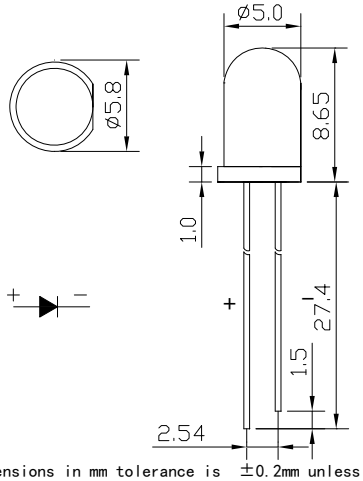
SHEN ZHEN BEIJING OPTOELECTRONICS TECH CO.LTD

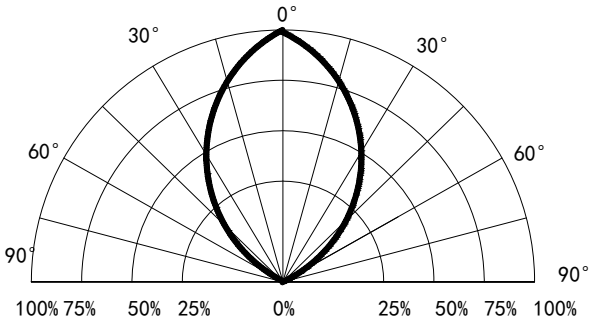
深圳市贝晶光电科技有限公司

■ Package Dimensions



Notes:
1. All dimensions in mm tolerance is ±0.2mm unless otherwise noted.
2. An epoxy meniscus may extend about 1.5mm down the leads.
3. Burr around bottom of epoxy may be 0.5mm max.

■ Far field Pattern



Relative Luminous Intensity vs. Radiation Angle

■Descriptions

PART NO	Chip		Lens Color
	Material	Emitted Color	
BJ1-5044UB-381-570-W60	InGaN	Blue	WATER CLEAR

■Absolute Maximum Ratings (Ta = 25℃)

Items	Symbol	Absolute maximum Rating	Unit
Forward Current(DC)	I_F	50	mA
Peak Forward Current*	I_{FP}	100	mA
Reverse Voltage	V_R	5	V
Operation Temperature	T_{opr}	-40 ~ +95	℃
Storage Temperature	T_{stg}	-40 ~ +100	℃
Lead Soldering Temperature	T_{sol}	Max.260℃for 5 sec Max. (3mm from the base of the epoxy bulb)	

*Pulse width≦0.1msec duty≦1/10

■ Typical Electrical & Optical Characteristics (Ta = 25℃)

Items	Symbol	Condition	Min.	Typ.	Max.	Unit
Power Dissipation	PD	IF = 20mA	---	64	---	mW
Forward Voltage	VF	IF = 20mA	2.8	---	3.6	V
Reverse Current	IR	VR = 5V	---	---	5	μA
Dominant Wavelength	λD	IF = 20mA	465	---	475	nm
Luminous Intensity	IV	IF = 20mA	---	1000	---	mcd
50% Power Angle	2θ½	IF = 20mA	---	60	---	Deg

Release Date:2009/01/01

■ Typical Electrical/Optical Characteristics Curves
(Ta=25° Unless Otherwise Noted)

