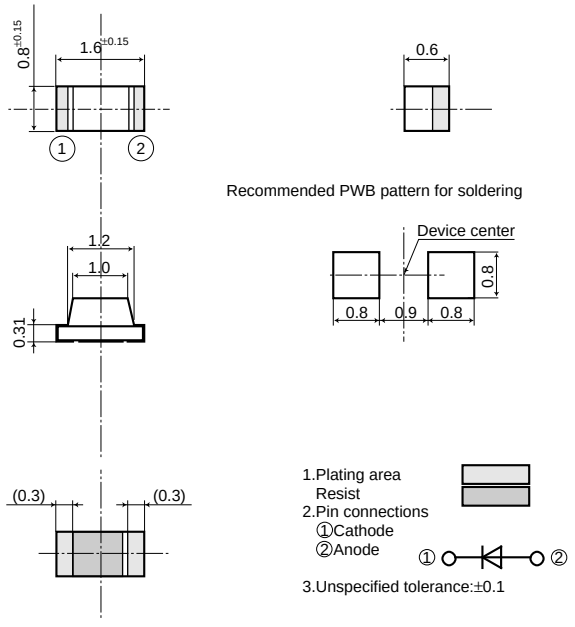
# LT1❑97A series

## 1608 Size, Super Thin Type(0.6mm), Leadless Chip LED Devices

### ■ Outline Dimensions

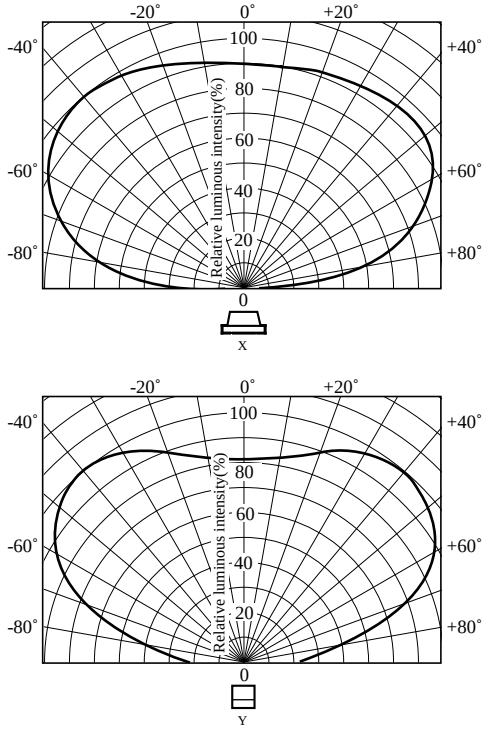
(Unit : mm)




U type: There is Anode mark on the device because polarity faces in the opposite direction.

### ■ Radiation Diagram

(Ta=25˚C)




### ■ Absolute Maximum Ratings

(Ta=25˚C)

| Model No. | Radiation color | Radiation material | Power dissipation P (mW) | Forward current $I_F$ (mA) | Peak forward current $I_{FM}$*1 (mA) | Derating factor (mA/˚C) DC | Derating factor (mA/˚C) Pulse | Reverse voltage $V_R$ (V) | Operating temperature $T_{opr}$ (˚C) | Storage temperature $T_{stg}$ (˚C) | Soldering temperature $T_{sol}$*2 (˚C) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| LT1U97A | Red(Super-luminosity) | GaAlAs on GaAlAs | 75 | 30 | 50 | 0.40 | 0.67 | 5 | -30 to +85 | -40 to +100 | 350 |
| LT1P97A | Red | GaP | 23 | 10 | 50 | 0.13 | 0.67 | 5 | -30 to +85 | -40 to +100 | 350 |
| LT1D97A | Red | GaAsP on GaP | 84 | 30 | 50 | 0.40 | 0.67 | 5 | -30 to +85 | -40 to +100 | 350 |
| LT1S97A | Sunset orange | GaAsP on GaP | 84 | 30 | 50 | 0.40 | 0.67 | 5 | -30 to +85 | -40 to +100 | 350 |
| LT1H97A | Yellow | GaAsP on GaP | 84 | 30 | 50 | 0.40 | 0.67 | 5 | -30 to +85 | -40 to +100 | 350 |
| LT1E97A | Yellow-green | GaP | 84 | 30 | 50 | 0.40 | 0.67 | 5 | -30 to +85 | -40 to +100 | 350 |
| LT1K97A | Green | GaP | 84 | 30 | 50 | 0.40 | 0.67 | 5 | -30 to +85 | -40 to +100 | 350 |

*1 Duty ratio=1/10, Pulse width=0.1ms

*2 For 3s or less at the temperature of hand soldering. Temperature of reflow soldering is shown on the below page.

