

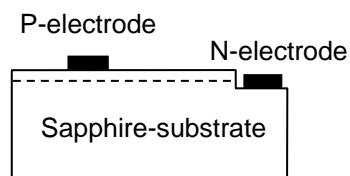
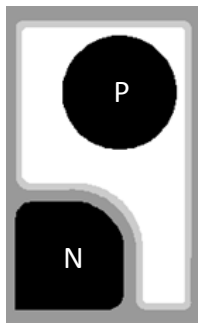
> Mechanical Specification:

(1) Dimension

- Chip size: $210 \pm 40 \mu\text{m} \times 130 \pm 40 \mu\text{m}$
- Thickness: 4.3 mil ($110 \pm 10 \mu\text{m}$)
- P bonding pad: 3.0 mil ($75 \pm 10 \mu\text{m}$)
- N bonding pad: 2.8 mil ($70 \pm 10 \mu\text{m}$)

(2) Metallization

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



Features:

- High luminous intensity
- Long operation life
- 100% probing test
- Passivation layer on top

Applications:

- RGB display

> Electro-optical Characteristics at 25°C: ⁽¹⁾

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit	
Forward Voltage	Vf1	If = 10μA	2.0	-	-	V	
	Vf2	If = 5mA	-	2.9	3.2	V	
Reverse Current	Ir	Vr = 5V	-	-	2.0	μA	
Dominant Wavelength ⁽²⁾	λd	If = 5mA (2nm/bin)	460	-	474	nm	
Spectra Half-width	Δλ	If = 5mA	-	25	-	nm	
Luminous intensity ⁽³⁾	Iv	I14	If = 5mA λd=460-464nm	90	-	110	mcd
		I15		110	-	130	
		I14	If = 5mA λd=464-474nm	90	-	110	
		I15		110	-	130	
		I16		130	-	150	
		I17		150	-	170	

Note:

(1) ESD protection during chip handling is recommended.

(2) Basically, the wavelength span is 14nm; however, 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	≤ 20	mA
Reverse Voltage	Vr	Ta = 25°C	≤ 5	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

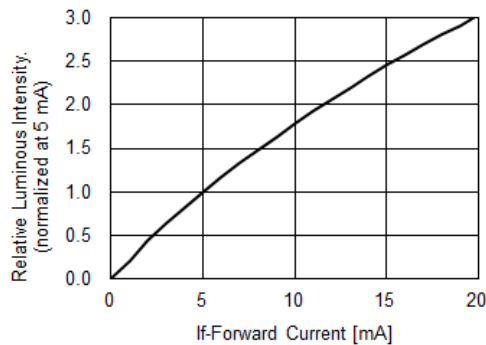


Fig.2 – Forward Current vs. Forward Voltage

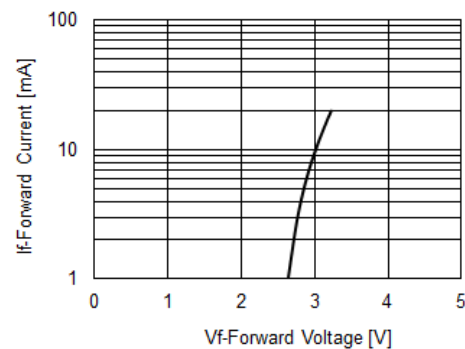


Fig.3 – Relative Intensity (@5mA) vs. Ambient Temperature

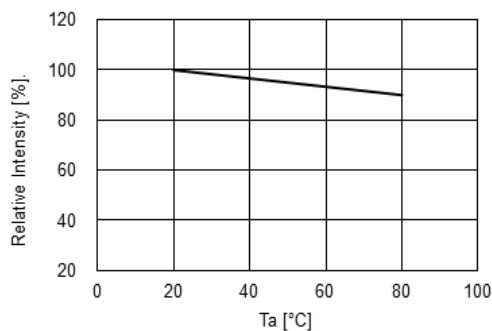


Fig.4 – Forward Voltage (@5mA) vs. Ambient Temperature

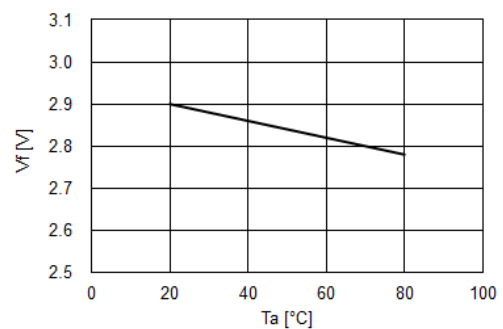


Fig.5 – Dominant Wavelength (@5mA) vs. Ambient Temperature

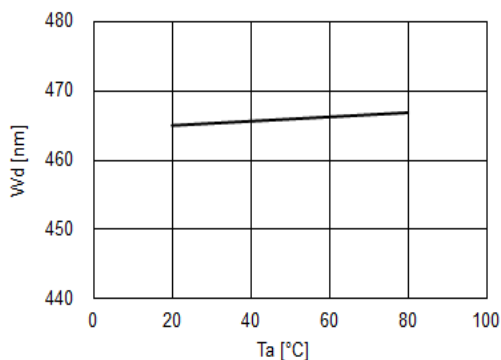


Fig.6 – Maximum Driving Forward DC Current vs. Ambient Temperature (De-rating based on Tj max. = 115°C)

