

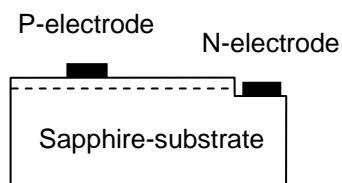
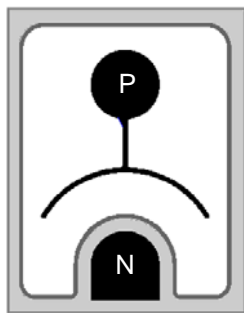
### > Mechanical Specification:

#### (1) Dimension

- Chip size:  $355 \pm 40 \mu\text{m} \times 280 \pm 40 \mu\text{m}$
- Thickness: 4.3 mil ( $110 \pm 10 \mu\text{m}$ )
- P bonding pad: 3.1 mil ( $80 \pm 10 \mu\text{m}$ )
- N bonding pad: 3.1 mil ( $80 \pm 10 \mu\text{m}$ )

#### (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: <sup>(1)</sup>

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit	
Forward Voltage	Vf1	If = 10μA	1.8	-	-	V	
	Vf2	If = 20mA	-	2.7	3.2	V	
Reverse Current	Ir	Vr = 5V	-	-	2.0	μA	
Dominant Wavelength <sup>(2)</sup>	λd	If = 20mA	515	-	535	nm	
Spectra Half-width	Δλ	If = 20mA	-	35	-	nm	
Luminous intensity <sup>(3)</sup>	Iv	If = 20mA	I43	1400	-	1500	mcd
			I44	1500	-	1600	
			I45	1600	-	1700	
			I46	1700	-	1800	

Note:

(1) ESD protection during chip handling is recommended.

(2) Basically, the wavelength span is 20nm; 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	≤ 35	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

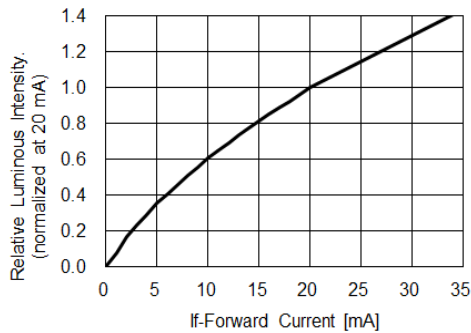


Fig.2 – Forward Current vs. Forward Voltage

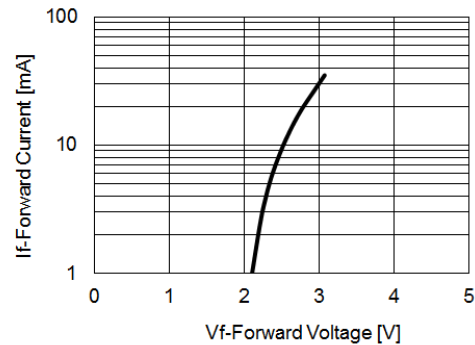


Fig.3 – Relative Intensity (@20mA) vs. Ambient Temperature

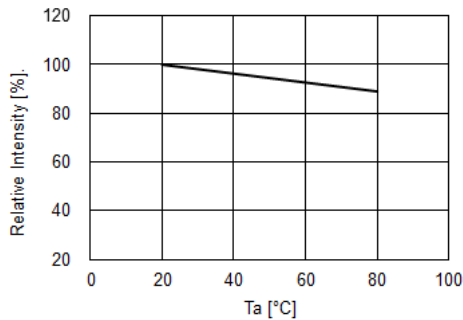


Fig.4 – Forward Voltage (@20mA) vs. Ambient Temperature

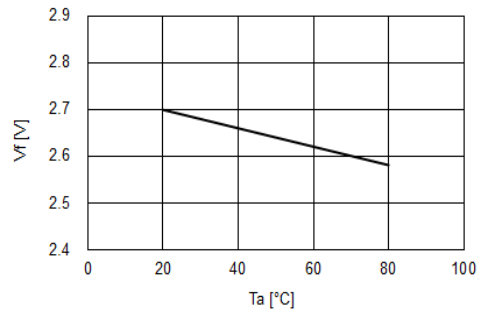


Fig.5 – Dominant Wavelength (@20mA) vs. Ambient Temperature

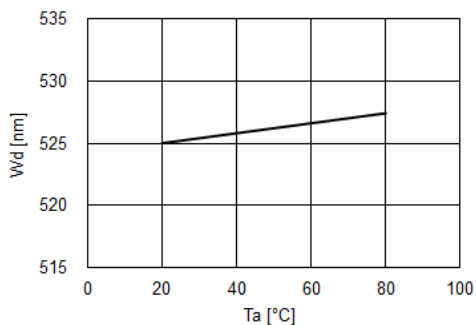


Fig.6 – Maximum Driving Forward DC Current vs. Ambient Temperature (De-rating based on Tj max. = 115°C)

