

> Mechanical Specification:

(1) Dimension

- Chip size: 42 mil x 42 mil ($1076\pm 25\ \mu\text{m}$ x $1076\pm 25\ \mu\text{m}$)
- Thickness: 8.8 mil ($225\pm 25\ \mu\text{m}$)
- N bonding pad: 4.7 mil ($120\pm 10\ \mu\text{m}$)

(2) Metallization

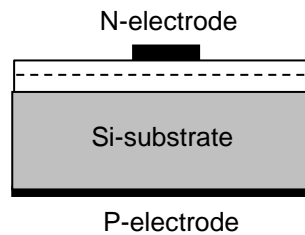
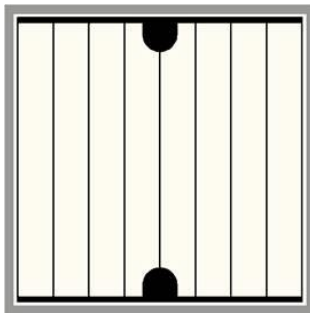
- Topside N electrode (x2): Au alloy
- Backside P electrode: Au alloy

Features:

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

Applications:

- Horticulture lighting
- Medical appliances



> 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	-	2.1	2.2	V
Reverse Current	Ir	Vr = 10V	-	-	5.0	μ A
Peak Wavelength ⁽¹⁾	λ_p	If = 350mA	650	660	670	nm
Spectra Half-width	$\Delta\lambda$	If = 350mA	-	16	-	nm
Radiant flux ⁽²⁾⁽³⁾	Po	H15	360	-	-	mW
		H16	400	-	-	

Note:

(1) Basically, the wavelength span is 20nm; 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	≤ 700	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

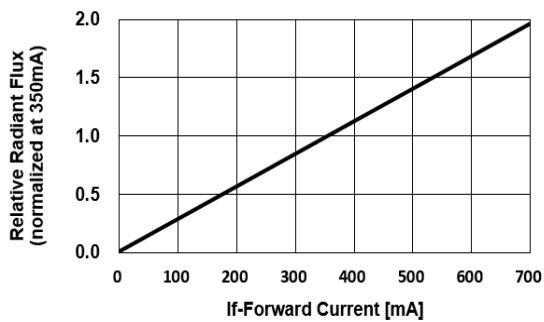


Fig.2 – Forward Current vs. Forward Voltage

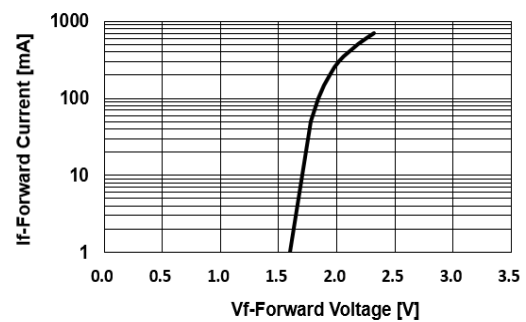


Fig.3 – Relative Radiant Flux (@350mA) vs. Ambient Temperature

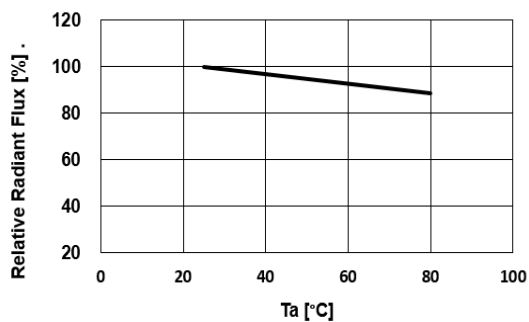


Fig.4 – Forward Voltage (@350mA) vs. Ambient Temperature

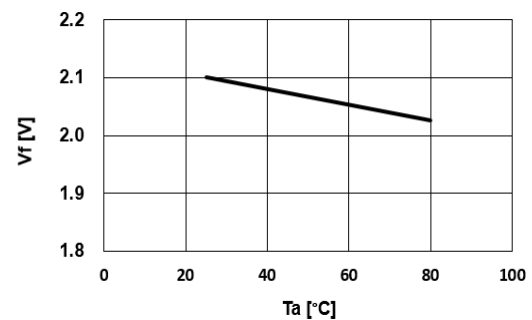


Fig.5 – Peak Wavelength (@350mA) vs. Ambient Temperature

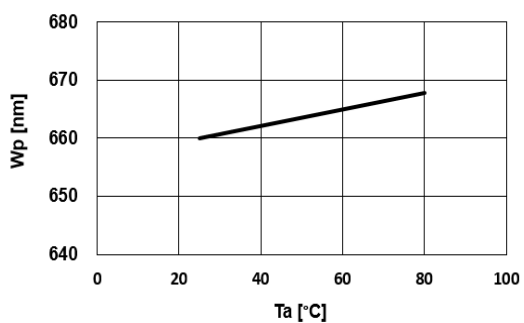


Fig.6 – Maximum Driving Forward DC Current vs. Ambient Temperature (De-rating based on Tj max. = 115°C)