### ■ Electro-optical Characteristics

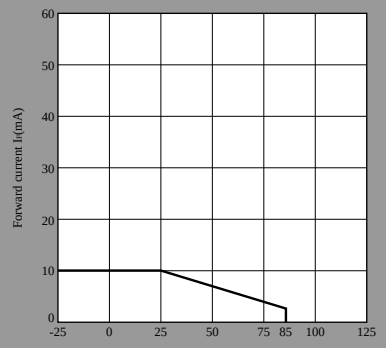
(Ta=25˚C)

| Lens type | Model No. | Forward voltage $V_F$(V) TYP | Forward voltage $V_F$(V) MAX | Peak emission wavelength $\lambda_p$(nm) TYP | $I_F$ (mA) | Luminous intensity $I_V$(mcd) TYP | $I_F$ (mA) | Spectrum radiation bandwidth Δλ(nm) TYP | $I_F$ (mA) | Reverse current $I_R$(μA) MAX | $V_R$ (V) | Terminal capacitance $C_t$(pF) TYP | (MHz) | Page for characteristics diagrams |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Milky diffusion | LT1U97A | 1.85 | 2.5 | 660 | 20 | 35.3 | 20 | 20 | 20 | 100 | 3 | 25 | 1 | → |
| | LT1P97A | 1.9 | 2.3 | 695 | 5 | 1.6 | 5 | 100 | 5 | 10 | 4 | 55 | 1 | → |
| | LT1D97A | 2.0 | 2.8 | 635 | 20 | 11.0 | 20 | 35 | 20 | 10 | 4 | 20 | 1 | → |
| | LT1S97A | 2.0 | 2.8 | 610 | 20 | 8.2 | 20 | 35 | 20 | 10 | 4 | 15 | 1 | → |
| | LT1H97A | 2.0 | 2.8 | 585 | 20 | 9.8 | 20 | 30 | 20 | 10 | 4 | 35 | 1 | → |
| | LT1E97A | 2.1 | 2.8 | 565 | 20 | 23.0 | 20 | 30 | 20 | 10 | 4 | 35 | 1 | → |
| | LT1K97A | 2.1 | 2.8 | 555 | 20 | 4.5 | 20 | 25 | 20 | 10 | 4 | 40 | 1 | → |

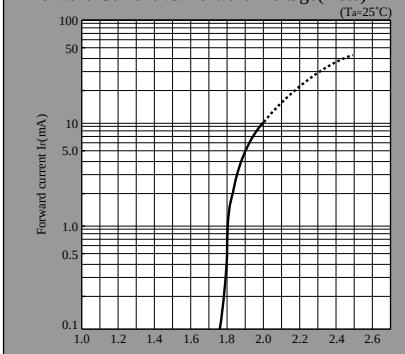
# LED Lamp Characteristics Diagrams

## PR series

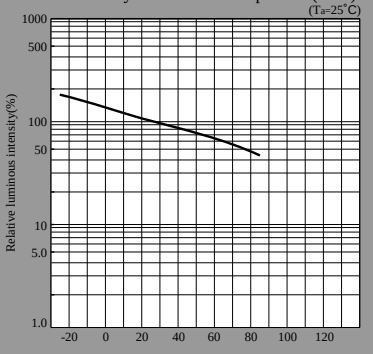
Forward Current Derating Curve



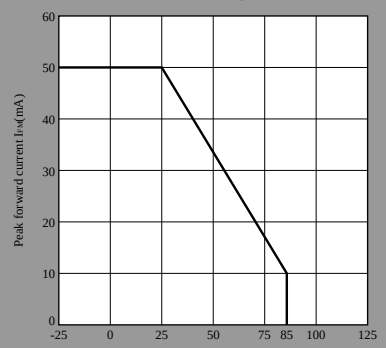

Forward Current vs. Forward Voltage(Note)



