

Data Sheet

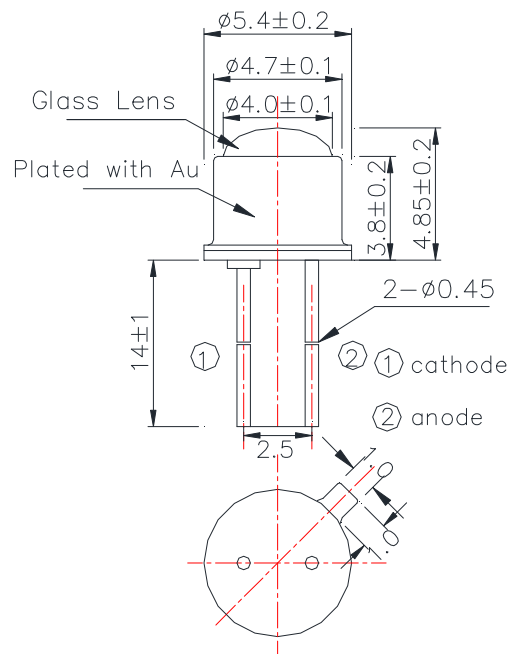
PRELIMINARY

L1550S-35K42

Stem type LED Lamp

USHIO

Outline and Internal Circuit



(Unit : mm)

Features

- Non-hermetic package
- Chip Material : InGaAsP
- Chip Dimension : 350um * 350um
- Number of Chips : 1pce
- Peak Wavelength : 1550nm typ.
- Stem: TO-46 type
- Lens : Unspherical Glass
- Cap : Gold Plated

Application

Absolute Maximum Ratings (Tc=25°C)

| Item | Symbol | Ratings | Unit |
|-----------------------|--------|------------|------|
| Power Dissipation | PD | 130 | mW |
| Forward Current | IF | 100 | mA |
| Pulse Forward Current | IFP | 1000 | mA |
| Reverse Voltage | VR | 5 | V |
| Thermal Resistance | Rthja | 300 | K/W |
| Junction Temperature | Tj | 120 | °C |
| Operating Temperature | Topr | -40 ~ +100 | °C |
| Storage Temperature | Tstg | -40 ~ +100 | °C |
| Soldering Temperature | TSOL | 250 | °C |

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

‡Soldering condition: Soldering condition must be completed within 5 seconds at 250°C and is allowed in the area apart 3mm from the bottom of the lamp.

Optical and Electrical Characteristics (Tc=25°C)

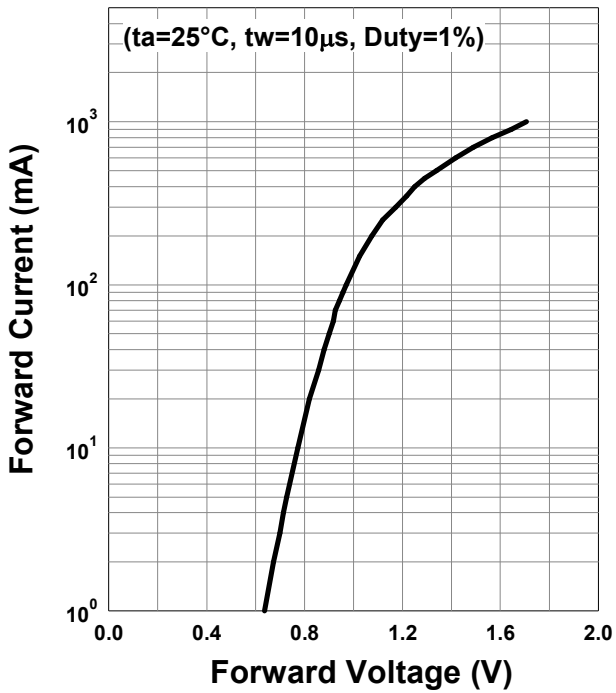
| Parameter | Symbol | Min | Typ | Max | Unit | Test Condition |
|----------------------|-----------------|------|---------|------|-------|----------------|
| Forward Voltage | VF | | 0.9 | 1.3 | V | IF=50mA |
| | VFP | | 1.7 | | | IFP=1A |
| Total Radiated Power | PO | | 2.4 | | mW | IF=50mA |
| | | | 13 | | | IFP=1A |
| Radiant Intensity | IE | | 44 | | mW/sr | IF=50mA |
| | | | 240 | | | IFP=1A |
| Peak Wavelength | λ_p | 1500 | | 1600 | nm | IF=50mA |
| Half Width | $\Delta\lambda$ | | 120 | | nm | IF=50mA |
| Viewing Half Angle | $\theta_{1/2}$ | | ± 9 | | deg. | IF=50mA |
| Rise Time | tr | | 30 | | ns | IF=50mA |
| Fall Time | tf | | 70 | | ns | IF=50mA |

