

> Mechanical Specification:

(1) Dimension

- Chip size: 14 mil x 28 mil ($350 \pm 25 \mu\text{m} \times 715 \pm 25 \mu\text{m}$)
- Thickness: 5.9 mil ($150 \pm 10 \mu\text{m}$)
- P bonding pad: 2.8 mil ($70 \pm 10 \mu\text{m}$)
- N bonding pad: 2.8 mil ($70 \pm 10 \mu\text{m}$)

(2) Metallization

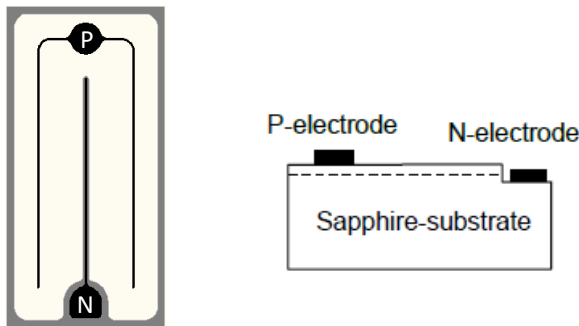
- Topside P electrode: Au alloy
- Topside N electrode: Au alloy

Features:

- High radiant flux
- Long operation life
- Lambertian radiation

Applications:

- Backlighting
- Lighting



> Electro-optical Characteristics at 25°C: ⁽¹⁾

| Parameter | Symbol | Condition | Min. | Typ. | Max. | Unit | |
|------------------------------------|--------|------------|------------|------|------|------|----|
| Forward Voltage | Vf0 | If = 1μA | 1.8 | - | - | V | |
| | Vf2 | If = 120mA | - | 3.1 | 3.2 | V | |
| Reverse Current | Ir | Vr = 5V | - | - | 2.0 | μA | |
| Dominant Wavelength ⁽²⁾ | λd | If = 120mA | 445 | - | 465 | nm | |
| Spectra Half-width | Δλ | If = 120mA | - | 25 | - | nm | |
| Radiant Flux ⁽³⁾⁽⁴⁾ | Po | A70 | If = 120mA | 210 | - | 220 | mW |
| | | A71 | | 220 | - | 230 | |
| | | A72 | | 230 | - | 240 | |

Note:

(1) ESD protection during chip handling is recommended.

(2) Basically, the wavelength span is 20nm; however, customers' special requirements are also welcome.

(3) Radiant flux is determined by using an Ag-plated TO-can header without an encapsulant.

(4) Radiant flux measurement allows a tolerance of $\pm 15\%$.

> Absolute Maximum Ratings:

| Parameter | Symbol | Condition | Rating | Unit |
|------------------------------|------------------|-----------------------------|----------------------|------------------|
| Forward DC Current | I_f | $T_a = 25^\circ\text{C}$ | ≤ 240 | mA |
| Reverse Voltage | V_r | $T_a = 25^\circ\text{C}$ | ≤ 5 | V |
| Junction Temperature | T_j | - | ≤ 125 | $^\circ\text{C}$ |
| Storage Temperature | T_{stg} | Chip | $-40 \sim +85$ | $^\circ\text{C}$ |
| | | Chip-on-tape/storage | $5 \sim 35$ | $^\circ\text{C}$ |
| | | Chip-on-tape/transportation | $-20 \sim +65$ | $^\circ\text{C}$ |
| Temperature during Packaging | - | - | $280(<10\text{sec})$ | $^\circ\text{C}$ |

Note: Maximum ratings are package dependent. The above maximum ratings were determined using a Metal Core Printed Circuit Board (MCPCB) without an encapsulant. Stresses in excess of the absolute maximum ratings such as forward current and junction temperature may cause damage to the LED.

> Characteristic Curves:

Fig.1 – Relative luminous Intensity vs. Forward Current

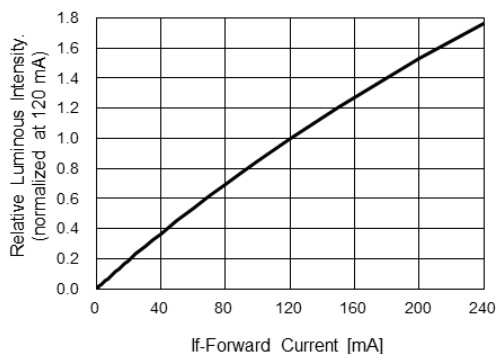


Fig.2 – Forward Current vs. Forward Voltage

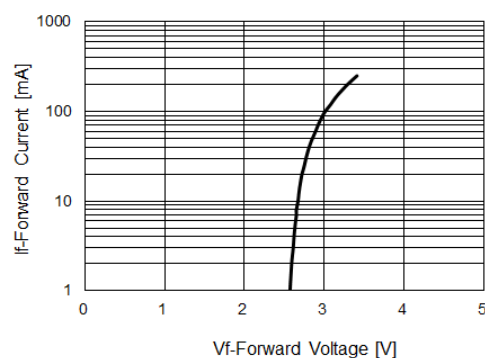


Fig.3 – Relative Intensity (@120mA) vs. Ambient Temperature

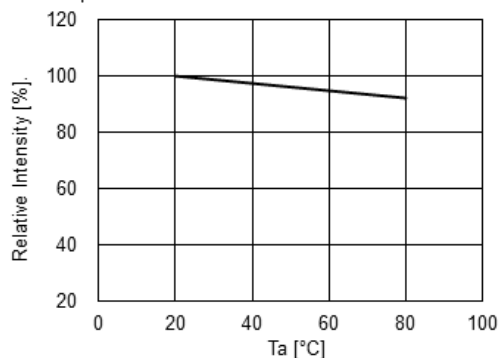


Fig.4 – Forward Voltage (@120mA) vs. Ambient Temperature

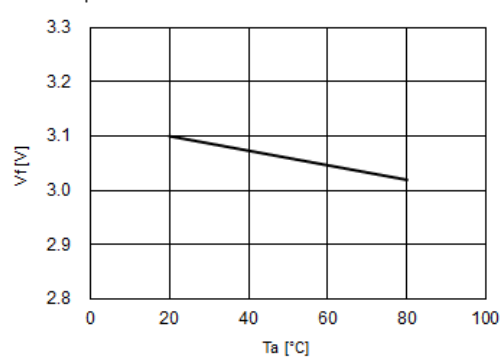


Fig.5 – Dominant Wavelength (@120mA) vs. Ambient Temperature

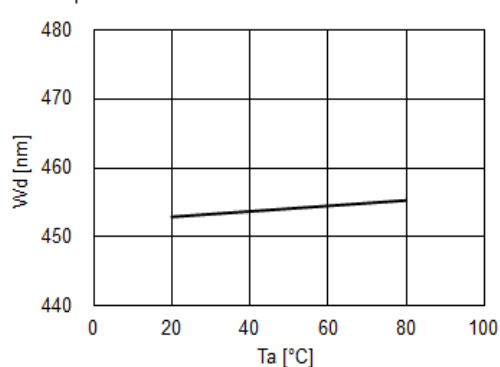


Fig.6 – Maximum Driving Forward DC Current vs. Ambient Temperature (De-rating based on $T_j \text{ max.} = 125^\circ\text{C}$)

