EPISTAR

ES-EABCFD30B

InGaN High Voltage LED Chip

> Mechanical Specification:

(1) Dimension
- Chip size: 30 mil x 43 mil (762 ± 25 μm x 1090 ± 25 μm)
- Thickness: 5.1 mil (130 ± 10 μm)
- P bonding pad: 3.1 mil (80 ± 10 μm)
- N bonding pad: 3.1 mil (80 ± 10 μm)

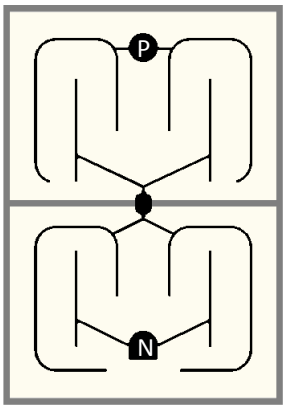
(2) Metallization
- Topside P electrode: Au alloy
- Topside N electrode: Au alloy

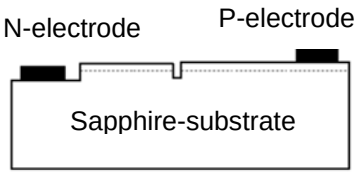
Features:

- For high voltage/low current applications.
- LED cells connected in series.
- Besides DC, can also be AC driven with external bridge & resister.

Applications:

- TV Backlight





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

Parameter	Symbol		Condition	Min.	Typ.	Max.	Unit
Forward Voltage	Vf1		If = 10μA	4.4	-	-	V
	Vf2		If = 200mA	-	6.2	6.6	V
Dominant Wavelength(2)	λd		If = 200mA	445	-	465	nm
Spectra Half-width	Δλ		If = 200mA	-	25	-	nm
Radiant Flux(3)(4)	Po	A94	If = 200mA	600	-	650	mW
		A95		650	-	700	

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-TO-can header without an encapsulant.
(4) Radiant flux measurement allows a tolerance of ±15%.

> Absolute Maximum Ratings:

Parameter	Symbol	Condition	Rating	Unit
Forward DC Current	If	Ta = 25˚C	≤ 240	mA
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

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

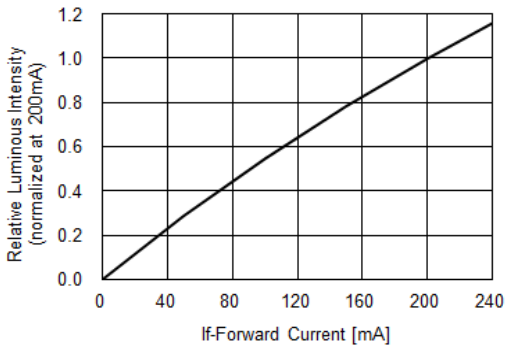


Fig.2 – Forward Current vs. Forward Voltage

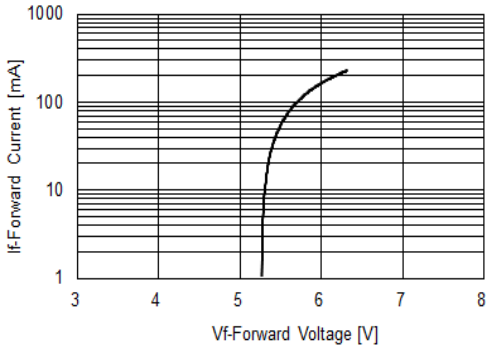


Fig.3 – Relative Intensity (@200mA) vs. Ambient Temperature

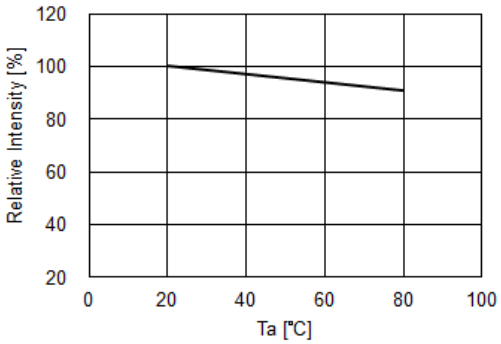


Fig.4 – Forward Voltage (@200mA) vs. Ambient Temperature

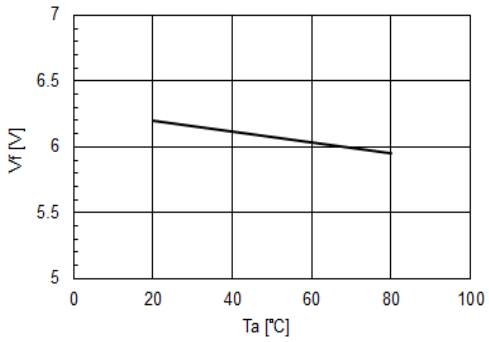


Fig.5 – Dominant Wavelength (@200mA) vs. Ambient Temperature

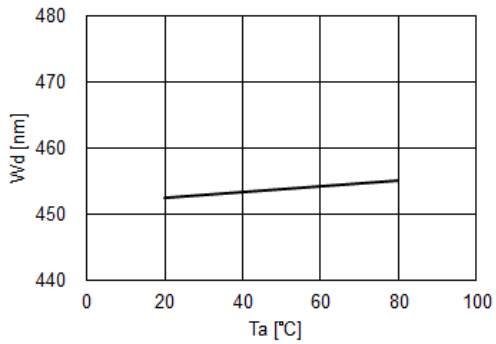


Fig.6 – Maximum Driving Forward DC Current vs. Ambient Temperature (De-rating based on Tj max. = 125°C)