‡ Radiated Power is measured by G8370-85.

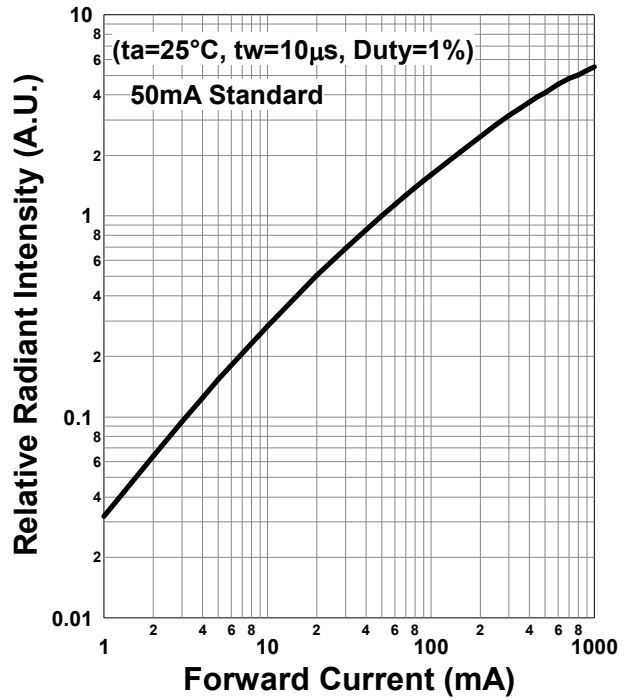
‡ Radiant Intensity is measured by Ando Optical Multi Meter AQ2140 & AQ2742.

