

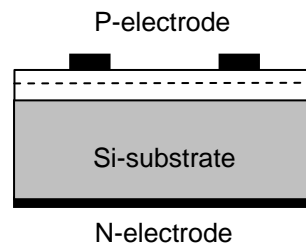
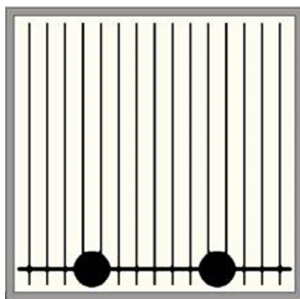
> Mechanical Specification:

(1) Dimension

- Chip size: 42 mil x 42 mil ($1070\pm 25\ \mu\text{m}$ x $1070\pm 25\ \mu\text{m}$)
- Thickness: 8.8 mil ($225\pm 25\ \mu\text{m}$)
- P bonding pad: 4.7 mil ($120\pm 10\ \mu\text{m}$)

(2) Metallization

- Topside P electrode: Au alloy(x2)
- Backside N electrode: Au alloy



Features:

- High luminous intensity
- Thin film structure
- Vertical electrode
- High driving current

Applications:

- Traffic signal
- Lighting

> Electro-optical Characteristics at 25°C:

| Parameter | Symbol | Condition | Min. | Typ. | Max. | Unit | |
|--------------------------------------|-----------------|----------------------|------------|-------|------|---------|-----|
| Forward Voltage | Vf1 | If = 10 μ A | 1.3 | - | - | V | |
| | Vf2 | If = 350mA | - | 2.2 | 2.6 | V | |
| Reverse Current | I _r | V _r = 10V | - | - | 5.0 | μ A | |
| Peak Wavelength | λ_p | If = 350mA | - | 591 | - | nm | |
| Dominant Wavelength ⁽¹⁾ | λ_d | If = 350mA | 584 | 589 | 594 | nm | |
| Spectra Half-width | $\Delta\lambda$ | If = 350mA | - | 15 | - | nm | |
| Luminous Intensity ⁽²⁾⁽³⁾ | I _v | H16 | If = 350mA | 15000 | - | - | mcd |
| | | H17 | | 17000 | - | - | |
| | | H18 | | 19000 | - | - | |

Note:

(1) Basically, the wavelength span is 10nm; however, customers' special requirements are also welcome.

(2) Customers' special requirements are also welcome.

(3) Luminous intensity is measured by EPISTAR's equipment on bare chips.

> Absolute Maximum Ratings:

| Parameter | Symbol | Condition | Rating | Unit |
|------------------------------|--------|-----------------------------|-------------|------|
| Forward DC Current | If | Ta = 25°C | ≤ 700 | mA |
| Reverse Voltage | Vr | Ta = 25°C | ≤ 10 | V |
| Junction Temperature | Tj | - | ≤ 125 | °C |
| Storage Temperature | Tstg | Chip | -40 ~ +85 | °C |
| | | Chip-on-tape/storage | 5 ~ 35 | °C |
| | | Chip-on-tape/transportation | -20 ~ +65 | °C |
| Temperature during Packaging | - | - | 280(<10sec) | °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

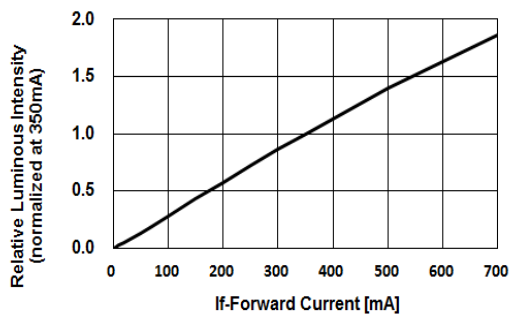


Fig.2 – Forward Current vs. Forward Voltage

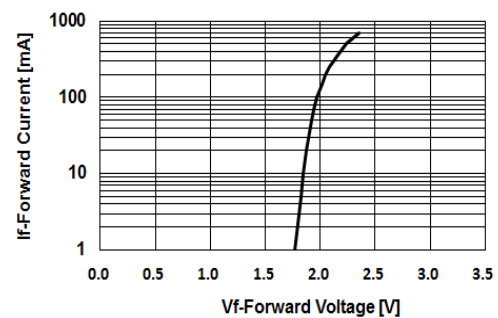


Fig.3 – Relative Intensity (@350mA) vs. Ambient Temperature

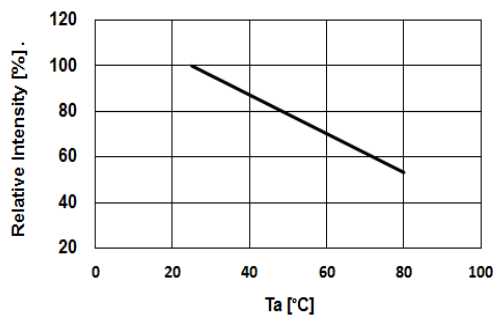


Fig.4 – Forward Voltage (@350mA) vs. Ambient Temperature

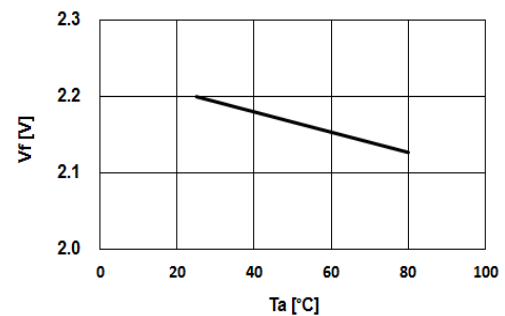


Fig.5 – Dominant Wavelength (@350mA) vs. Ambient Temperature

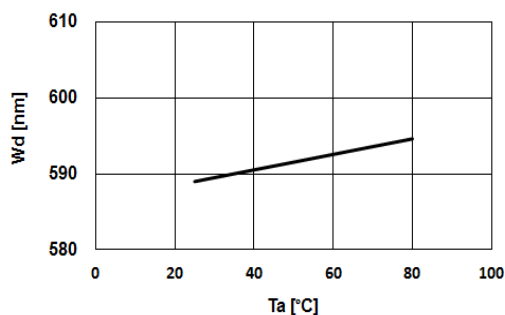


Fig.6 – Maximum Driving Forward DC Current vs. Ambient Temperature (De-rating based on Tj max. = 125°C)