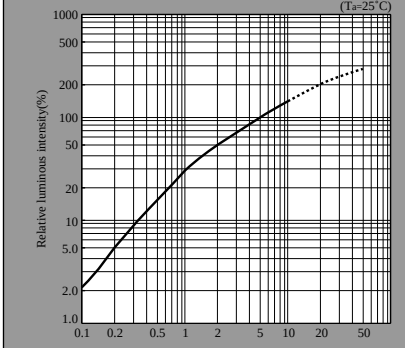

Luminous Intensity vs. Ambient Temperature(Note)



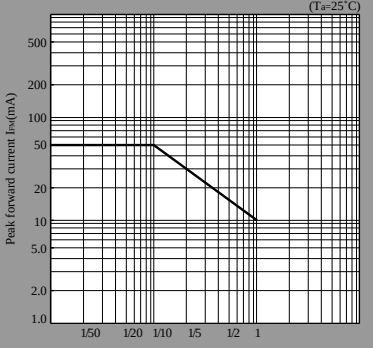

Peak Forward Current Derating Curve




Luminous Intensity vs. Forward Current(Note)

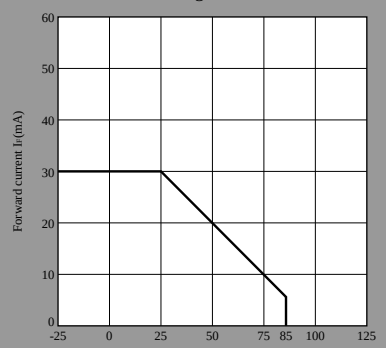



Duty Ratio vs. Peak Forward Current

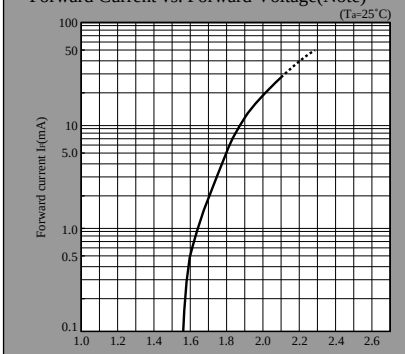



## HD series

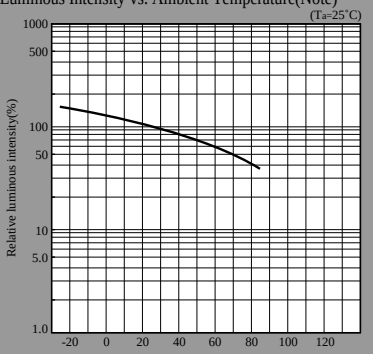
Forward Current Derating Curve



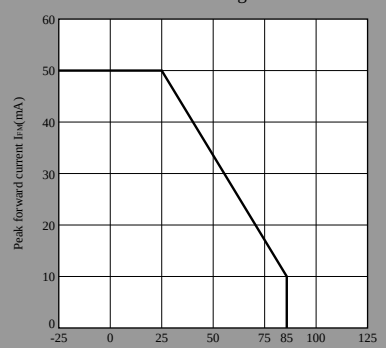

Forward Current vs. Forward Voltage(Note)



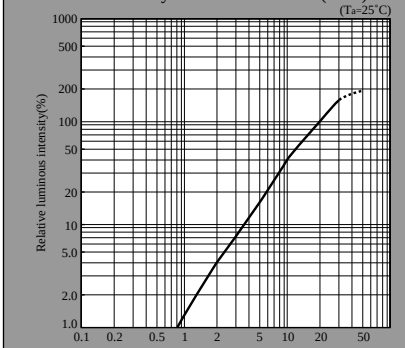

Luminous Intensity vs. Ambient Temperature(Note)