Typical Characteristic Curves

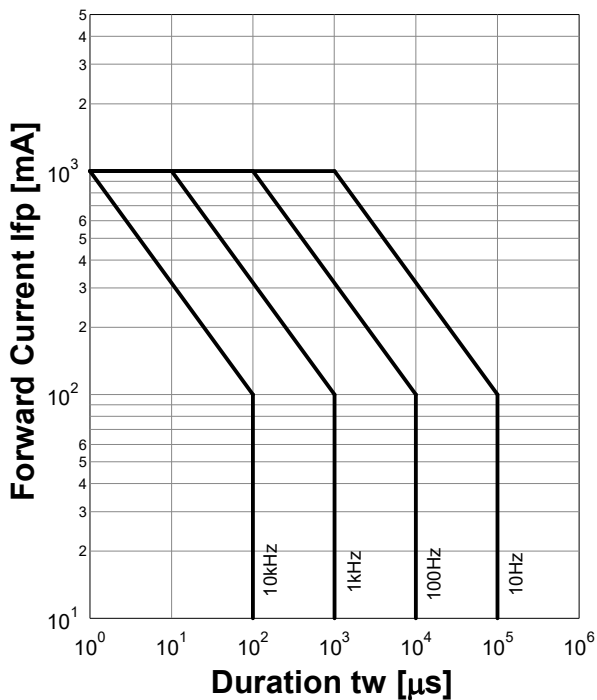
Forward Current - Forward Voltage



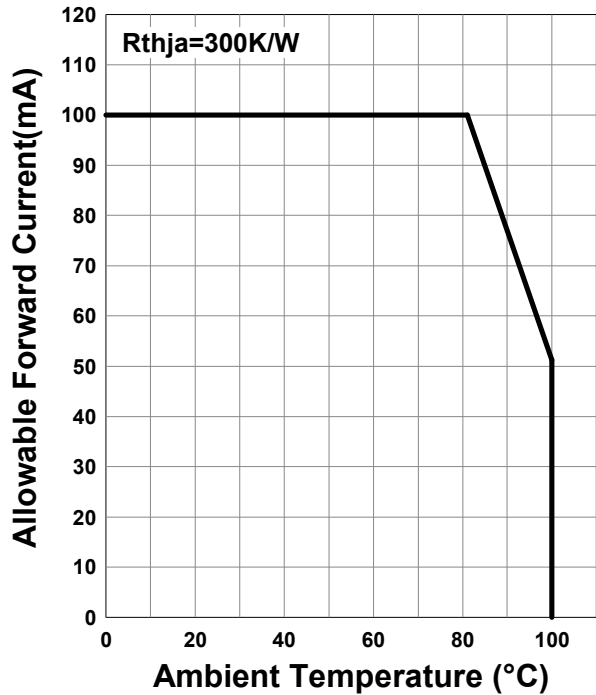
Relative Radiant Intensity - Forward Current



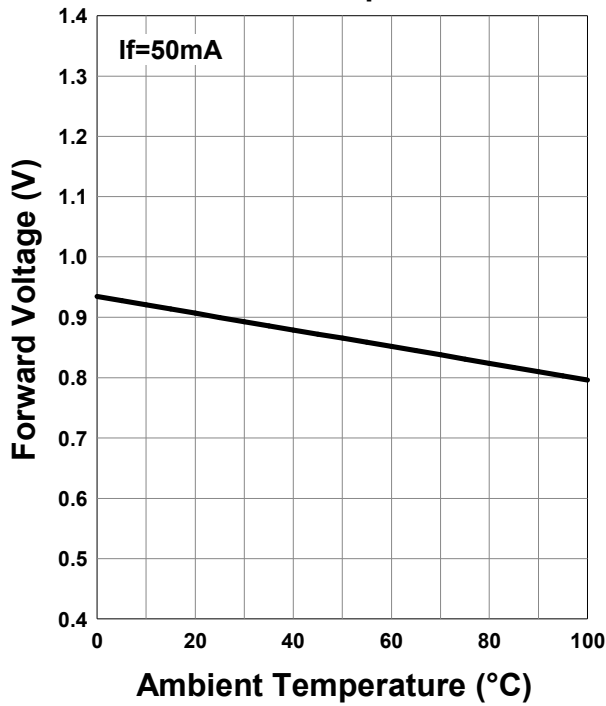
Forward Current - Pulse Duration



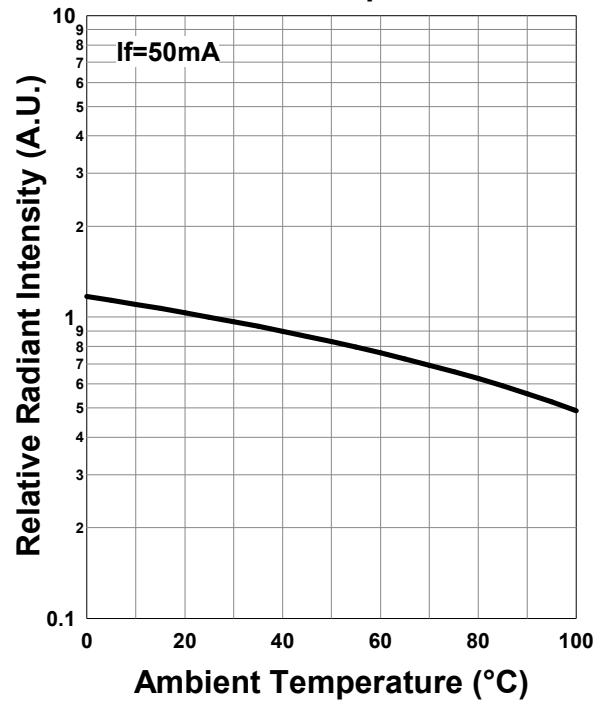
Allowable Forward Current - Ambient Temperature



