

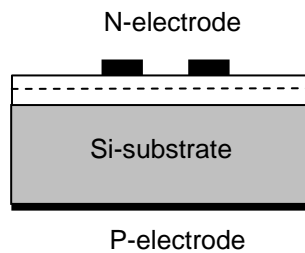
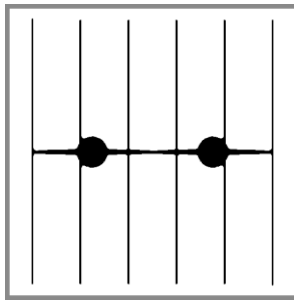
### > Mechanical Specification:

#### (1) Dimension

- Chip size: 42 mil x 42 mil (1066±25 μm x 1066±25 μm)
- Thickness: 6.7 mil (170±25 μm)
- N bonding pad: 4.3 mil (110±10 μm)

#### (2) Metallization

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



#### Features:

- High radiant flux
- Thin film structure
- Vertical electrode
- High driving current

#### Applications:

- Automotive
- Data Communication
- Surveillance

### > Electro-optical Characteristics at 25°C:

| Parameter                      | Symbol | Condition  | Min.       | Typ. | Max. | Unit |    |
|--------------------------------|--------|------------|------------|------|------|------|----|
| Forward Voltage                | Vf1    | If = 10μA  | 0.7        | -    | -    | V    |    |
|                                | Vf2    | If = 350mA | -          | 1.6  | 1.9  | V    |    |
| Reverse Current                | Ir     | Vr = 10V   | -          | -    | 5.0  | μA   |    |
| Peak Wavelength <sup>(1)</sup> | λp     | If = 350mA | 840        | 855  | 870  | nm   |    |
| Spectra Half-width             | Δλ     | If = 350mA | -          | 25   | -    | nm   |    |
| Radiant flux <sup>(2)(3)</sup> | Po     | H13        | If = 350mA | 220  | -    | -    | mW |
|                                |        | H14        |            | 250  | -    | -    |    |

Note:

(1) Basically, the wavelength span is 30nm; however, customers' special requirements are also welcome.

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(3) Radiant flux is measured by EPISTAR's equipment on bare chips.

## > Absolute Maximum Ratings:

| Parameter                    | Symbol | Condition                   | Rating      | Unit |
|------------------------------|--------|-----------------------------|-------------|------|
| Forward DC Current           | If     | Ta = 25°C                   | ≤ 1000      | 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 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 Radiant Flux vs. Forward Current

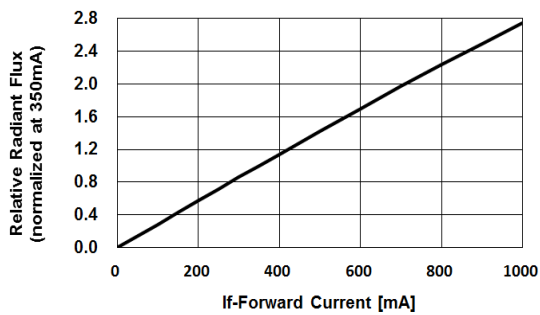


Fig.2 – Forward Current vs. Forward Voltage

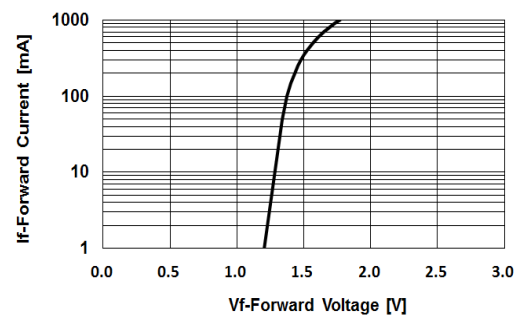


Fig.3 – Relative Radiant Flux (@350mA) vs. Ambient Temperature

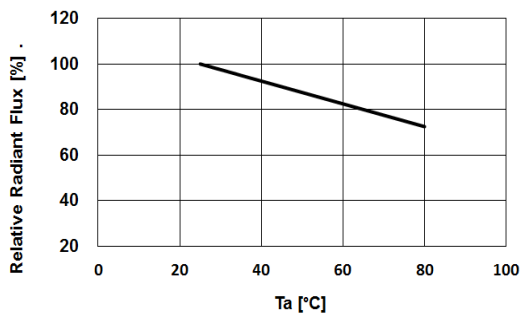


Fig.4 – Forward Voltage (@350mA) vs. Ambient Temperature

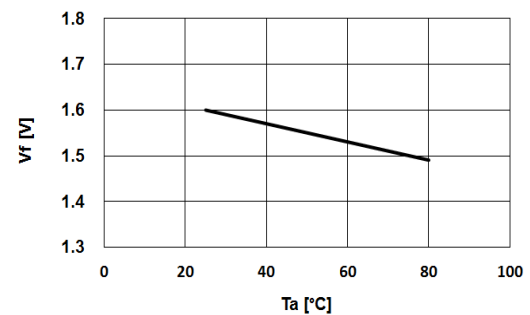


Fig.5 – Peak Wavelength (@350mA) vs. Ambient Temperature

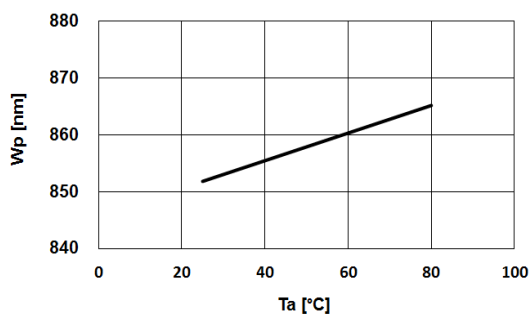


Fig.6 – Maximum Driving Forward DC Current vs. Ambient Temperature (De-rating based on Tj max. = 115°C)

