

# Data Sheet

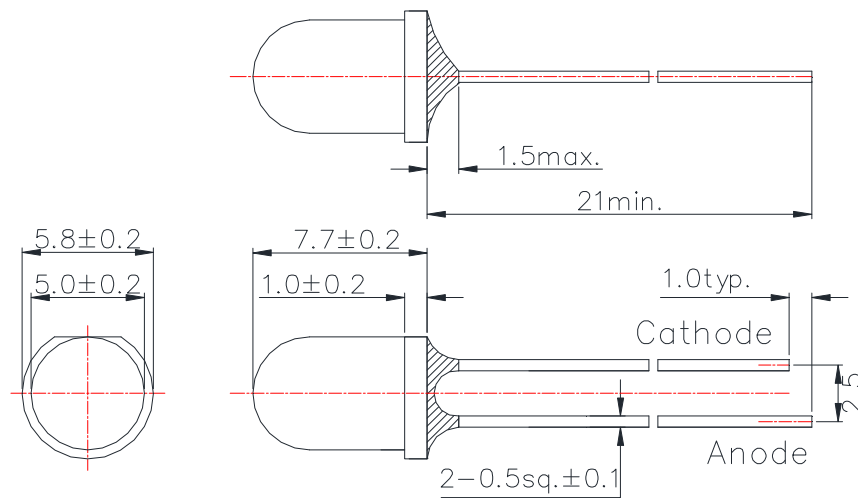
PRELIMINARY

## L375R-04

UV LED Lamp

USHIO

### Outline and Internal Circuit



(Unit : mm)

### Features

- Chip Material : AlGaIn
- Chip Dimension :  $350 \mu\text{m} \times 350 \mu\text{m}$
- Number of Chips : 1pc
- Peak Wavelength :  $375 \text{ nm}$  typ.
- Package Type :  $\phi 5 \text{ mm}$  clear molding
- Lead Frame : Soldered (Lead Free)
- Lens : UV Resin

### Application

## Absolute Maximum Ratings (Tc=25°C)

| Item                  | Symbol | Ratings    | Unit |
|-----------------------|--------|------------|------|
| Power Dissipation     | PD     | 220        | mW   |
| Forward Current       | IF     | 50         | mA   |
| Pulse Forward Current | IFP    | 100        | mA   |
| Reverse Voltage       | VR     | 5          | V    |
| Thermal Resistance    | Rthja  | 300        | K/W  |
| Junction Temperature  | Tj     | 120        | °C   |
| Operating Temperature | Topr   | -20 ~ +100 | °C   |
| Storage Temperature   | Tstg   | -20 ~ +100 | °C   |
| Soldering Temperature | TSOL   | 265        | °C   |