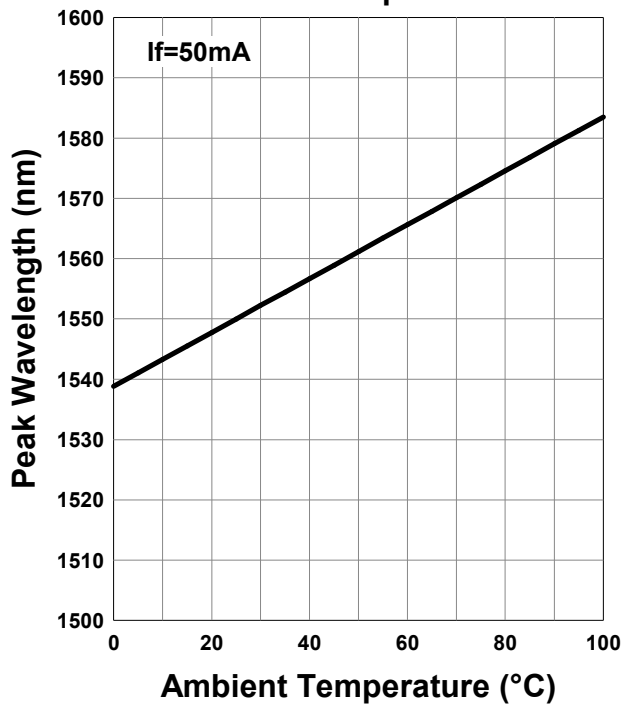
Forward Voltage - Ambient Temperature



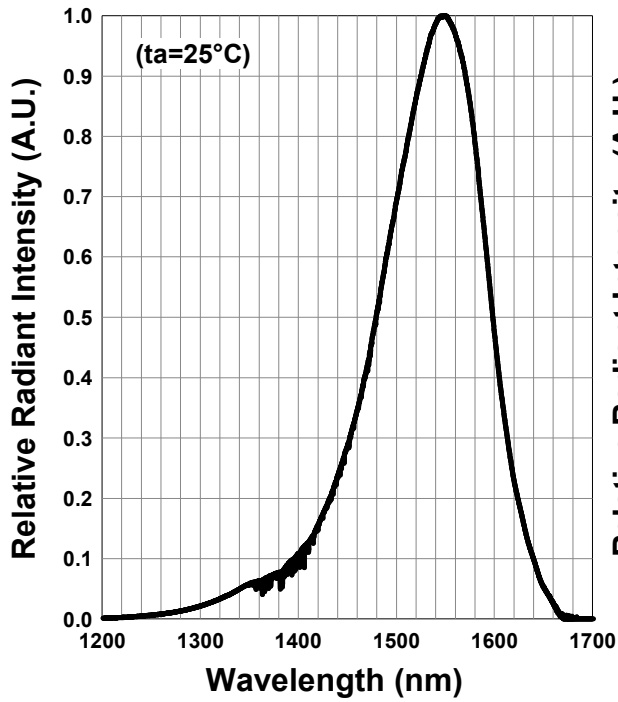
Relative Radiant Intensity - Ambient Temperature



