

H272B-BL LED Chip of Specifications



Shenzhen CYT Semiconductor Technology Co., Ltd.

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PRODUCT NAME: H 272B-BL

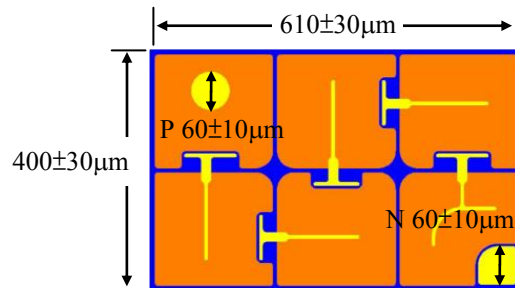
VERSION: V1.0

Date: 2018-03-02

◆ Mechanical Specification

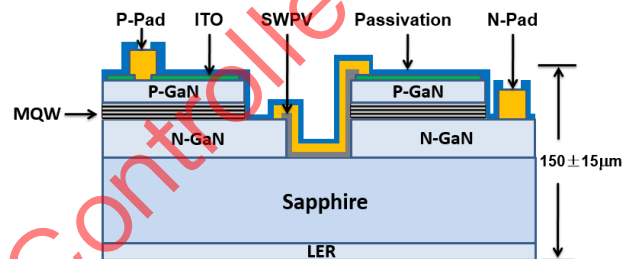
1. Outline Dimensions:

- Chip size: L*W : $610\pm 30\mu\text{m}$ * $400\pm 30\mu\text{m}$
- Chip thickness : $150\pm 15\mu\text{m}$
- P bonding pad : $60\pm 10\mu\text{m}$
- N bonding pad : $60\pm 10\mu\text{m}$



2. Material and Structure:

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



3. Features: high saturation current

◆ Electro-optical characteristics at 25°C

Parameters	Conditions	Min.	Typ.	Max.	split	Unit
Forward Voltage(V_F)	$I_F=30\text{mA}$	18	-	20	0.5	V
	$I_F=1\mu\text{A}$	13.2	-	-	-	V
Dominant Wavelength(W_D)	$I_F=30\text{mA}$	445	-	462.5	2.5	nm
Peak Wavelength(W_p)	$I_F=30\text{mA}$	400	-	470	-	nm
Output Power (P_o)	$I_F=30\text{mA}$	180	-	230	10	mW
Reverse current (I_R)	$V_R=40.0\text{V}$	-	-	1.0	-	μA

Note:

1. Recommend ESD protection during handling and shipping the chip.
2. Output power is based on ETI standard probing equipments.
3. Output power measurement allows a tolerance of $\pm 8\%$.
4. Dominant wavelength is controlled of $\pm 1\text{nm}$, and the forward voltage is dominated in $\pm 0.25\text{V}$.

◆ Absolute Maximum Rating

Parameter	Symbol	Condition	Unit
Forward Current [$T_a = 25^\circ\text{C} \pm 2^\circ\text{C}$]	I_F	40	mA
Pulse Forward Current [1/10 Duty Cycle]	I_{FP}	120	mA
Pulse Forward Voltage	V_{FP}	23	V
Junction Temperature	T_j	≤ 120	$^\circ\text{C}$
Reverse Voltage	V_R	40	V
Power Dissipation	P_D	600	mW
Operating Temperature	T_{OPT}	$-30 \sim +80$	$^\circ\text{C}$
Storage Temperature	T_{STC}	$-40 \sim +100$	$^\circ\text{C}$

Note:

1. The maximum ratings were determined by using a Printed Circuit Board (PCB) without packaging.
2. High voltage products have a high sensitivity to power supply control, in order to avoid subsequent application problems, Please note the condition of current/voltage and ensure not to exceed the above mentioned scope.

