EPISTAR

ES-EAUVF45H

InGaN F-series UV LED Chip

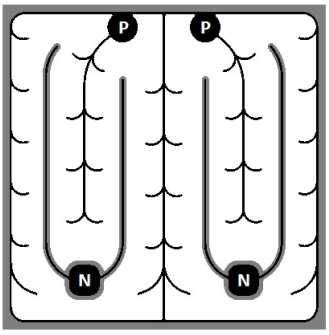
> Mechanical Specification:

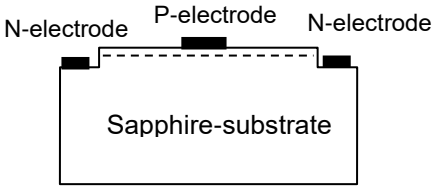
(1) Dimension
- Chip size: 45 mil x 45 mil (1143 ± 50 μm x 1143 ± 50 μm)
- Thickness: 5.9 mil (150 ± 10 μm)
- P bonding pad: 3.9 mil (100 ± 10 μm)
- N bonding pad: 3.9 mil (100 ± 10 μm)

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

Features:
- High radiant flux
- Long operation life
- Lambertian radiation
- High anti-ESD level

Applications:
- UV air purifier
- Printing
- Curing





> Electro-optical Characteristics at 25°C[1]:

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Forward Voltage	Vf1	If = 10uA	1.6	-	-	V
	Vf	If = 350mA	-	3.3	3.4	V
Peak Wavelength[2]	λp	If = 350mA	385	-	415	nm
Spectra Half-width	Δλ	If = 350mA	-	15	-	nm
Radiant Flux[3][4]	Po	If = 350mA λp =385~400nm (20mW/bin)	440	-	580	mW
		If = 350mA λp =400~415nm (20mW/bin)	520	-	620	

Note:
(1) ESD protection during chip handling is recommended.
(2) Basically, the wavelength span is 30nm; however, customers' special requirements are also welco
(3) Radiant flux is determined by using an Ag-plated 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℃	≤ 700	mA
Junction Temperature	Tj	-	≤ 125	℃
Storage Temperature	Tstg	Chip	-40 ~ +85	℃
		Chip-on-tape/storage	5 ~ 35	℃
		Chip-on-tape/transportation	-20 ~ +65	℃
Temperature during Packaging	-	-	280(<10sec)	℃

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: (Peak Wavelength@395nm)

