

# High Output Violet Blue LED Lamp

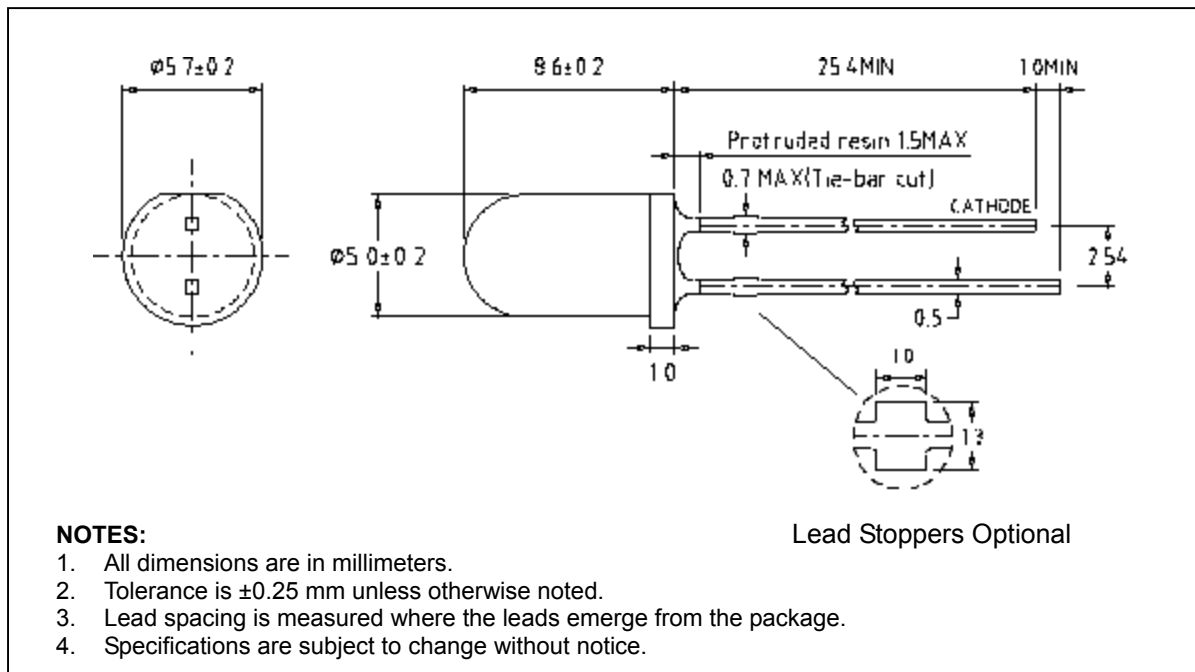


5mm Through-Hole Package

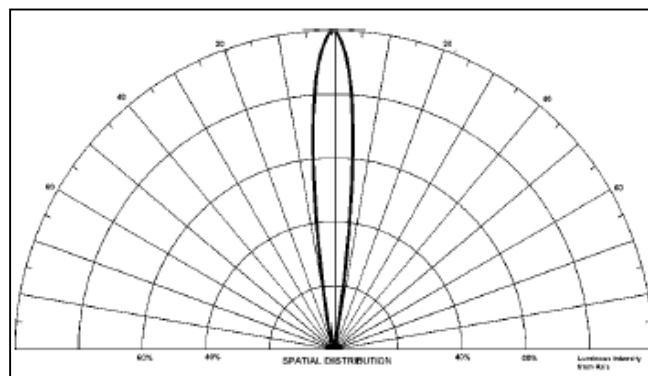
## BL-LBVB5N15C series

FEATURES	APPLICATIONS
<ul style="list-style-type: none"> <li>• High Output Violet Blue 435nm <math>\lambda_p</math> (+/- 5nm)</li> <li>• InGaN on Sapphire (<math>Al_2O_3</math>) die.</li> <li>• 5mm round shaped resin mold.</li> <li>• Water Clear Lens.</li> <li>• Narrow viewing angle (15 degrees).</li> </ul>	<ul style="list-style-type: none"> <li>• Epoxy Curing</li> <li>• Currency validation / detection</li> <li>• Bacteria detection.</li> <li>• Medical and forensics.</li> <li>• Decorative /Accent Lighting</li> </ul>

### PACKAGE OUTLINE DIMENSIONS:



### BEAM RADIATION PATTERN



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### ABSOLUTE MAXIMUM RATING (at $T_A = 25^\circ\text{C}$ )

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	$P_d$	112	mW
Forward Voltage	$V_f$	3.7	V
Reverse Voltage	$V_R$	5.0	V
Operating Temperature	$T_{opr}$	-40 to +85	$^\circ\text{C}$
Storage Temperature	$T_{stg}$	-45 to +100	$^\circ\text{C}$
Lead Soldering Temperature (1.6mm (0.063") from body)	260 $^\circ\text{C}$ for 5 seconds		

