

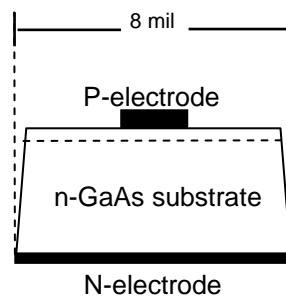
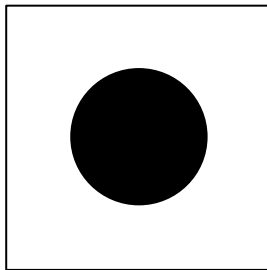
### > Mechanical Specification:

#### (1) Dimension

- Chip size: 8 mil x 8 mil ( $203\pm 25\ \mu\text{m}$  x  $203\pm 25\ \mu\text{m}$ )
- Thickness: 6.7 mil ( $170\pm 25\ \mu\text{m}$ )
- P bonding pad: 3.9 mil ( $100\pm 10\ \mu\text{m}$ )

#### (2) Metallization

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



#### Features:

- High luminous intensity
- ITO layer on top

#### Applications:

- Mobile appliances
- Indoor application
- Consumer electronic

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

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit	
Forward Voltage	Vf1	If = 10μA	1.35	-	-	V	
	Vf2	If = 20mA	-	2.05	2.4	V	
Reverse Current	Ir	Vr = 10V	-	-	10	μA	
Peak Wavelength	$\lambda_p$	If = 20mA	-	587	-	nm	
Dominant Wavelength <sup>(1)</sup>	$\lambda_d$	If = 20mA	581	585	589	nm	
Spectra Half-width	$\Delta\lambda$	If = 20mA	-	15	-	nm	
Luminous Intensity <sup>(2)(3)</sup>	Iv	If = 20mA	E4	45	-	-	mcd
			E5	60	-	-	
			E6	75	-	-	
			E7	90	-	-	

Note:

(1) Basically, the wavelength span is 8nm; 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.

This product is made and sold under one or more of the following patents: Taiwan Patent Certificate Nos.: 098998; 113696; 128153; 131010; 144415; 148677; 170789; 183481; 183846; U.S. Patent Nos.: 5,008,718; 5,164,798; 5,233,204; 5,789,768; 6,078,064; 6,057,562; 6,225,648; 6,552,367; 6,876,005, and any foreign counterparts.

## > Absolute Maximum Ratings:

Parameter	Symbol	Condition	Rating	Unit
Forward DC Current	$I_f$	$T_a = 25^\circ\text{C}$	$\leq 30$	mA
Reverse Voltage	$V_r$	$T_a = 25^\circ\text{C}$	$\leq 10$	V
Junction Temperature	$T_j$	-	$\leq 115$	$^\circ\text{C}$
Storage Temperature	$T_{stg}$	Chip	$-40 \sim +85$	$^\circ\text{C}$
		Chip-on-tape/storage	$5 \sim 35$	$^\circ\text{C}$
		Chip-on-tape/transportation	$-20 \sim +65$	$^\circ\text{C}$
Temperature during Packaging	-	-	$280(<10\text{sec})$	$^\circ\text{C}$

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

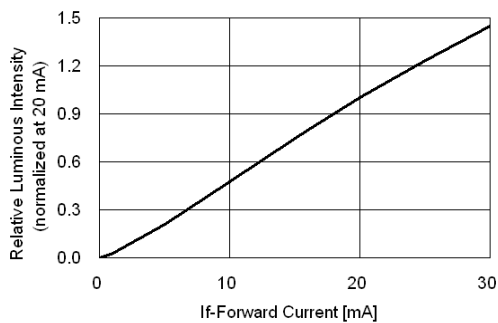


Fig.2 – Forward Current vs. Forward Voltage

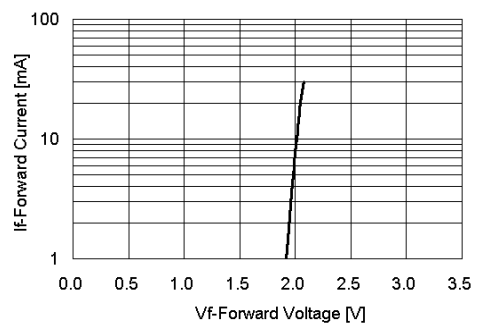


Fig.3 – Relative Intensity (@20mA) vs. Ambient Temperature

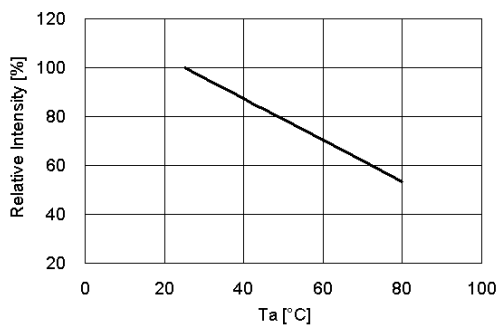


Fig.4 – Forward Voltage (@20mA) vs. Ambient Temperature

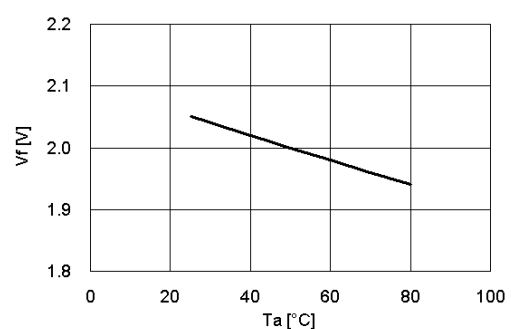


Fig.5 – Dominant Wavelength (20mA) vs. Ambient Temperature

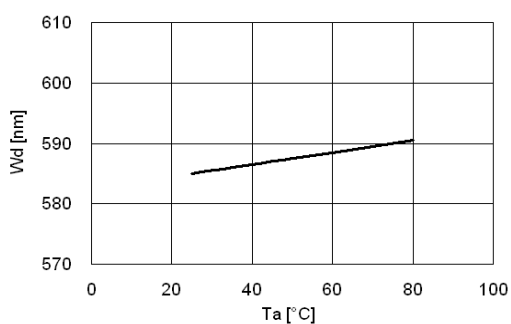


Fig.6 – Maximum Driving Forward DC Current vs. Ambient Temperature (Derating based on  $T_j \text{ max.} = 115^\circ\text{C}$ )

