

> Mechanical Specification:

(1) Dimension

- Chip size: $457 \pm 40 \mu\text{m} \times 457 \pm 40 \mu\text{m}$
- Thickness: $150 \pm 10 \mu\text{m}$
- P bonding pad: $80 \pm 10 \mu\text{m}$
- N bonding pad: $80 \pm 10 \mu\text{m}$

(2) Metallization

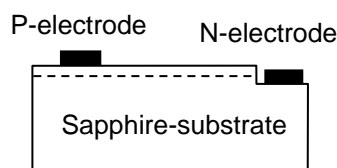
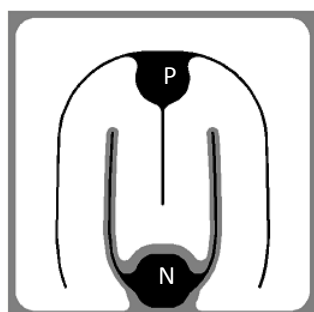
- Topside P electrode: Au alloy
- Topside N electrode: Au alloy

Features:

- High radiant flux
- Long operation life

Applications:

- Special lighting
- Architectural lighting



> 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 = 120mA	-	3.2	3.3	V	
Reverse Current	Ir	Vr = 5V	-	-	2.0	μ A	
Dominant Wavelength ⁽²⁾	λ_d	If = 120mA	515	-	535	nm	
Spectra Half-width	$\Delta\lambda$	If = 120mA	-	35	-	nm	
Radiant Flux ⁽³⁾⁽⁴⁾	Po	If = 120mA	A50	80	-	85	mW
			A51	85	-	90	
			A52	90	-	95	
			A53	95	-	100	

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	≤ 200	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 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

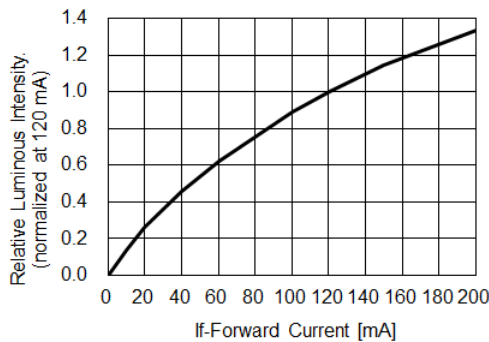


Fig.2 – Forward Current vs. Forward Voltage

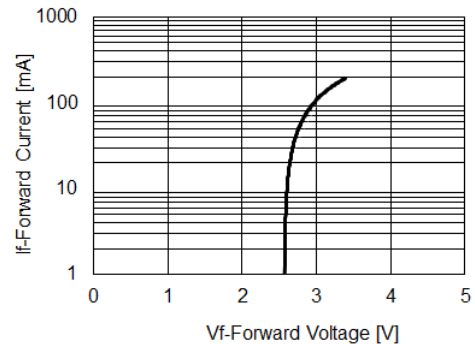


Fig.3 – Relative Intensity (@120mA) vs. Ambient Temperature

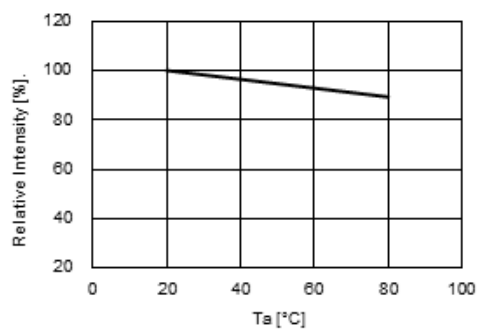


Fig.4 – Forward Voltage (@120mA) vs. Ambient Temperature

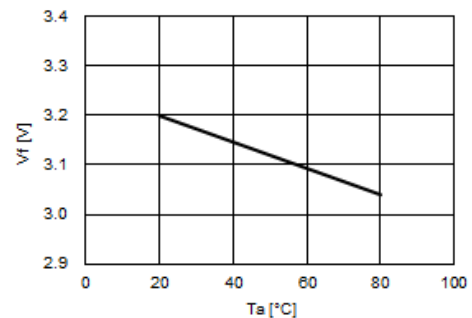


Fig.5 – Dominant Wavelength (@120mA) vs. Ambient Temperature

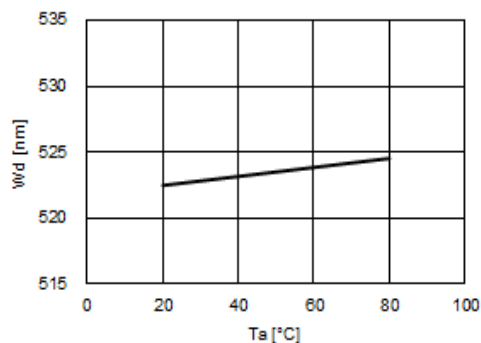


Fig.6 – Maximum Driving Forward DC Current vs. Ambient Temperature (De-rating based on Tj max. = 125°C)