### ELECTRICAL / OPTICAL CHARACTERISTICS (at $T_A = 25^\circ\text{C}$ )

Parameter	Symbol	Min	Typ	Max	Unit
Forward Voltage	$I_F = 20\text{ mA}$ $V_F$		3.4	3.7	V
Radiant Intensity	$I_F = 20\text{ mA}$ $I_r$		20		mW/sr
Peak Wavelength	$I_F = 20\text{ mA}$ $\lambda_p$	430	435	440	nm
Dominant Wavelength	$I_F = 20\text{ mA}$ $\lambda_d$		445		nm
Spectrum Radiation Bandwidth	$I_F = 20\text{ mA}$ $\Delta\lambda$		31		nm
Viewing Angle	$2\theta_{1/2}$	12	15	17	deg
Reverse Current	$V_R = 5\text{ V}$ $I_R$		10	100	$\mu\text{A}$

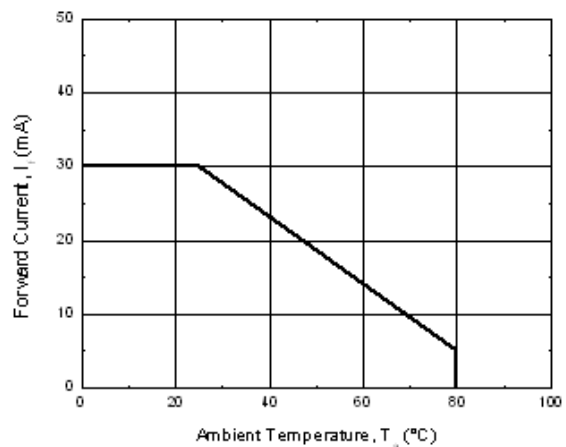
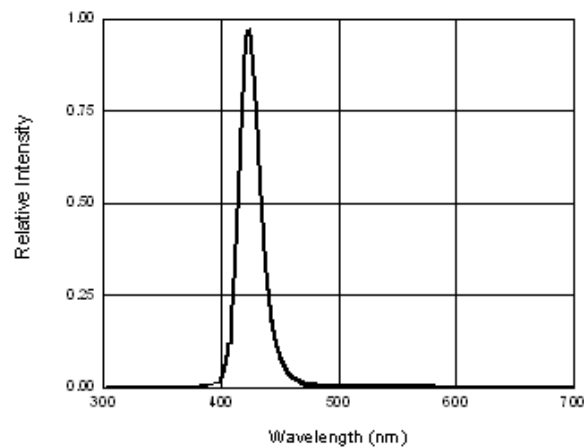
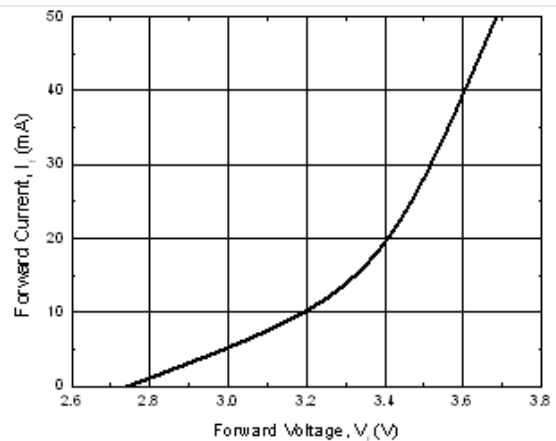
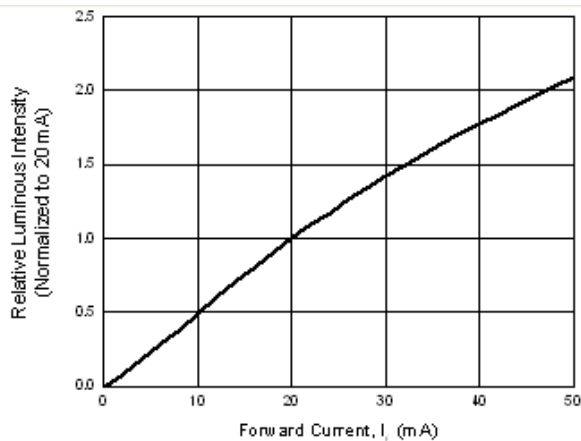
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## TYPICAL ELECTRICAL CHARACTERISTICS CURVES (at 20 mA DC / $T_A = 25^\circ\text{C}$ )



### GENERAL NOTES:

1. Radiant Intensity ( $I$ ), a radiometric measurement, is obtained by measuring the LED lamp with a Spectral Goniometric Analyzer. It is the Light Energy (mW) emitted by the LED lamp in the forward axial direction (within a  $3^\circ$  solid angle (sr)).
2. Radiant Intensity measurement uncertainty is  $\pm 15\%$  due to test procedures and equipment variations.
3.  $\theta_{1/2}$  is the off-axis angle at which the luminous intensity is half the axial luminous intensity. Tolerance  $\pm 3^\circ$ .
4. Dominant wavelength is derived from the 1931 CIE  $2^\circ$  Observer Chromaticity Diagram.
5. Peak and Dominant wavelength measurement uncertainty is  $\pm 0.05$  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