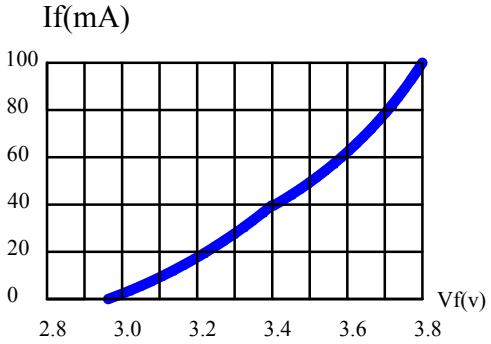


Fig. 1 Forward Current vs Forward Voltage

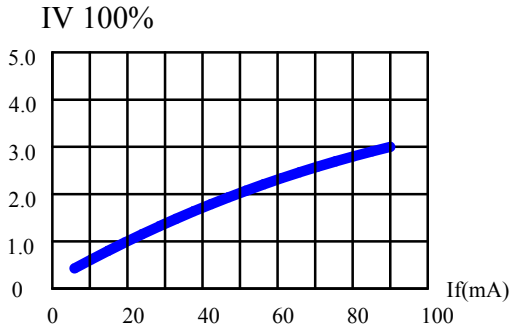


Fig. 2 Relative Luminous Intensity vs Forward Voltage

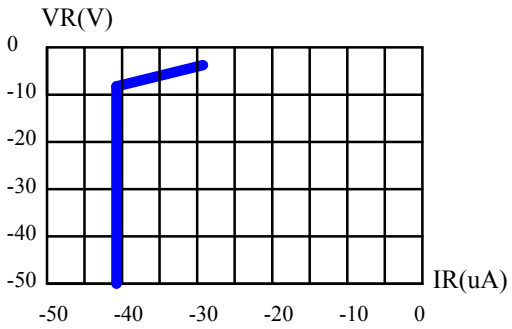


Fig. 3 Reverse Current vs Reverse Voltage

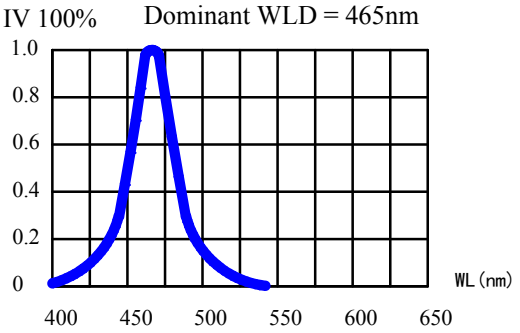


Fig. 4 Relative Luminous Intensity vs Wavelength

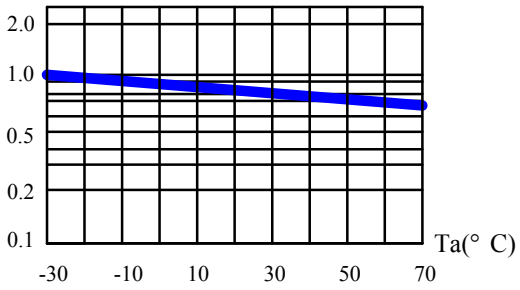


Fig. 5 Relative Luminous Intensity vs Ambient Temperature

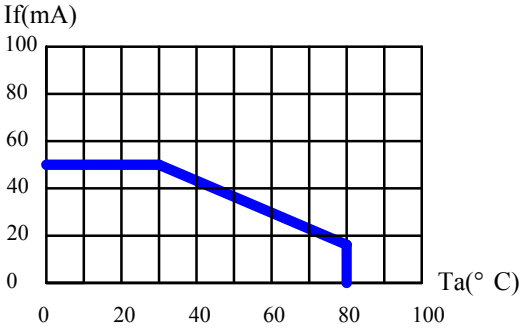


Fig. 6 Maximum Forward Current vs Ambient Temperature

Rank(IF=20mA)	Code		
Luminous Intensity(mcd)	**L16**	**L17**	**L18**
	810~1135	1135~1590	1590~2225
Forward Voltage(V)	**V8**	**V9**	**V10**
	2.8~3.0	3.0~3.2	3.2~3.4
Dominant Wavelength(nm)	**B5**	**B6**	**B7**
	463~466	466~469	469~472

*Tolerance of measurement of forward voltage is±0.1V
*Tolerance of measurement of luminous intensity or flux is±15%.

Release Date:2009/01/01

*Tolerance of measurement of dominant wavelength is±1nm.

Precautions:

TAKE NOTE OF THE FOLLOWING IN USE OF LED

1. Temperature in use

Since the light generated inside the LED needs to be emitted to outside efficiently, a resin with high light transparency is used; therefore, additives to improve the heat resistance or moisture resistance (silica gel , etc) which are used for semiconductor products such as transistors cannot be added to the resin.

Consequently, the heat resistant ability of the resin used for LED is usually low; therefore, please be careful on the following during use.

Avoid applying external force, stress, and excessive vibration to the resins and terminals at high temperature. The glass transition temperature of epoxy resin used for the LED is approximately 120-130℃.

At a temperature exceeding this limit, the coefficient of liner expansion of the resin doubles or more compared to that at normal temperature and the resin is softened.

If external force or stress is applied at that time, it may cause a wire rupture.

2. Soldering

Please be careful on the following at soldering.

After soldering, avoided applying external force, stress, and excessive vibration until the products go to cooling process (normal temperature), <Same for products with terminal leads>

(1) Soldering measurements:
Distance between melted solder side to bottom of resin shall be 1.6mm or longer.

(2) Solder dip: Preheat: 90℃ max. (Backside of PCB), Within 120 seconds
Solder bath: 260℃ max. (Solder temperature), Within 5 seconds

(3) Soldering iron : 350℃ max. (Temperature of soldering iron tip), Within 3 seconds

3. Insertion

Pitch of the LED leads and pitch of mounting holes need to be same

4. Others

Since the heat resistant ability of the LED resin is low, SMD components are used on the same PCB, please mount the LED after adhesive baking process for SMD components. In case adhesive baking is done after LED lamp insertion due to a production process reason, make sure not to apply external force, stress, and excessive vibration to the LED and follow the conditions below.

Baking temperature: 120℃ max. Baking time: Within 60 seconds

If soldering is done sequentially after the adhesive baking, please perform the soldering after cooling down the LED to normal temperature.

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