◆ Characteristics Curves

Fig1. Forward Voltage vs. Forward Current

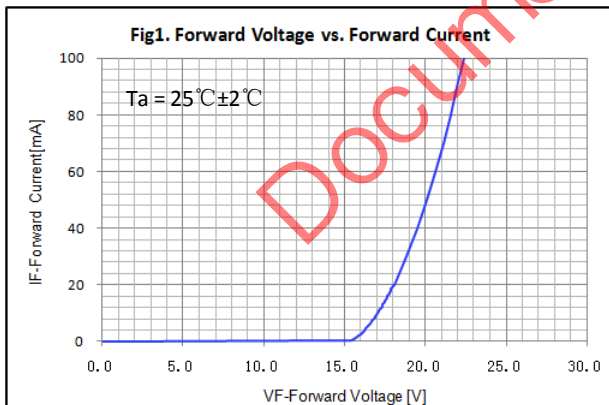


Fig2. Forward Current vs. Relative Luminous Intensity

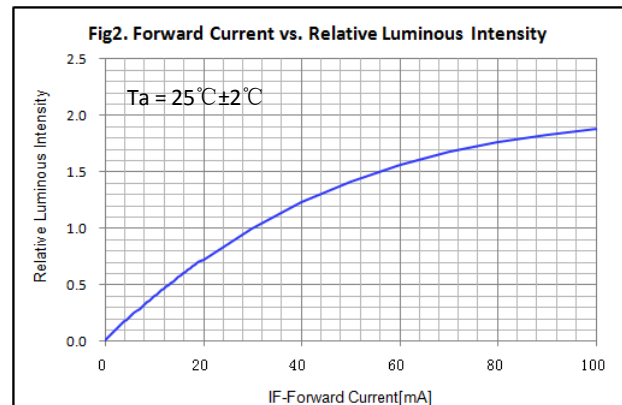


Fig3. Forward Current vs. WD Shift

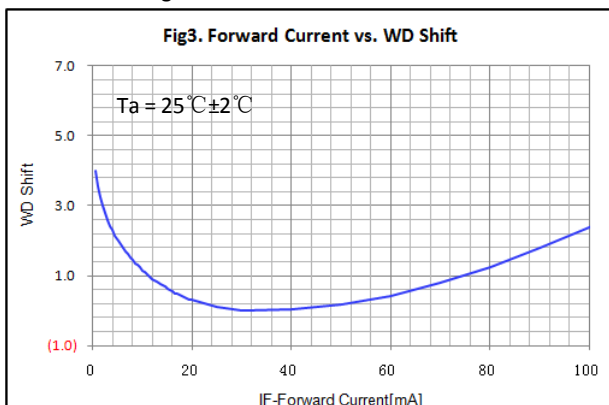


Fig4. Wavelength vs. Spectral radiant power

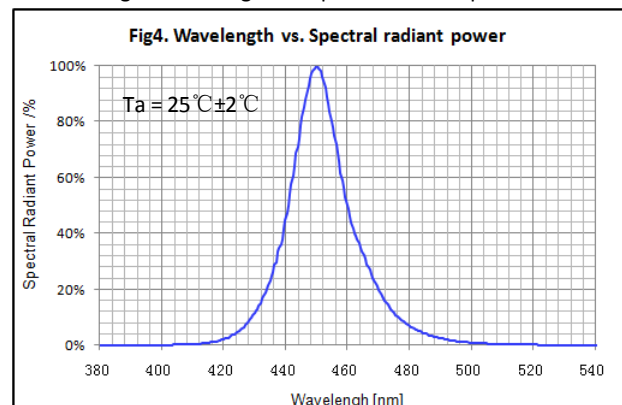




Fig5.Forward Voltage [@30mA]vs. Ambient Temperature

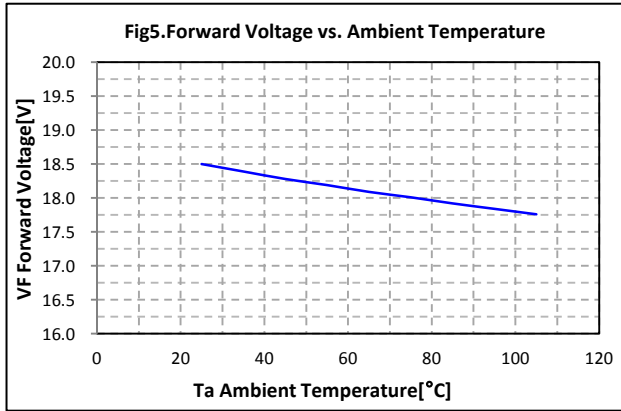


Fig6.Relative Intensity [@30mA]vs. Ambient Temperature

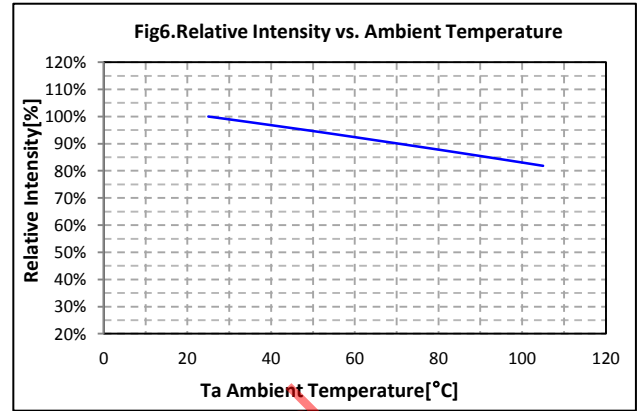


Fig7.Dominant Wavelength [@30mA]vs.Ambient Temperature

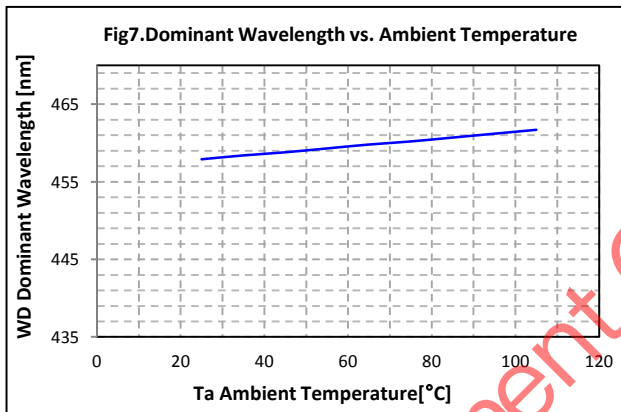
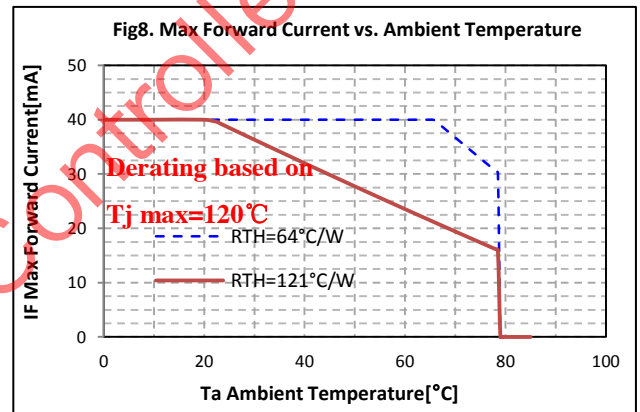


Fig8.Maximum Driving Forward DC Current vs.Ambient Temperature

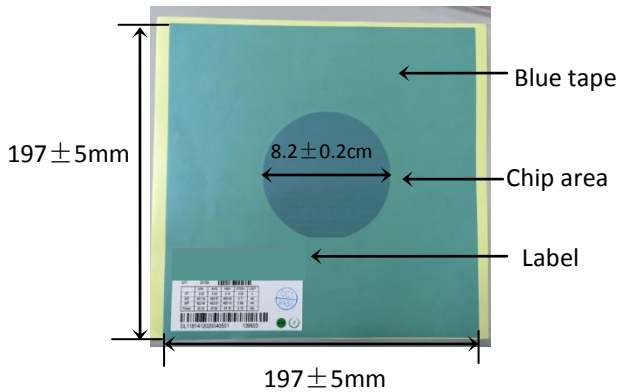


Sorting BIN rank

W _D [nm]	Power [mW]					VF4[V]
445.0~447.5	180~190	190~200	200~210	210~220	220~230	18~18.5~19~19.5~20
447.5~450.0	180~190	190~200	200~210	210~220	220~230	
