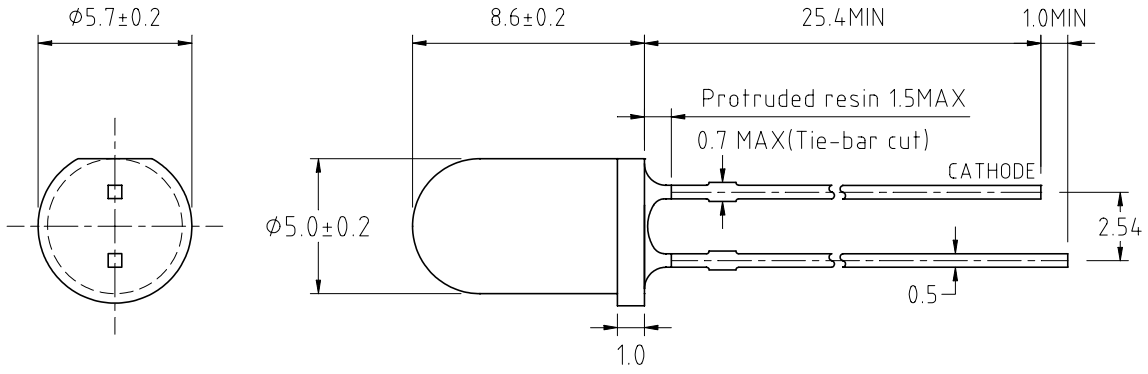
High Brightness Deep Blue LED Lamp

5mm Through-Hole Package

BL-LBDB5N18C series

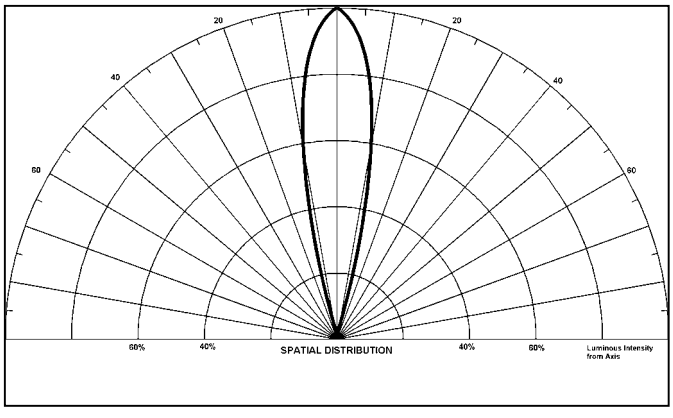
FEATURES	APPLICATIONS
• High Brightness Deep Blue (450nm) LED. • GaN on Sapphire die. • 5mm round resin mold. • Water Clear Lens. • Medium-Wide viewing angle (20 deg)	• Dental and Medical applications • Displays and signs • Instrumentation. • Toys and electronics • Decorative /Accent Lighting

PACKAGE OUTLINE DIMENSIONS:



NOTES:
1. All dimensions are in millimeters.
2. Tolerance is ±0.25 mm unless otherwise noted.
3. Lead spacing is measured where the leads emerge from the package.
4. Specifications are subject to change without notice.

BEAM RADIATION PATTERN



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ABSOLUTE MAXIMUN RATING (at T_A = 25°C)

Parameter	Symbol	Value	Unit
Continuous Forward Current	I_F	30	mA
Peak Forward Current (1/10 Duty Cycle, 0.1msec Pulse width)	I_{Fp}	100	mA
Power Dissipation	P_d	120	mW
Forward Voltage	V_f	3.8	V
Reverse Voltage	V_R	5.0	V
Operating Temperature	T_{opr}	-40 to +85	°C
Storage Temperature	T_{stg}	-45 to +100	°C
Lead Soldering Temperature (1.6mm (0.063") from body)	**260°C for 5 seconds**		

ELECTRICAL / OPTICAL CHARACTERISTICS (at T_A = 25°C)

Parameter		Symbol	Min	Typ	Max	Unit
Forward Voltage	I_F= 20 mA	V_F		3.1	3.4	V
Radiant Intensity (on optical axis)	I_F= 20 mA	I_r		20		mW/sr
Luminous Intensity	I_F= 20 mA	I_v	400	710	880	mcd
Dominant Wavelength	I_F= 20 mA	λ_d	445	450	460	nm
Peak Wavelength	I_F= 20 mA	λ_p	440	445	455	nm
Spectrum Radiation Bandwidth	I_F= 20 mA	$\Delta\lambda$		23		nm
Viewing Angle		2θ 1/2	18	20	26	deg
Reverse Current	V_R= 5 V	I_R		10	100	μA