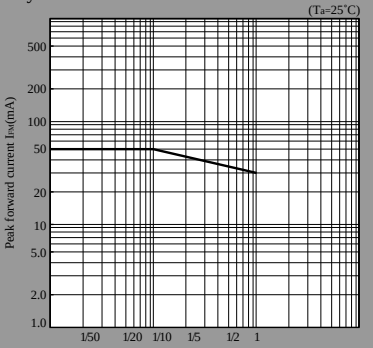

Peak Forward Current Derating Curve




Luminous Intensity vs. Forward Current(Note)




Duty Ratio vs. Peak Forward Current

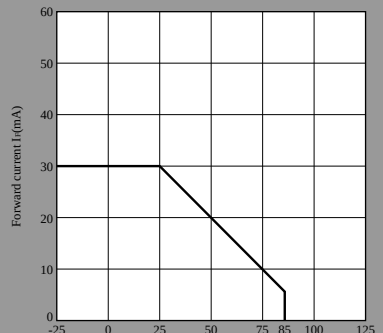



Note)Characteristics shown in diagrams are typical values. (not assurance value)

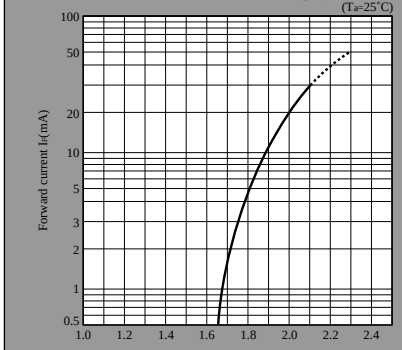
# LED Lamp Characteristics Diagrams

## HS series

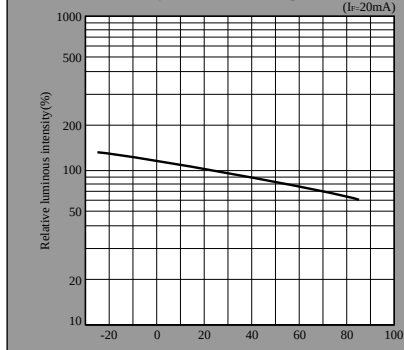
Forward Current Derating Curve



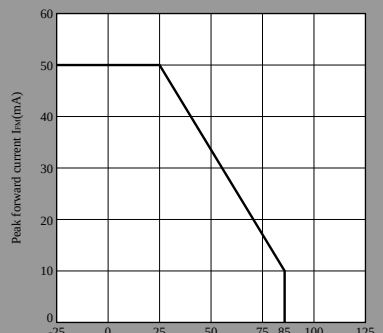

Forward Current vs. Forward Voltage(Note)



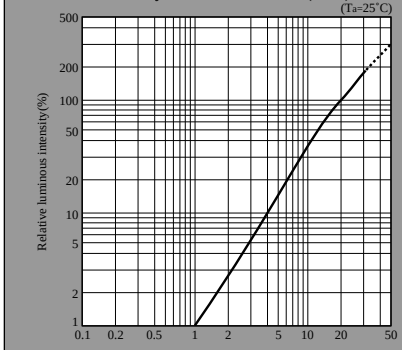

Luminous Intensity vs. Ambient Temperature(Note)



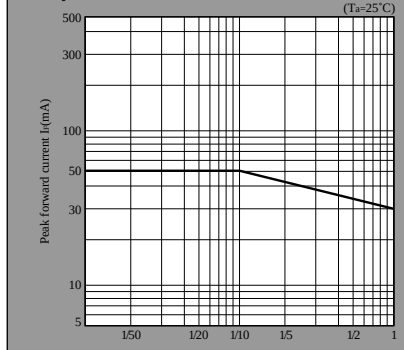

Peak Forward Current Derating Curve




Luminous Intensity vs. Forward Current(Note)

