EPISTAR

ES-FMBCPD24A

InGaN Blue LED Chip

> Mechanical Specification:

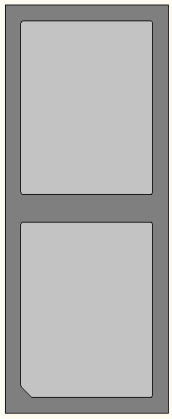
(1) Dimension
- Chip size: 24mil x 60mil (610 ± 25 μm x 1524 ± 25 μm)
- Thickness: 7.9mil (200 ± 10 μm)
- Anode pad: 402± 10 μm x 558 ± 10 μm
- Cathode pad: 452 ± 10 μm x 582 ± 10 μm

(2) Metallization
- Electrode pad: Au

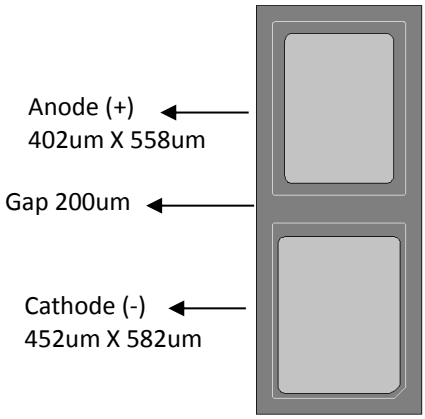
Features:
- Compatible with Solder Process
- High Power Density
- Low Rth and Long life time

Applications:
- Direct lit TV

Top view



Bottom view



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

Parameter	Symbol		Condition	Min.	Typ.	Max.	Unit
Forward Voltage	Vf1		If = 10μA	4.0	-	-	V
	Vf2		If = 120mA	-	5.8	6.2	V
Dominant Wavelength(2)	λd		If = 120mA	445	-	465	nm
Spectra Half-width	Δλ		If = 120mA	-	25	-	nm
Radiant Flux(3)(4)	Po	A82	If = 120mA	360	-	380	mW
		A83		380	-	400	

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 EPISTAR standard.
(4) Radiant flux measurement allows a tolerance of ±15%.

> Absolute Maximum Ratings:

Parameter	Symbol	Condition	Rating	Unit
Forward DC Current	If	Ta = 25˚C	≤ 170	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
Temperature during Packaging	-	-	260(<5sec)*	˚C

Note: Maximum ratings are package dependent. The above maximum ratings were determined using by EPISTAR standard. Forward current and junction temperature will cause the damage of LEDs if over the absolute maximum ratings.
*Reflow soldering should not be done more than two times.

> Characteristic Curves:

Fig.1 – Relative luminous Intensity vs. Forward Current

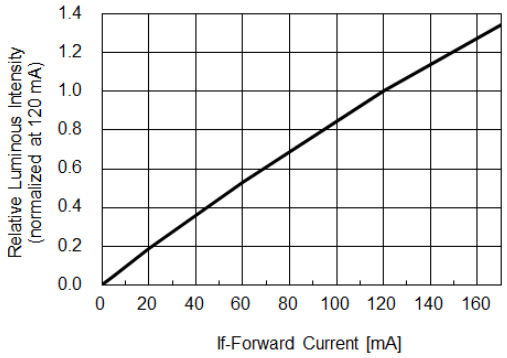


Fig.2 – Forward Current vs. Forward Voltage

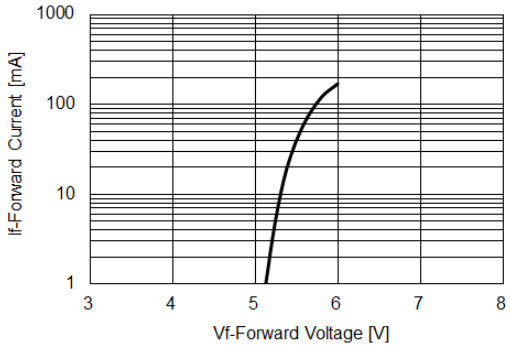


Fig.3 – Relative Intensity (@120mA) vs. Ambient Temperature

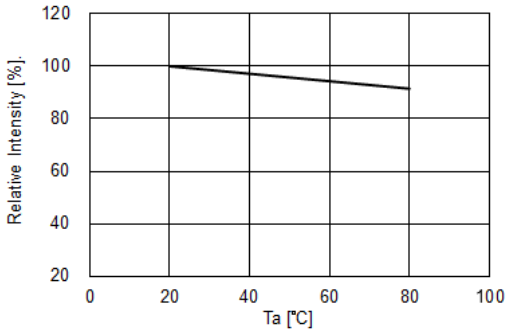


Fig.4 – Forward Voltage (@120mA) vs. Ambient Temperature

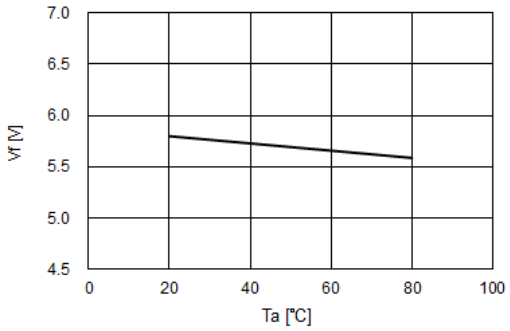


Fig.5 – Dominant Wavelength (@120mA) vs. Ambient Temperature

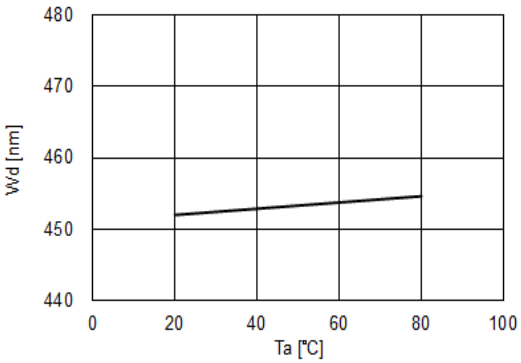


Fig.6 – Maximum Driving Forward DC Current vs. Ambient Temperature (De-rating based on Tj max. = 125°C)