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

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

## Optical and Electrical Characteristics (Tc=25°C)

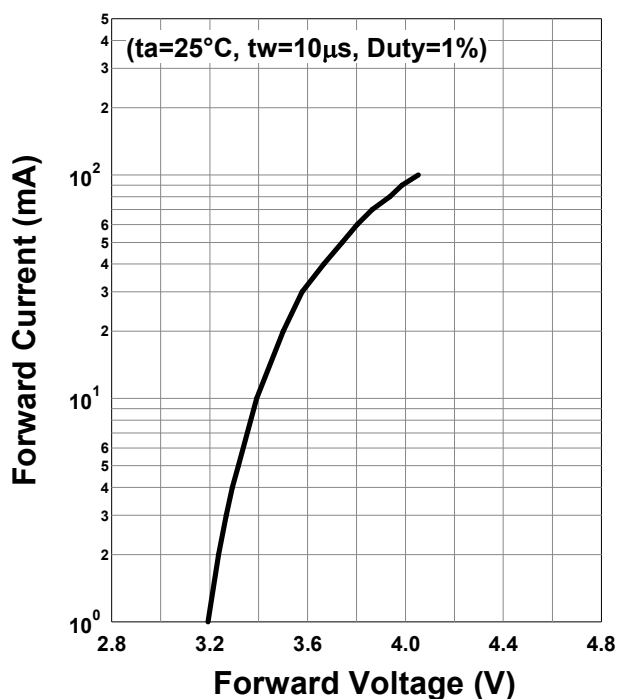
| Parameter            | Symbol          | Min | Typ      | Max | Unit  | Test Condition |
|----------------------|-----------------|-----|----------|-----|-------|----------------|
| Forward Voltage      | VF              |     | 3.5      | 4.3 | V     | IF=20mA        |
|                      | VFP             |     | 4.1      |     |       | IFP=100mA      |
| Total Radiated Power | PO              |     | 7.0      |     | mW    | IF=20mA        |
|                      |                 |     | 37       |     |       | IFP=100mA      |
| Radiant Intensity    | IE              |     | 19       |     | mW/sr | IF=20mA        |
|                      |                 |     | 100      |     |       | IFP=100mA      |
| Peak Wavelength      | $\lambda_p$     | 370 |          | 380 | nm    | IF=20mA        |
| Half Width           | $\Delta\lambda$ |     | 9        |     | nm    | IF=20mA        |
| Viewing Half Angle   | $\theta_{1/2}$  |     | $\pm 10$ |     | deg.  | IF=20mA        |
| Rise Time            | tr              |     | 50       |     | ns    | IF=20mA        |
| Fall Time            | tf              |     | 40       |     | ns    | IF=20mA        |

‡ Radiated Power is measured by S3584-08.

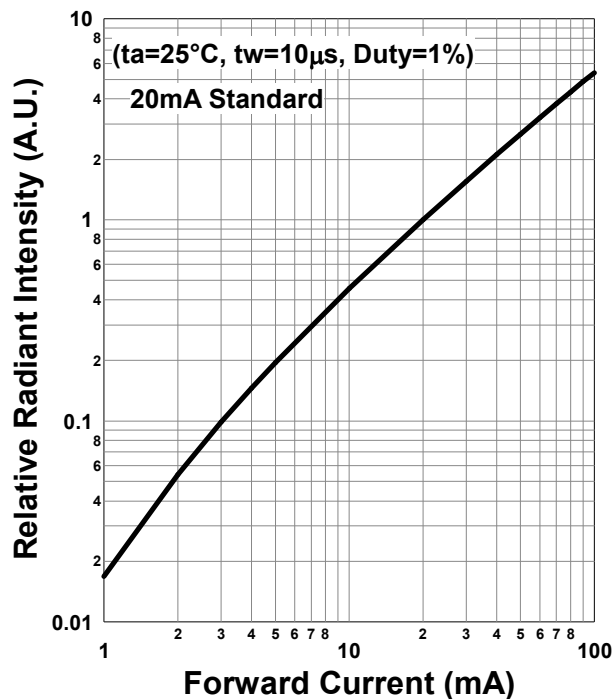
‡ Radiant Intensity is measured by CIE127-2007 Condition B.

