ETi-DB306A-BL LED Chip of Specifications

Elec-Tech International Co., Ltd.

SPECIFICATIONS No. :RD

PRODUCT NAME: ETi-DB306A-BL

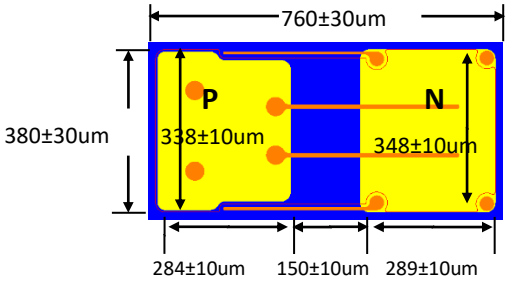
VERSION:RD

DATE : 2016-12-20

◆Mechanical Specification

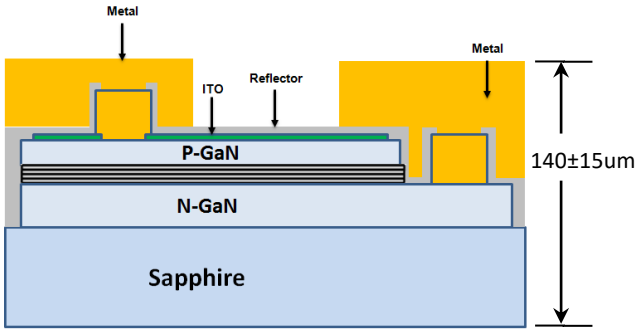
1. Outline Dimensions:

- Chip size: L*W :760±30um*380±30um
- Chip thickness : 140±15um
- P bonding pad : 338±10um*284±10um
- N bonding pad : 348±10um*289±10um
- P/N Gap:150±10um



2. Material and Structure:

- Material structure: Sapphire
- P electrode(anode) : Au alloy
- N electrode(cathode) : Au alloy



3. Features:

- Low thermal resistance
- Flip chip structure for superior heat dissipation
- Bond pad designed for die attach via solder, eliminating the need for wire bonds

◆ Electro-optical characteristics at 25℃

Parameters	Conditions	Min.	Typ.	Max.	split	Unit
Forward Voltage(V_F)	I_F= 120mA	2.8	-	3.4	0.1	V
	I_F= 1μA	2.0	-	-	-	V
Dominant Wavelength(W_D)	I_F=120mA	445	-	462.5	2.5	nm
PeakWavelength(W_P)	I_F=120mA	400	-	470	-	nm
Output Power (P_o)	I_F=120mA	157.5	-	195	7.5	mW
Reverse current (I_R)	V_R = 5V	-	-	1	-	μA

Note:

1. Recommend ESD protection during handling and shippingthe chip.

2.Output poweris based on ETi standard probing equipments.

3.Output power measurement allows a tolerance of ±8%.

4.Dominantwavelength is controlled of ±1nm, and the forward voltage is dominated in ±0.05V.

◆ Absolute Maximum Rating

Parameter	Symbol	Condition	Unit
Forward Current [Ta = 25℃±2℃]	I_F	250	mA
Pulse Forward Current [1/10 Duty Cycle]	I_{FP}	450	mA
Junction Temperature	Tj	135	℃
Power Dissipation	P_D	825	mW
Operating Temperature	T_{OPT}	-30~ +80	℃
Storage Temperature	T_{STC}	-40~+100	℃
Temperature during packaging	---	260(<10sec)	℃

Note: Themaximum ratings were determined by using aPrinted Circuit Board (PCB) without packaging.

◆ Characteristics Curves

Fig1. Forward Voltage vs. Forward Current

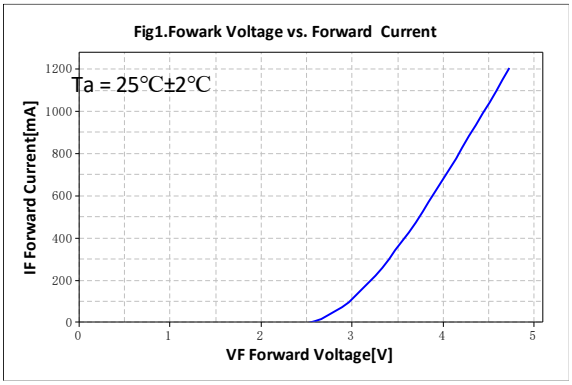


Fig2. Forward Current vs. Relative Luminous Intensity

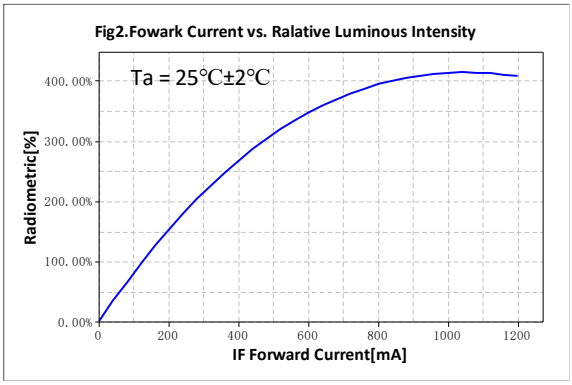


Fig3. Forward Current vs. WD Shift

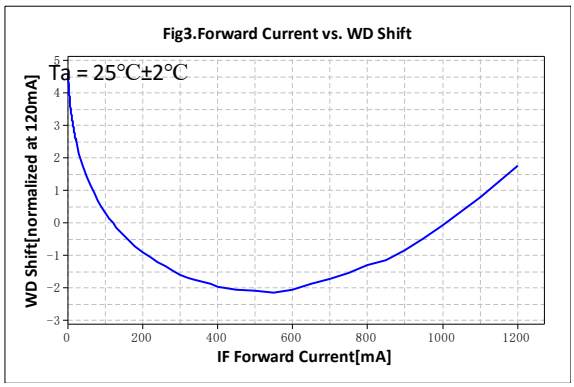


Fig4. Wavelength vs. Spectral radiant power