

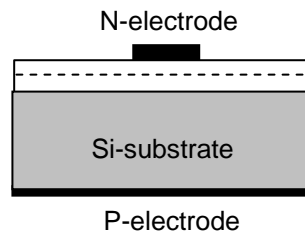
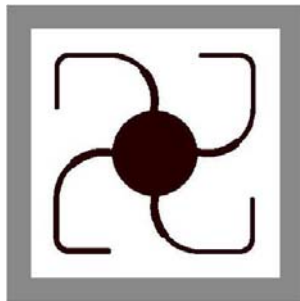
> Mechanical Specification:

(1) Dimension

- Chip size: 14 mil x 14 mil ($355\pm 25\ \mu\text{m}$ x $355\pm 25\ \mu\text{m}$)
- Thickness: 8.8 mil ($225\pm 25\ \mu\text{m}$)
- N bonding pad: 3.9 mil ($100\pm 10\ \mu\text{m}$)

(2) Metallization

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



Features:

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

Applications:

- Outdoor display
- Traffic signal
- Automotive

> 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 = 20mA | - | 2.1 | 2.5 | V | |
| Reverse Current | Ir | Vr = 10V | - | - | 5.0 | μ A | |
| Peak Wavelength | λ_p | If = 20mA | - | 631 | - | nm | |
| Dominant Wavelength ⁽¹⁾ | λ_d | If = 20mA | 619 | 624 | 629 | nm | |
| Spectra Half-width | $\Delta\lambda$ | If = 20mA | - | 20 | - | nm | |
| Luminous Intensity ⁽²⁾⁽³⁾ | Iv | E16 | If = 20mA | 500 | - | - | mcd |
| | | E17 | | 550 | - | - | |
| | | E18 | | 600 | - | - | |
| | | E19 | | 650 | - | - | |

Note:

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

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(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 | ≤ 70 | mA |
| Reverse Voltage | Vr | Ta = 25°C | ≤ 10 | V |
| Junction Temperature | Tj | - | ≤ 115 | °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 Printed Circuit Board (PCB) 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

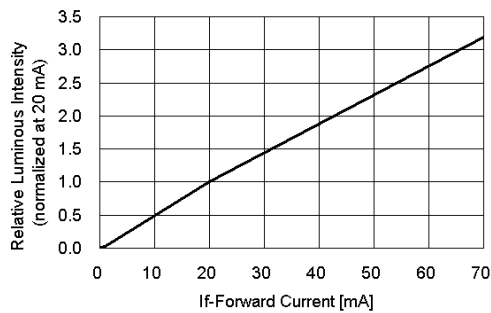


Fig.2 – Forward Current vs. Forward Voltage

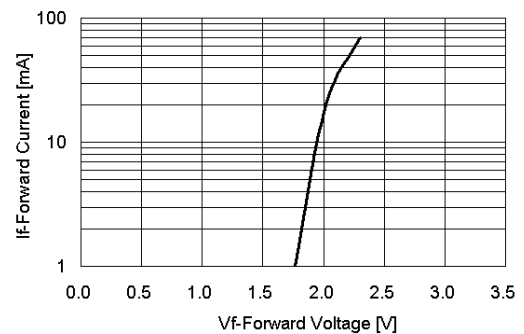


Fig.3 – Relative Intensity (@20mA) vs. Ambient Temperature

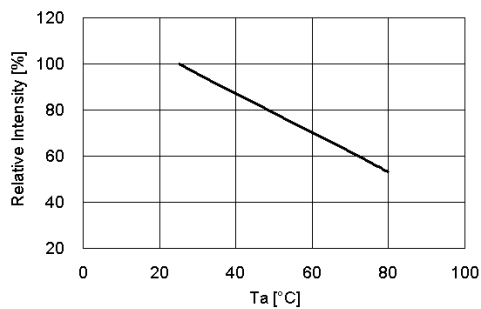


Fig.4 – Forward Voltage (@20mA) vs. Ambient Temperature

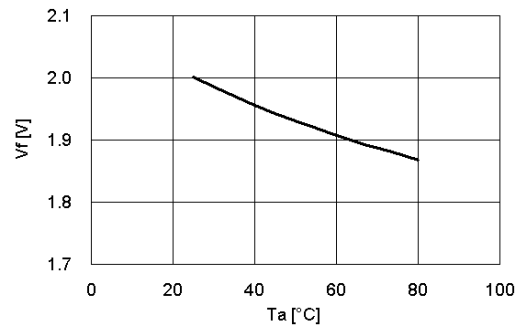


Fig.5 – Dominant Wavelength (@20mA) vs. Ambient Temperature

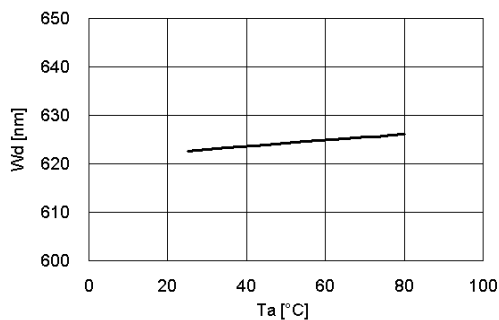


Fig.6 – Maximum Driving Forward DC Current vs. Ambient Temperature (De-rating based on Tj max. = 115°C)