## Typical Characteristic Curves

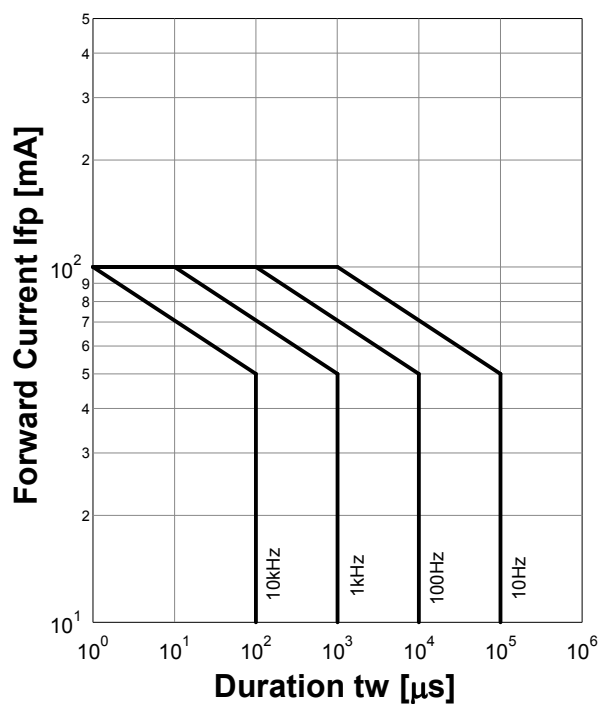
### Forward Current - Forward Voltage



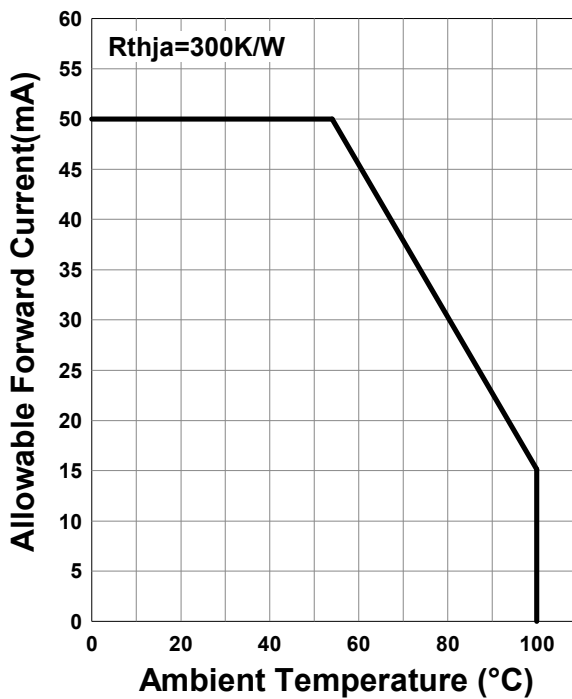
### Relative Radiant Intensity - Forward Current

