

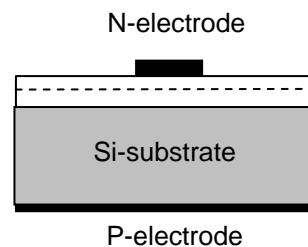
> Mechanical Specification:

(1) Dimension

- Chip size: 8 mil x 8 mil ($190\pm 25\ \mu\text{m}$ x $190\pm 25\ \mu\text{m}$)
- Thickness: 6.7 mil ($170\pm 25\ \mu\text{m}$)
- N bonding pad: 3.5 mil ($90\pm 10\ \mu\text{m}$)

(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:

- Backlighting
- Signage and channel letter
- Portable light source
- Decorating 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 = 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	E12	If = 20mA	300	-	-	mcd
		E13		350	-	-	
		E14		400	-	-	

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	≤ 40	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

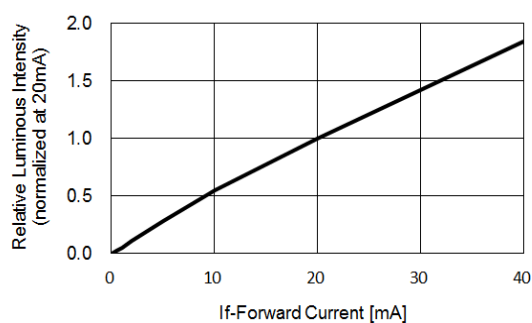


Fig.2 – Forward Current vs. Forward Voltage

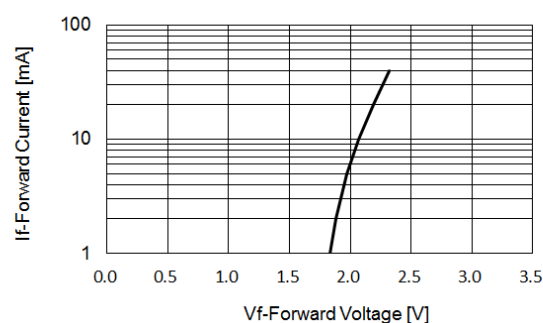


Fig.3 – Relative Intensity (@20mA) vs. Ambient Temperature

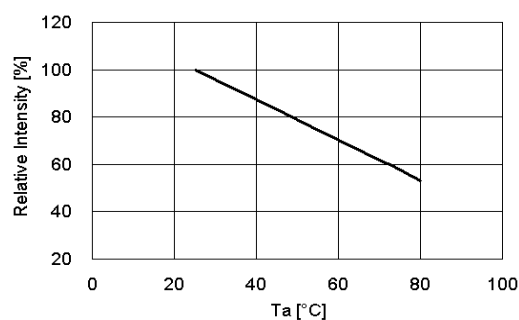


Fig.4 – Forward Voltage (@20mA) vs. Ambient Temperature

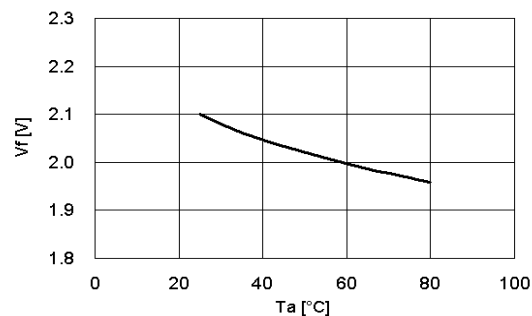


Fig.5 – Dominant Wavelength (@20mA) vs. Ambient Temperature

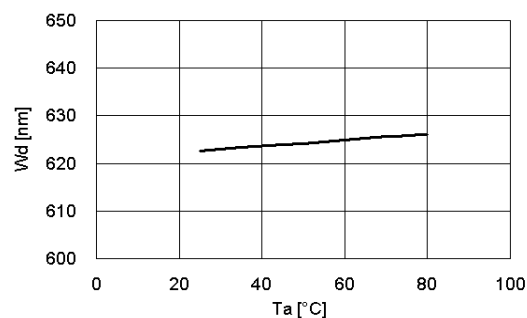


Fig.6 – Maximum Driving Forward DC Current vs. Ambient Temperature (De-rating based on Tj max. = 115°C)

