

> Mechanical Specification:

(1) Dimension

- Chip size: 21 mil x 43 mil ($540 \pm 25 \mu\text{m} \times 1100 \pm 25 \mu\text{m}$)
- Thickness: 5.9 mil ($150 \pm 10 \mu\text{m}$)
- P bonding pad: 3.0 mil ($76 \pm 10 \mu\text{m}$)
- N bonding pad: 2.8 mil ($70 \pm 10 \mu\text{m}$)

(2) Metallization

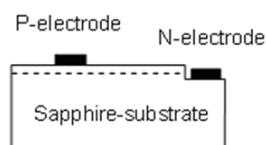
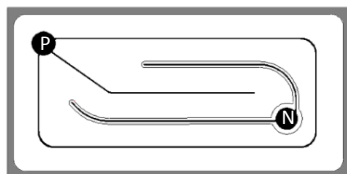
- Topside P electrode: Au alloy
- Topside N electrode: Au alloy

Features:

- High radiant flux
- Long operation life
- Lambertian radiation

Applications:

- TV backlighting



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

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit	
Forward Voltage	Vf1	If = 10 μ A	1.6	-	-	V	
	Vf2	If = 350mA	-	3.3	3.4	V	
Reverse Current	Ir	Vr = 5V	-	-	2.0	μ A	
Dominant Wavelength ⁽²⁾	λ_d	If = 350mA	445	-	465	nm	
Spectra Half-width	$\Delta\lambda$	If = 350mA	-	25	-	nm	
Radiant Flux ⁽³⁾⁽⁴⁾	Po	A91	If = 350mA	540	-	560	mW
		A92		560	-	580	
		A93		580	-	600	
		A94		600	-	650	

Note:

(1) ESD protection during chip handling is recommended.

(2) Basically, the wavelength span is 20nm; however, customers' special requirements are also welcome.

(3) Radiant flux is determined by using an Ag-plated TO-can header without an encapsulant.

(4) Radiant flux measurement allows a tolerance of $\pm 15\%$.

> Absolute Maximum Ratings:

Parameter	Symbol	Condition	Rating	Unit
Forward DC Current	If	Ta = 25°C	≤ 450	mA
Reverse Voltage	Vr	Ta = 25°C	≤ 5	V
Junction Temperature	Tj	-	≤ 125	°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 Luminous Intensity vs. Forward Current

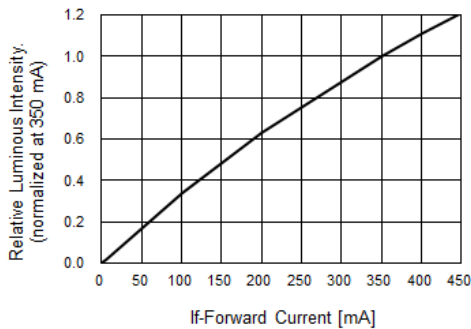


Fig.2 – Forward Current vs. Forward Voltage

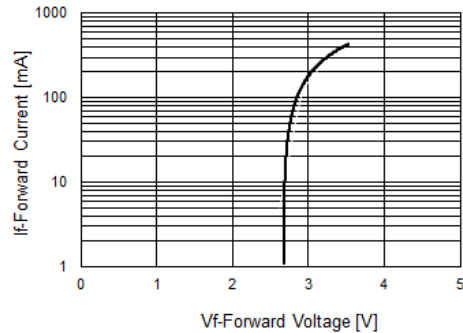


Fig.3 – Relative Intensity (@350mA) vs. Ambient Temperature

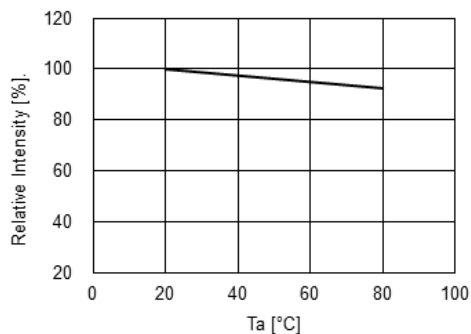


Fig.4 – Forward Voltage (@350mA) vs. Ambient Temperature

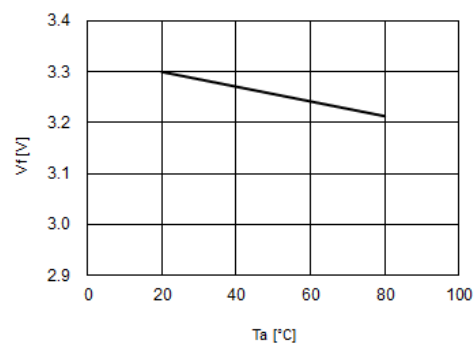


Fig.5 – Dominant Wavelength (@350mA) vs. Ambient Temperature

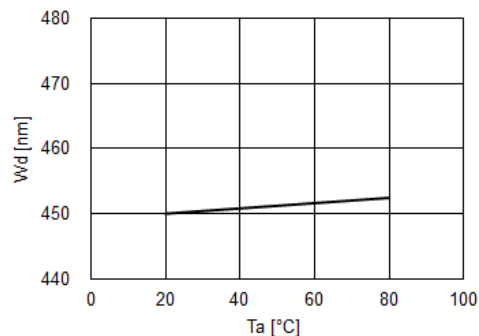


Fig.6 – Maximum Driving Forward DC Current vs. Ambient Temperature (De-rating based on Tj max. = 125°C)

