

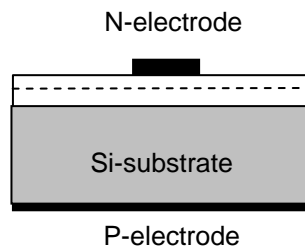
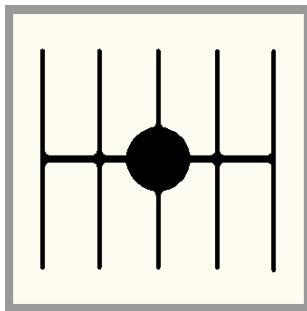
### > Mechanical Specification:

#### (1) Dimension

- Chip size: 20 mil x 20 mil ( $508 \pm 25 \mu\text{m} \times 508 \pm 25 \mu\text{m}$ )
- Thickness: 6.7 mil ( $170 \pm 25 \mu\text{m}$ )
- N bonding pad: 4.1 mil ( $105 \pm 10 \mu\text{m}$ )

#### (2) Metallization

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



#### Features:

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

#### Applications:

- Data Communication
- Surveillance

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

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit	
Forward Voltage	Vf1	If = 10 $\mu$ A	0.8	-	-	V	
	Vf2	If = 250mA	-	1.6	1.8	V	
Reverse Current	Ir	Vr = 10V	-	-	5.0	$\mu$ A	
Peak Wavelength <sup>(1)</sup>	$\lambda_p$	If = 250mA	840	855	870	nm	
Spectra Half-width	$\Delta\lambda$	If = 250mA	-	33	-	nm	
Radiant flux <sup>(2)(3)</sup>	Po	H9	If = 250mA	110	-	-	mW
		H10		130	-	-	
		H11		160	-	-	

Note:

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

(2) Customers' special requirements are also welcome.

(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	≤ 500	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

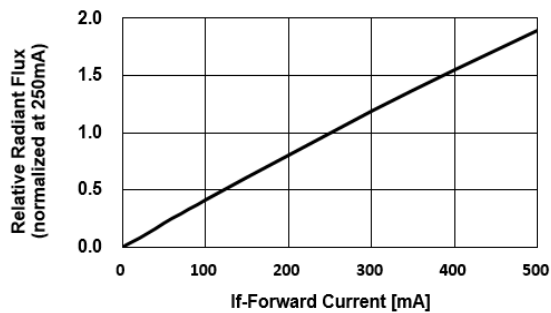


Fig.2 – Forward Current vs. Forward Voltage

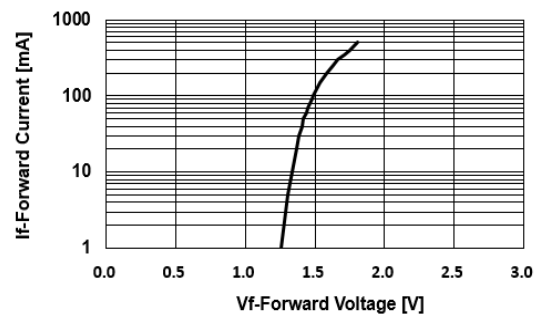


Fig.3 – Relative Radiant Flux (@250mA) vs. Ambient Temperature

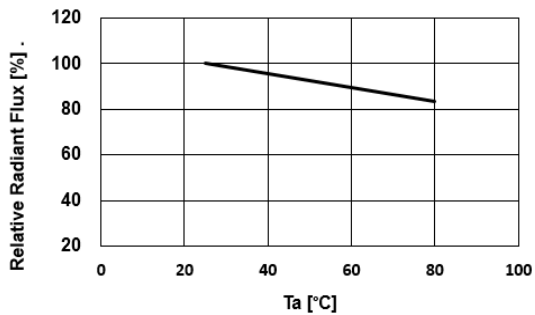


Fig.4 – Forward Voltage (@250mA) vs. Ambient Temperature

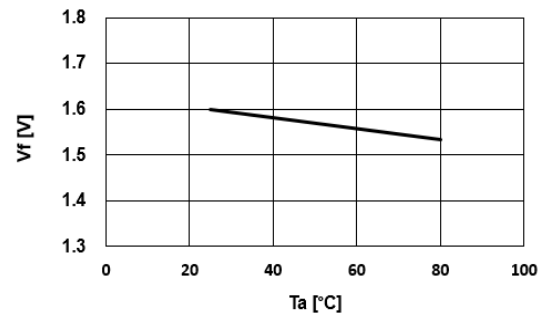


Fig.5 – Peak Wavelength (@250mA) vs. Ambient Temperature

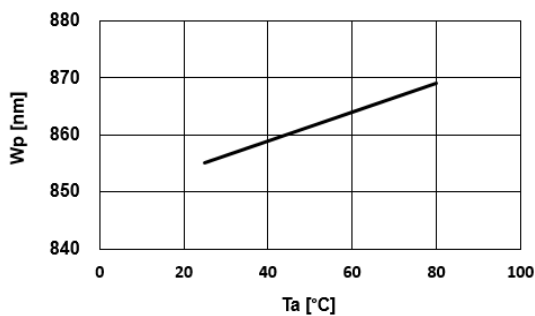


Fig.6 – Maximum Driving Forward DC Current vs. Ambient Temperature (De-rating based on Tj max. = 115°C)