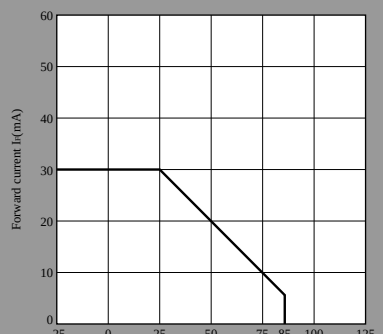



Duty Ratio vs. Peak Forward Current

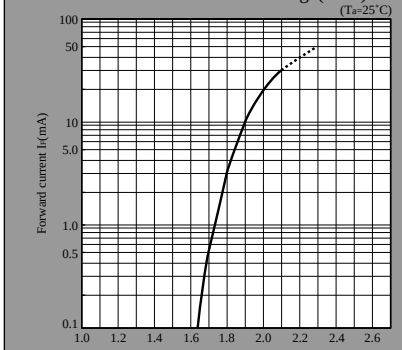



## HY series

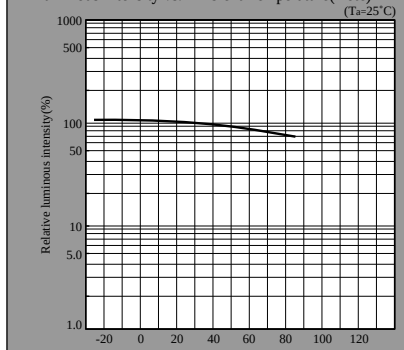
Forward Current Derating Curve



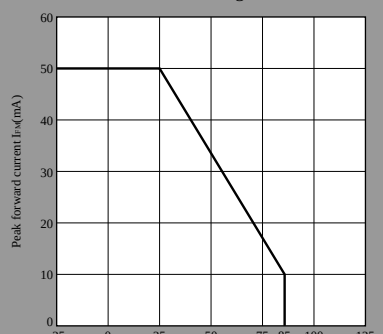

Forward Current vs. Forward Voltage(Note)



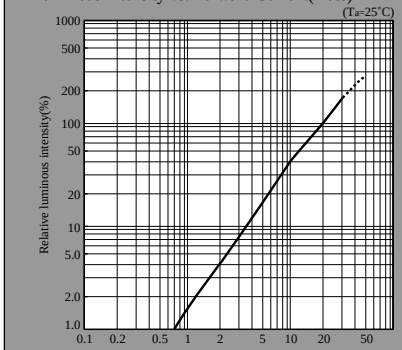

Luminous Intensity vs. Ambient Temperature(Note)



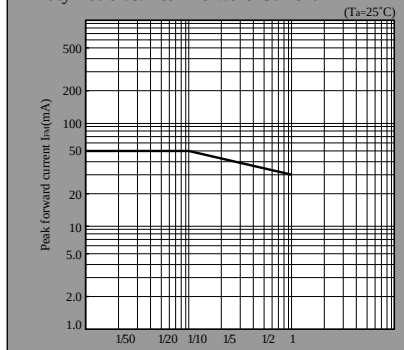

Peak Forward Current Derating Curve




Luminous Intensity vs. Forward Current(Note)




Duty Ratio vs. Peak Forward Current

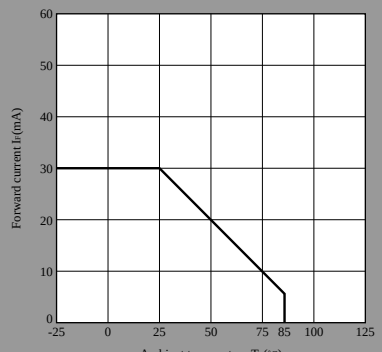



Note)Characteristics shown in diagrams are typical values. (not assurance value)

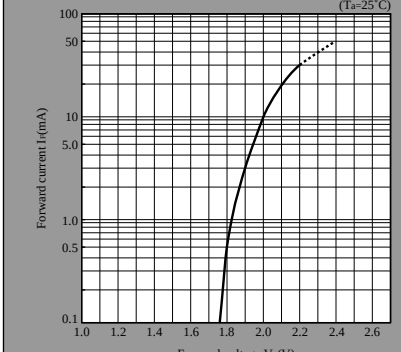
# LED Lamp Characteristics Diagrams

## EG series

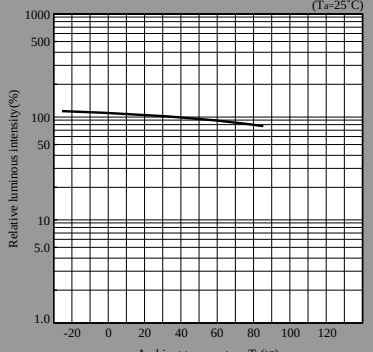
Forward Current Derating Curve



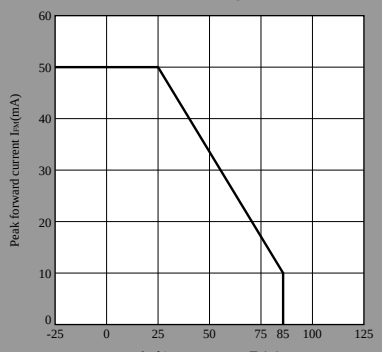

Forward Current vs. Forward Voltage(Note)



