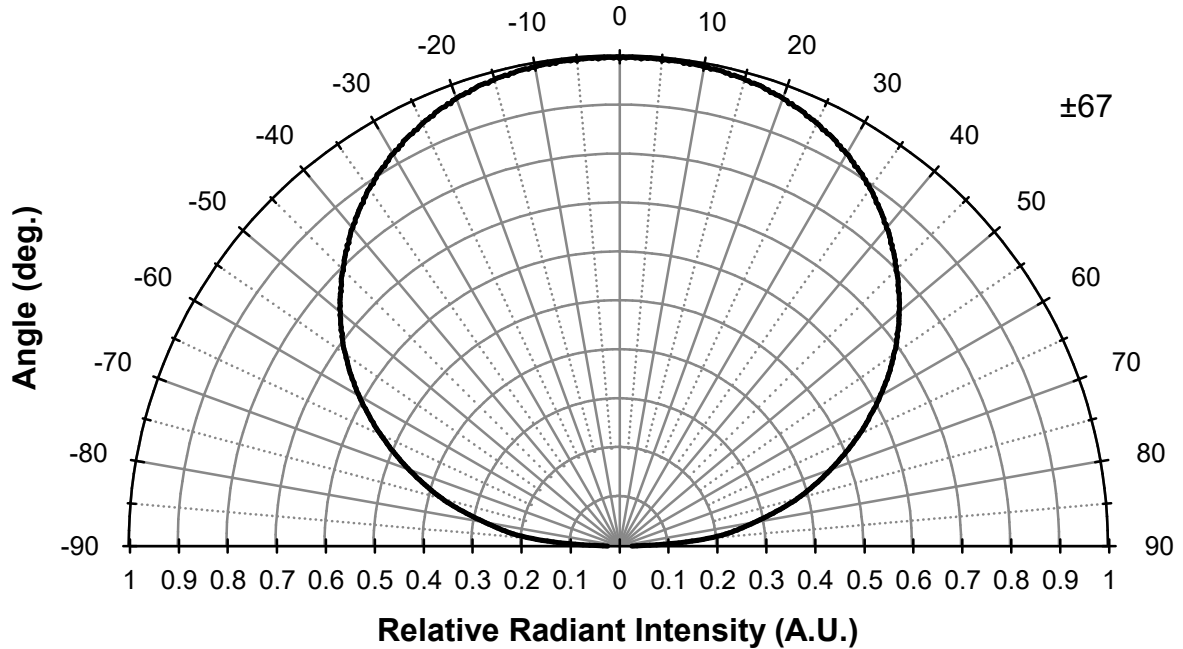
Allowable Forward Current - Ambient Temperature