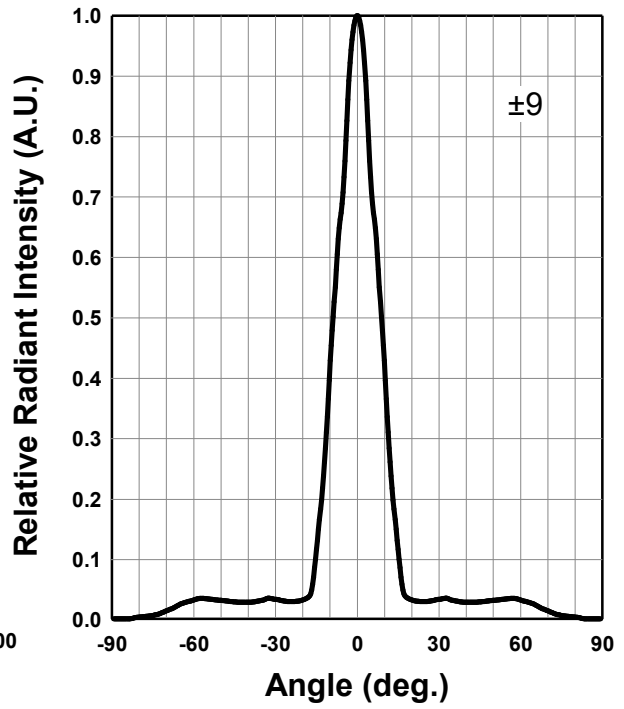
Peak Wavelength - Ambient Temperature



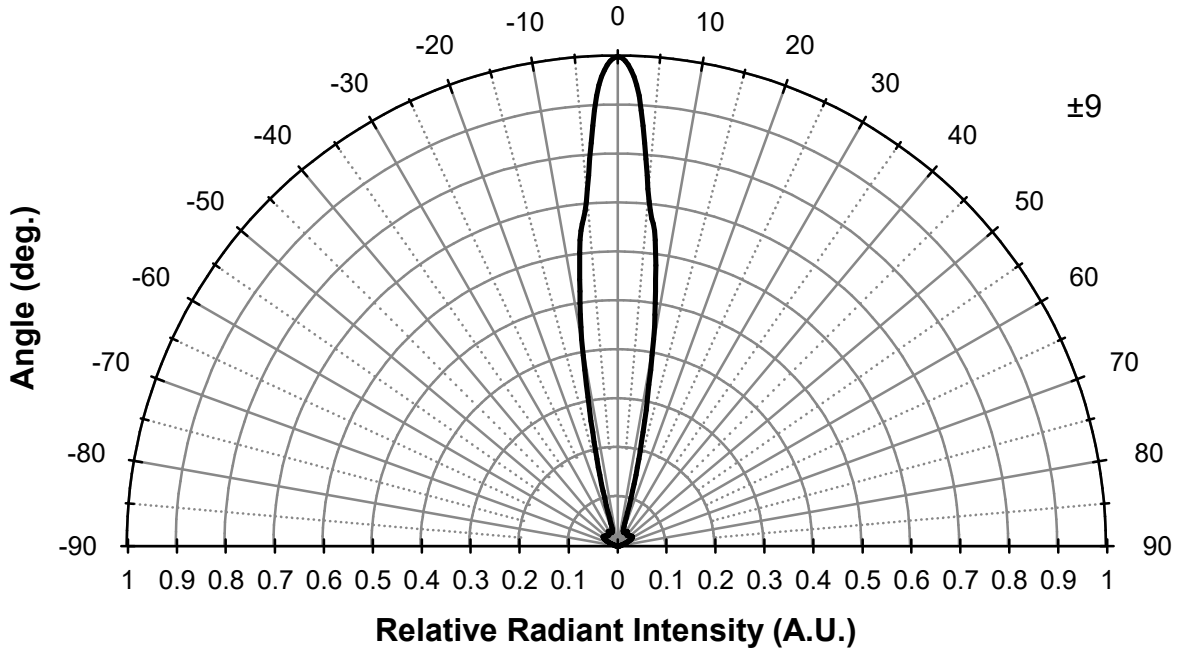
Relative Spectral Emission



Radiation Characteristics



Radiation Characteristics



Disclaimer

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