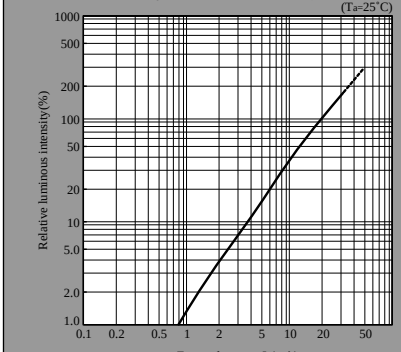

Luminous Intensity vs. Ambient Temperature(Note)



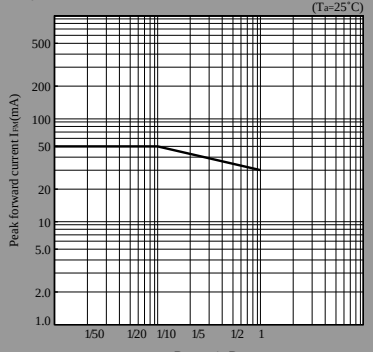

Peak Forward Current Derating Curve




Luminous Intensity vs. Forward Current(Note)

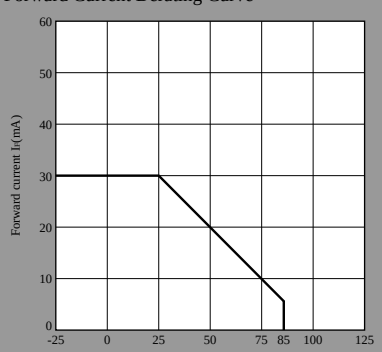



Duty Ratio vs. Peak Forward Current

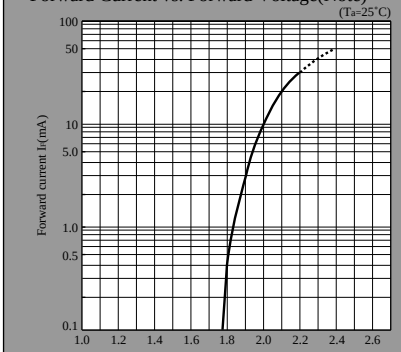



## KG series

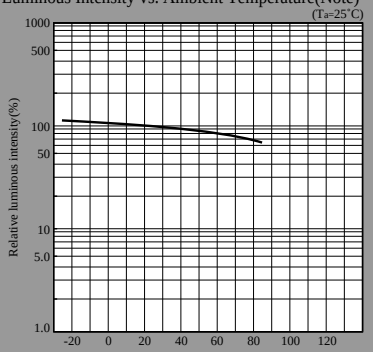
Forward Current Derating Curve



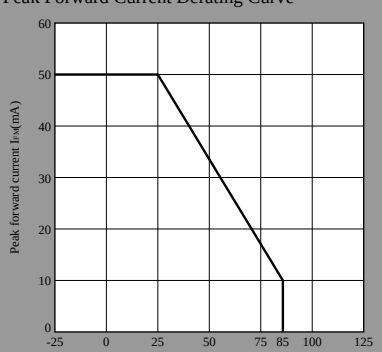

Forward Current vs. Forward Voltage(Note)



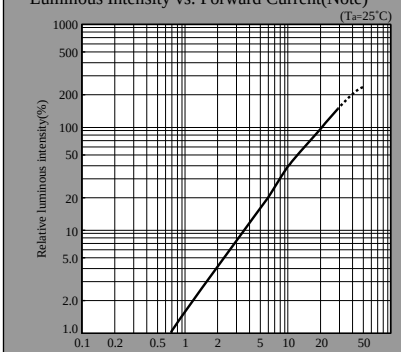

Luminous Intensity vs. Ambient Temperature(Note)