Fig.1 – Relative luminous Intensity vs. Forward Current

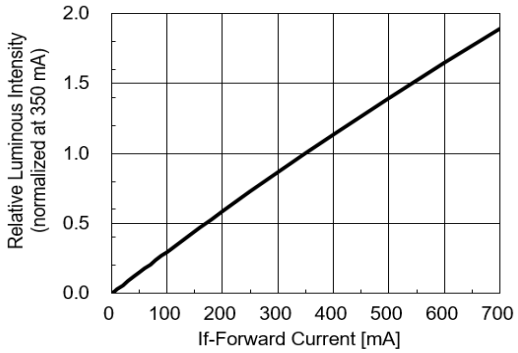


Fig.2 – Forward Current vs. Forward Voltage

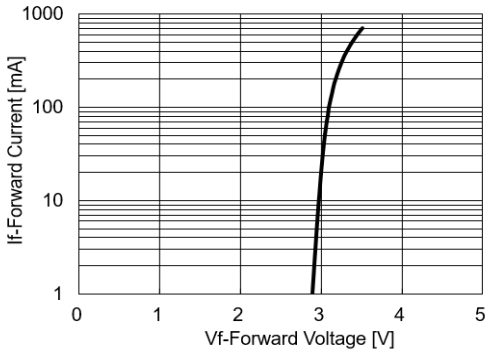


Fig.3 – Relative Intensity (@350mA) vs. Ambient Temperature

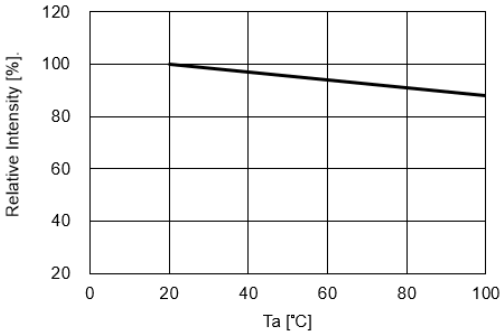


Fig.4 – Forward Voltage (@350mA) vs. Ambient Temperature

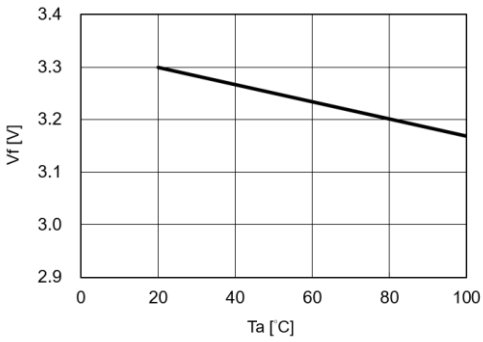


Fig.5 –Peak Wavelength (@350mA) vs. Ambient Temperature

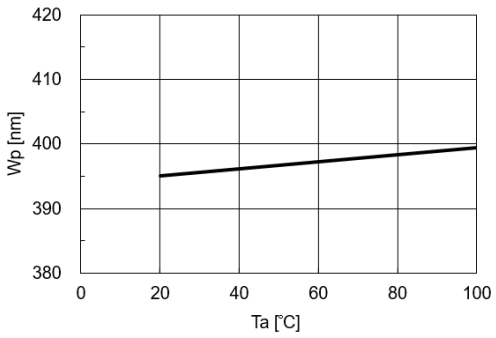
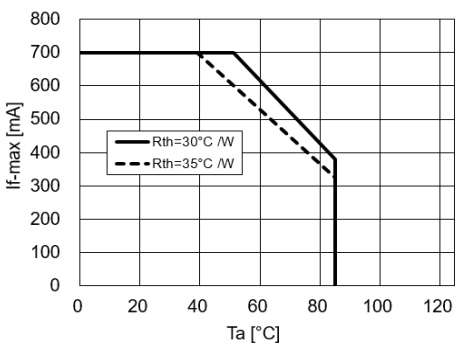


Fig.6 – Maximum Driving Forward DC Current vs. Ambient Temperature (De-rating based on Tj max. = 125°C)



> Characteristic Curves: (Peak Wavelength@405nm)

Fig.1 – Relative luminous Intensity vs. Forward Current

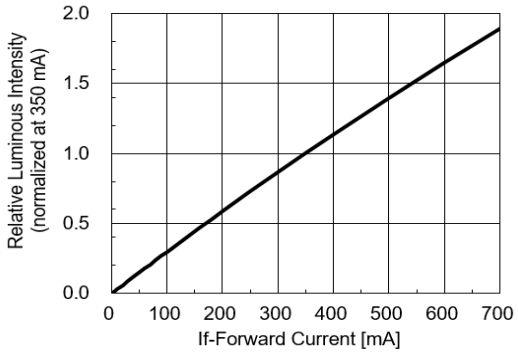


Fig.2 – Forward Current vs. Forward Voltage

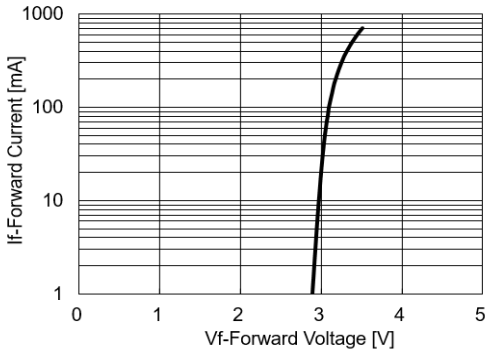
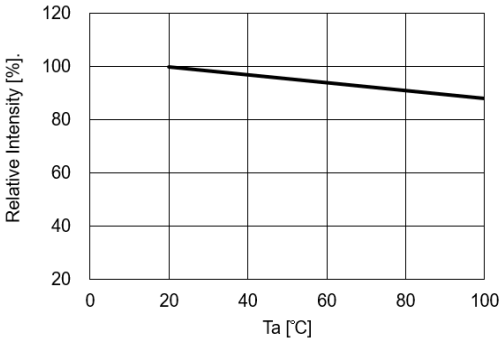


Fig.3 – Relative Intensity (@350mA) vs. Ambient Temperature



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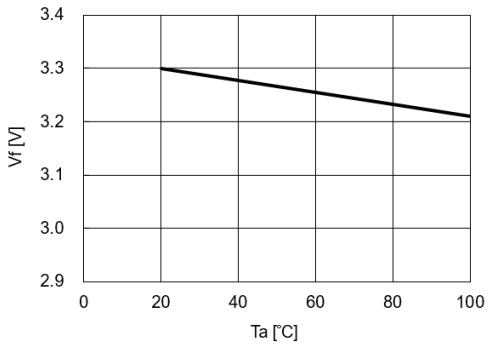

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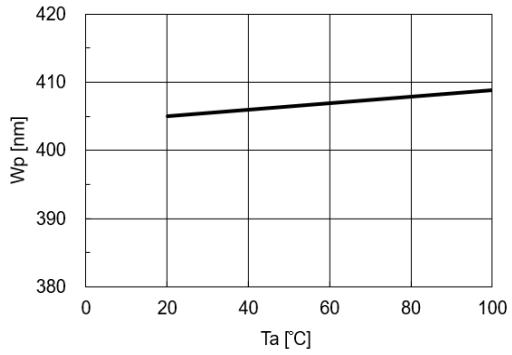

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