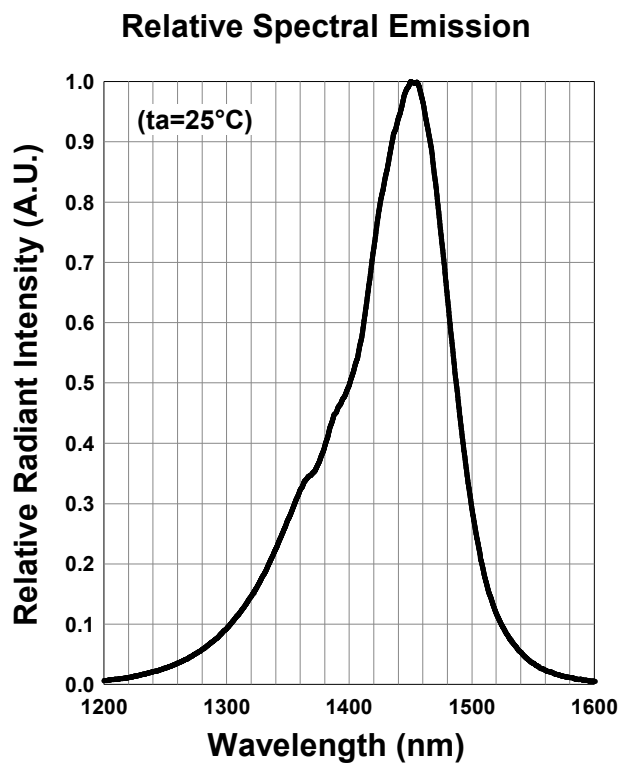
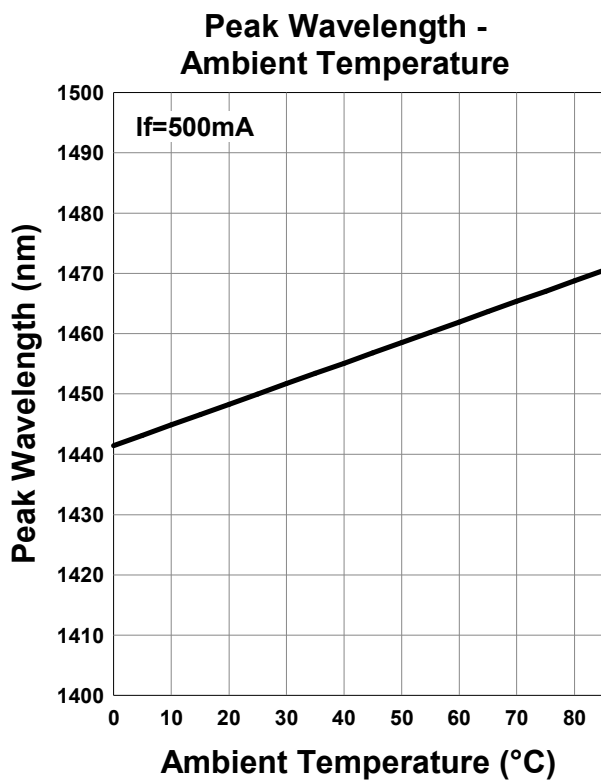
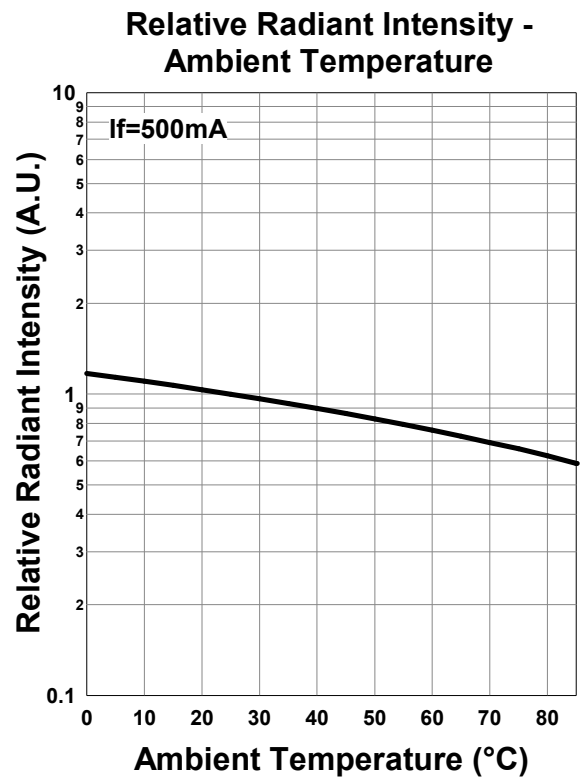
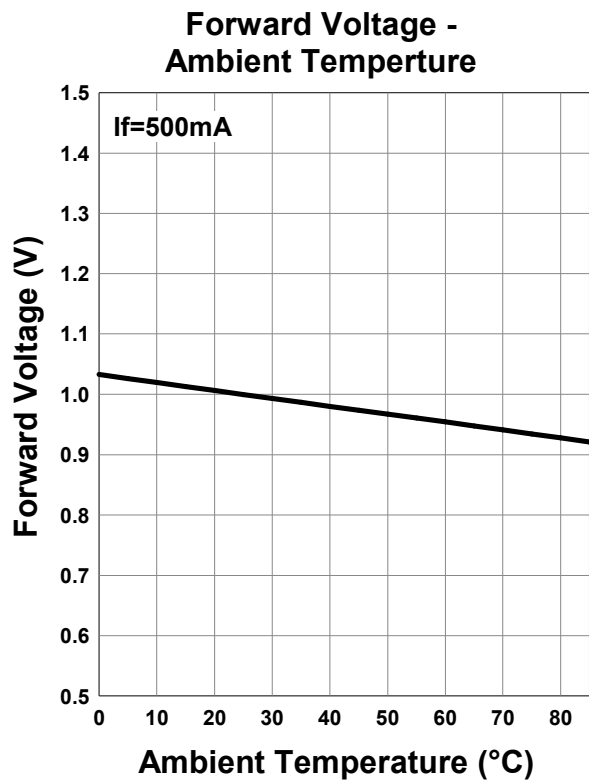
Radiation Characteristics



Radiation Characteristics



*The data below shows the characteristics of one representative TO-66 chip.



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.

Products shown in this catalog are intended to be used for general electronic equipment. Products are not guaranteed for applications where product malfunction or failure may cause personal injury or death, including but not limited to life-supporting / saving devices, medical devices, safety devices, airplanes, aerospace equipment, automobiles, traffic control systems, and nuclear reactor control systems.

*Effective July 2016, Ushio Epitex Inc. is now USHIO OPTO SEMICONDUCTORS, INC.

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