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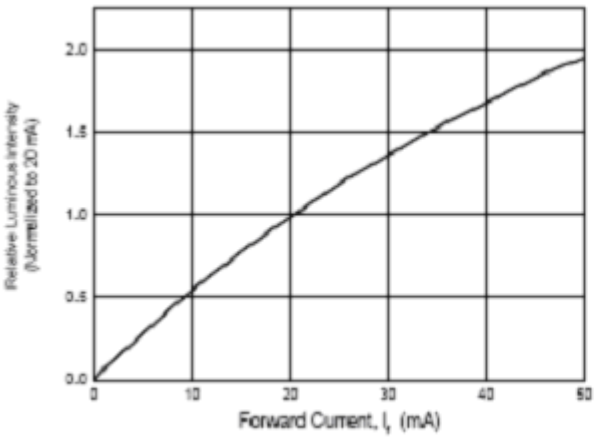
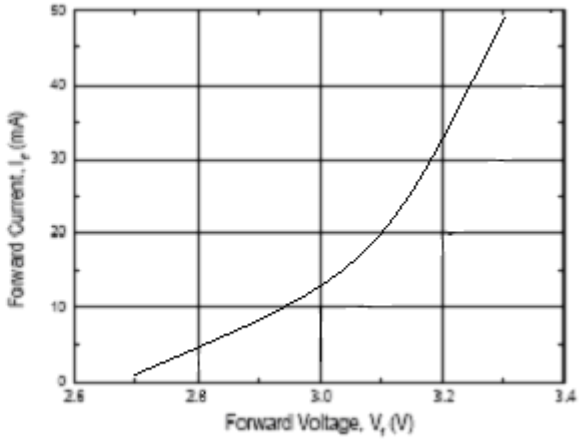
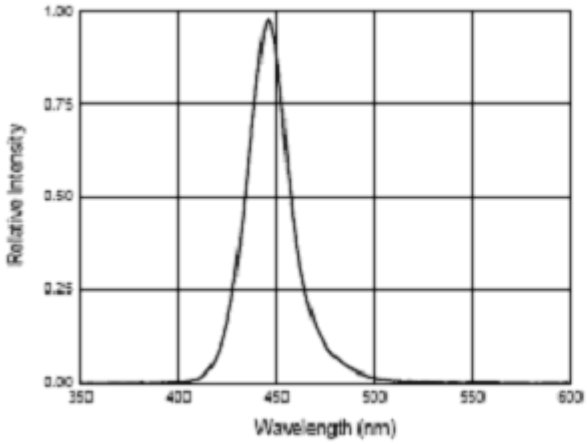
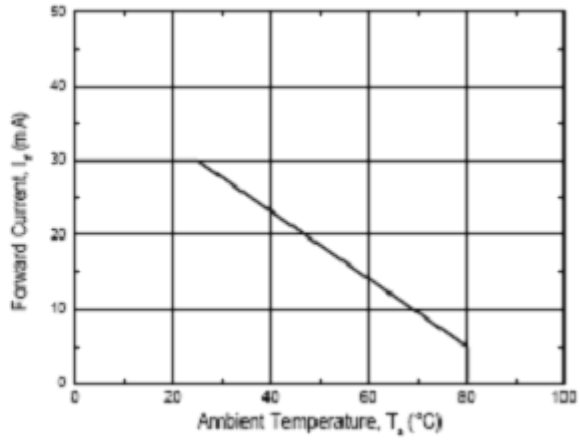
TYPICAL ELECTRICAL CHARACTERISTICS CURVES (at 20 mA DC / T_A = 25°C)









GENERAL NOTES:

1. Luminous Intensity (Iv) is measured with a light sensor and filter combination (goniospectroradiometer) and is the Luminous Flux per unit solid angle (steradian) emitted by the LED lamp in the direction of the mechanical axis of the lamp and then weighed by the eye response curve (1931 CIE 2° Observer Chromaticity Diagram).
2. Luminous Intensity measurement uncertainty is +/- 15% due to test procedures and equipment variations.
3. θ1/2 is the off-axis angle at which the luminous intensity is half the axial luminous intensity. Tolerance +/- 3°.
4. Dominant wavelength is derived from the 1931 CIE 2° Observer Chromaticity Diagram.
5. Peak and Dominant wavelength measurement uncertainty is +/- 0.05 due to variations.
6. Caution for ESD: Static Electricity and surges can damage the LED. It is recommended using a wristband or anti-electrostatic glove when handling the LED. All devices, equipment and machinery must be properly grounded.
7. Do not apply excess mechanical stress to the leads, especially when heated or while soldering.

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PRODUCT CODE BREAKDOWN

X_1X_2 - X_3 X_4 X_5X_6 X_7 X_8 X_9X_{10} X_{11} -X_{12} X_{13}

Manufacturer
BL= Brite-LED
PL=PowerLED
SG=SinoGerman

Package Type
L= Lamp TH

Product Series

Emitted Color
DB= Deep Blue

Lens Size
5= 5mm

Lens Shape
N= Normal Round

Viewing Angle
18= 20° ± 5°

Lens Resin
C= Clear

Lead Stoppers
N=No Stoppers
S= with Stoppers

Delivery
B= Bulk
R= Reel
A= Ammo