EPISTAR

ES-CABLV45H

InGaN Venus Blue LED Chip

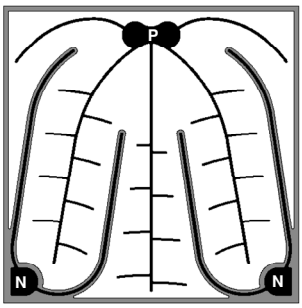
> Mechanical Specification:

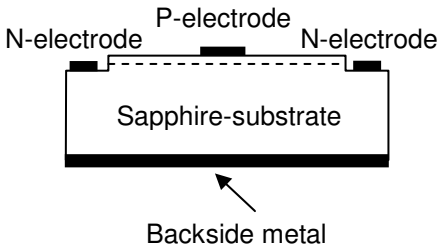
(1) Dimension
- Chip size: 45 mil x 45 mil (1143 ± 25 μm x 1143 ± 25 μm)
- Thickness: 5.9 mil (150 ± 10 μm)
- P bonding pad: 3.9 mil (100 ± 10 μm)
- N bonding pad: 3.9 mil (100 ± 10 μm)

(2) Metallization
- Topside P electrode (x2): Au alloy
- Topside N electrode (x2): Au alloy
- Backside metal : Au alloy

Features:
- High radiant flux
- Long operation life
- Lambertian radiation

Applications:
- Street lighting
- Architechural lighting
- Residential lighting





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

Parameter	Symbol		Condition	Min.	Typ.	Max.	Unit
Forward Voltage	Vf1		If = 10μA	1.6	-	-	V
	Vf2		If = 350mA	-	3.3	3.6	V
Reverse Current	Ir		Vr = 5V	-	-	2.0	μA
Dominant Wavelength(2)	λd		If = 350mA	455	-	465	nm
Spectra Half-width	Δλ		If = 350mA	-	25	-	nm
Radiant Flux(3)(4)	Po	H16	If = 350mA	295	-	340	mW
		H17		340	-	360	

Note:
(1) ESD protection during chip handling is recommended.
(2) Basically, the wavelength span is 10nm; however, customers' special requirements are also welcome.
(3) Radiant flux is determined by using an Au-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˚C	≤ 700	mA
Reverse Voltage	Vr	Ta = 25˚C	≤ 5	V
Junction Temperature	Tj	-	≤ 115	˚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

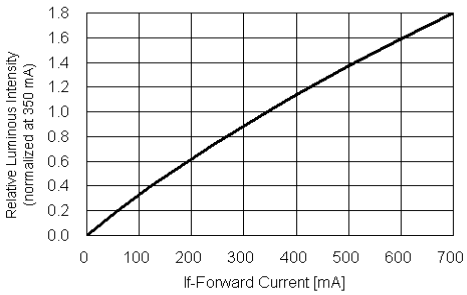


Fig.2 – Forward Current vs. Forward Voltage

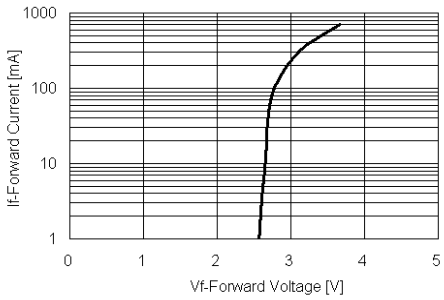


Fig.3 – Relative Intensity (@350mA) vs. Ambient Temperature

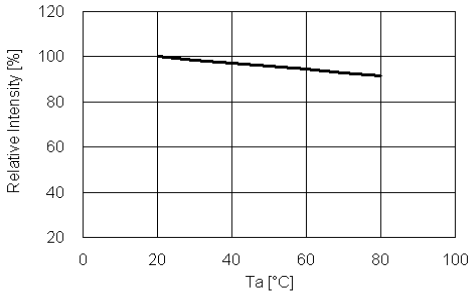


Fig.4 – Forward Voltage (@350mA) vs. Ambient Temperature

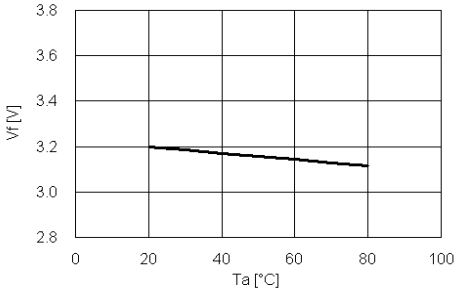


Fig.5 – Dominant Wavelength (@350mA) vs. Ambient Temperature

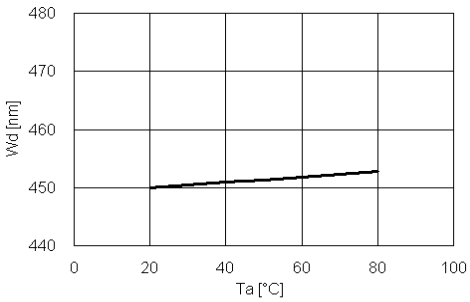


Fig.6 – Maximum Driving Forward DC Current vs. Ambient Temperature (De-rating based on Tj max. = 115°C)