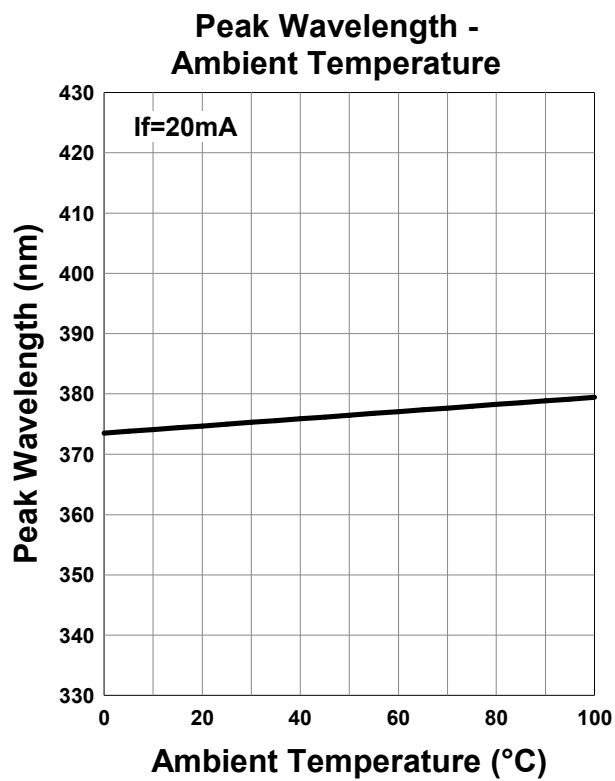
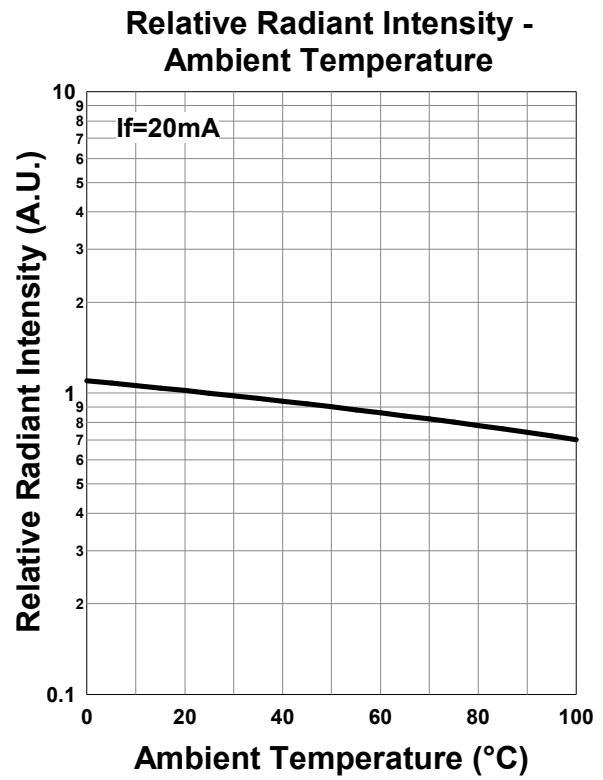
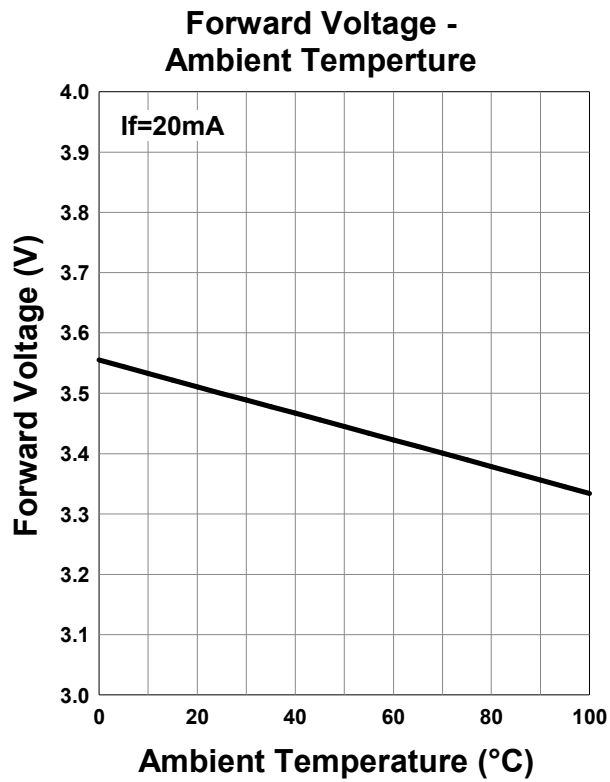