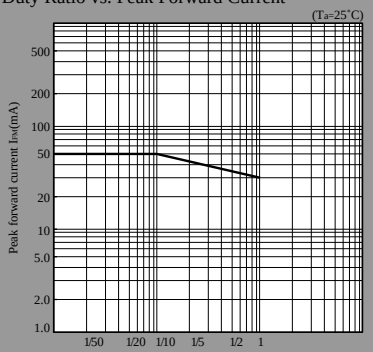

Peak Forward Current Derating Curve




Luminous Intensity vs. Forward Current(Note)



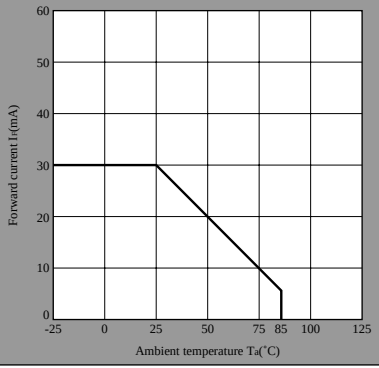

Duty Ratio vs. Peak Forward Current



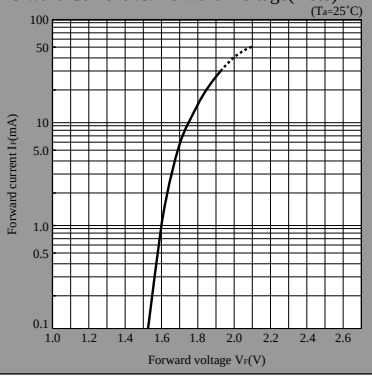

Note)Characteristics shown in diagrams are typical values. (not assurance value)

UR series

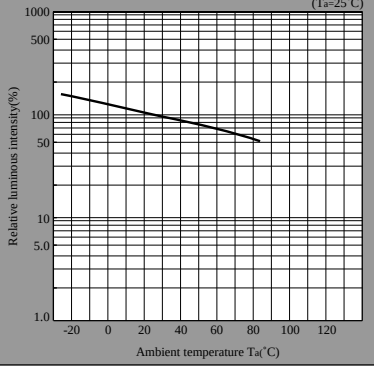
Forward Current Derating Curve



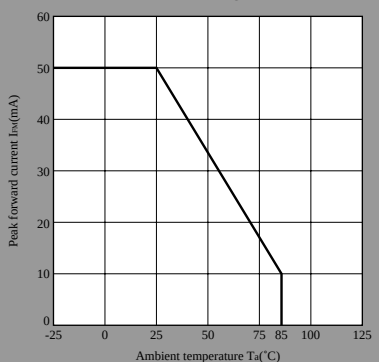

Forward Current vs. Forward Voltage(Note)



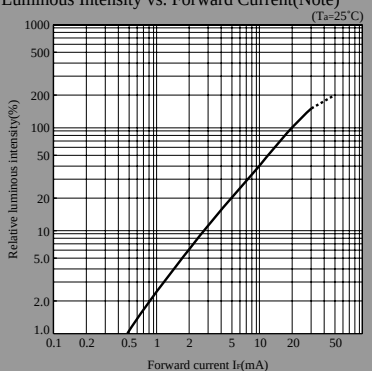

Luminous Intensity vs. Ambient Temperature(Note)



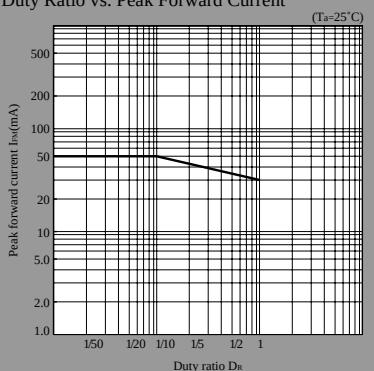

Peak Forward Current Derating Curve




Luminous Intensity vs. Forward Current(Note)




Duty Ratio vs. Peak Forward Current




Note)Characteristics shown in diagrams are typical values. (not assurance value)