450.0~452.5	180~190	190~200	200~210	210~220	220~230	
452.5~455.0	180~190	190~200	200~210	210~220	220~230	
455.0~457.5	180~190	190~200	200~210	210~220	220~230	
457.5~460.0	180~190	190~200	200~210	210~220	220~230	
460.0~462.5	180~190	190~200	200~210	210~220	220~230	

◆ Packing Specification

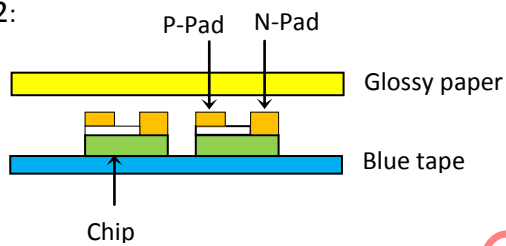
Figure1:



(Figure1)

1. The blue tape size is $197 \pm 5 \text{mm} \times 197 \pm 5 \text{mm}$.
2. Chip area circle diameter is $8.2 \pm 0.2 \text{cm}$.
3. Label on the lower left corner of the blue tape, and label includes Part NO, Model, Type, quantity and electro-optical parameters.
4. There are the ROHS and HSF mark on the label.

Figure2:



(Figure2)

1. The chip's emitting region towards glossy paper, the chip's substrate is pasted to blue tape.
2. After opening glossy paper, the left is P-pad, the right is N-pad.

Figure3:



(Figure3)

1. The packing box is with the ROHS mark.
2. Recommended storage conditions:
Temperature: $21 \pm 2^\circ \text{C}$, Humidity: $50 \pm 5\%$.