### Forward Current - Pulse Duration

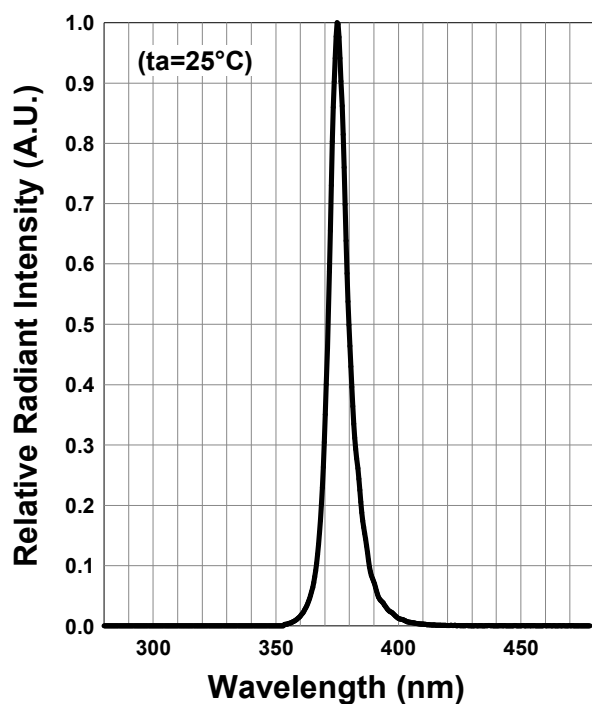


### Allowable Forward Current - Ambient Temperature

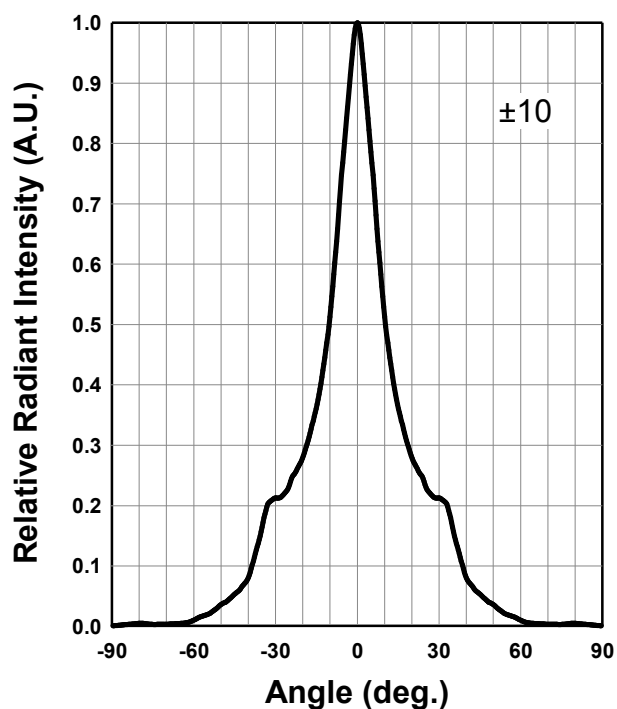




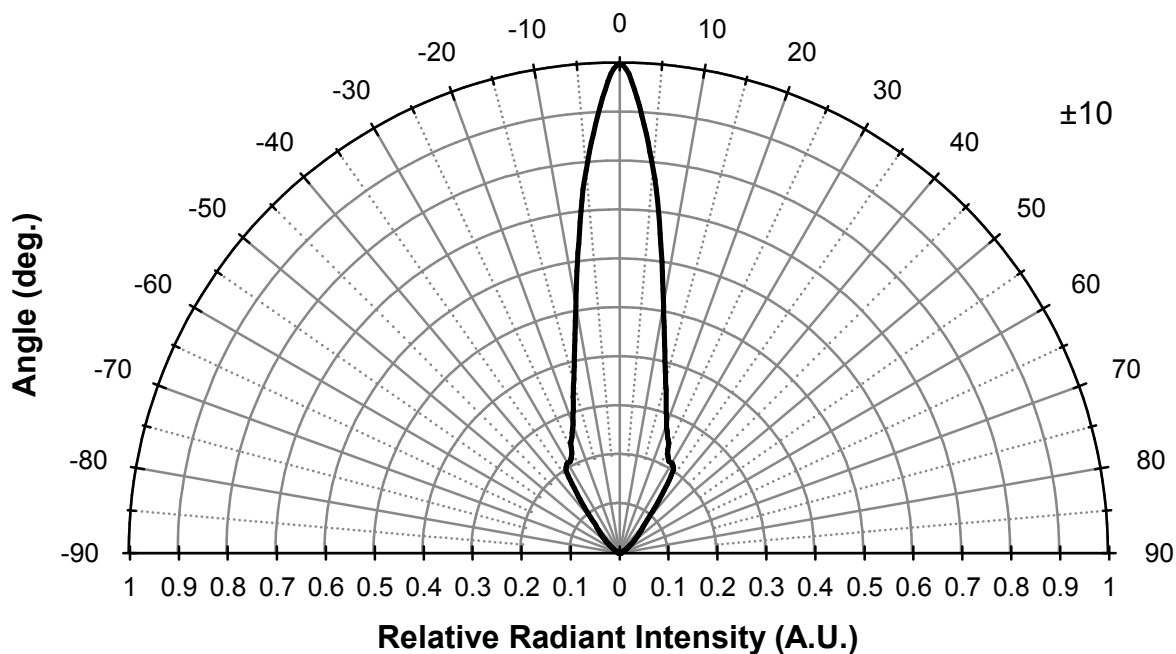
## Relative Spectral Emission



## Radiation Characteristics



## Radiation Characteristics



## Disclaimer

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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.