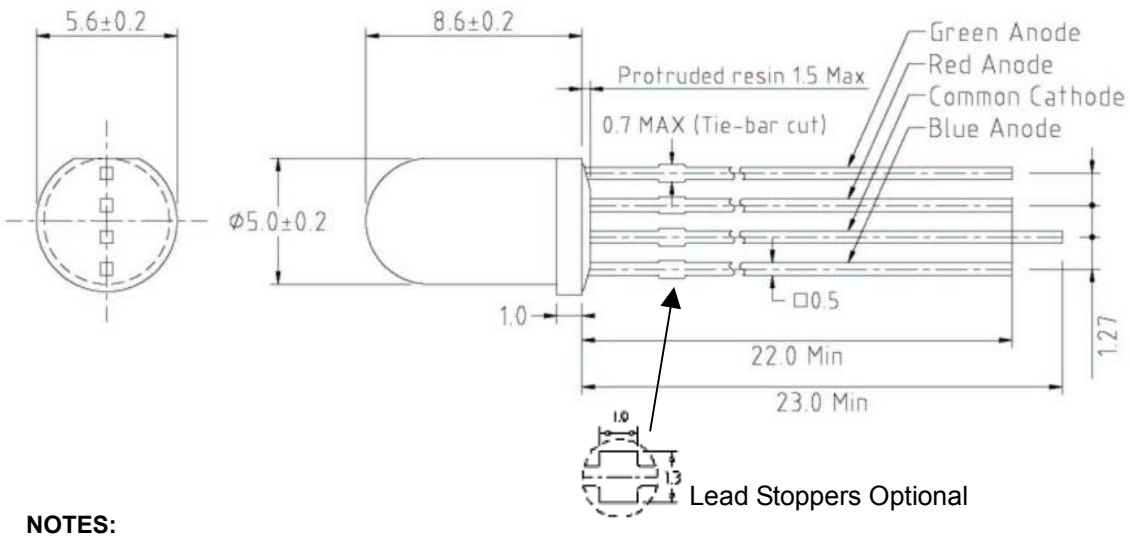
HB FULL COLOR (RGB) LED Lamp

5mm Round Through-Hole Package

BL–LxFC5N40C series

FEATURES	APPLICATIONS
• Super Luminosity Red (TS AlInGaP), Blue (GaN), and Green (InGaN) LED dice. • Full color mixing possible. • 4 Leads with 1 Common Cathode. • Common Anode configuration also available. • Water Clear Lens with wide viewing angle.	• Decorative /Accent Lighting • Toys and gizmos. • Video displays. • Back or Side lighting. • Garden lights.

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.

HB FULL COLOR (RGB) LED Lamp

5mm Round Through-Hole Package

BL–LxFC5N40C series

ABSOLUTE MAXIMUN RATING (at T_A = 25°C)

Parameter	Symbol	Red	Pure Green	Blue	Unit
Power Dissipation	P_D	75	84	84	mW
Continuous forward current (DC)	I_F	30	30	30	mA
Peak forward current *	I_{FP}	100	100	100	mA
Reverse voltage (DC)	V_R	5	5	5	V
Operating temperature	T_{opr}	-25 TO +85			°C
Storage temperature	T_{stg}	-35 TO +100			°C
Soldering temperature	260 °C / 5 seconds				

* Pulse width ≦ 10ms, Duty ratio ≦ 1/10

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

Parameter	Symbol	Radiation Color	Conditions	MIN	TYP	MAX	Unit
Forward Voltage	V_F	Red	I_F = 20 mA		2.0	2.4	V
		Pure-Green	I_F = 20 mA		3.2	3.8	V
		Blue	I_F = 20 mA		3.2	3.8	V
Luminous Intensity	I_V	Red	I_F = 20 mA	600	1200		mcd
		Pure-Green	I_F = 20 mA	800	1600		mcd
		Blue	I_F = 20 mA	400	800		mcd
Dominant Wavelength	λ d	Red	I_F = 20 mA		625		nm
		Pure-Green	I_F = 20 mA		525		nm
		Blue	I_F = 20 mA		470		nm
Spectrum Radiation Bandwidth	Δ λ	Red	I_F = 20 mA		20		nm
		Pure-Green	I_F = 20 mA		45		nm
		Blue	I_F = 20 mA		30		nm
Reverse Current	I_R	Red	V_R = 5V			50	μA
		Pure-Green	V_R = 5V			50	μA
		Blue	V_R = 5V			50	μA
View Angle	- -	Red	I_F = 20 mA		40		Deg
	- -	Pure-Green	I_F = 20 mA		40		Deg
	- -	Blue	I_F = 20 mA		40		Deg

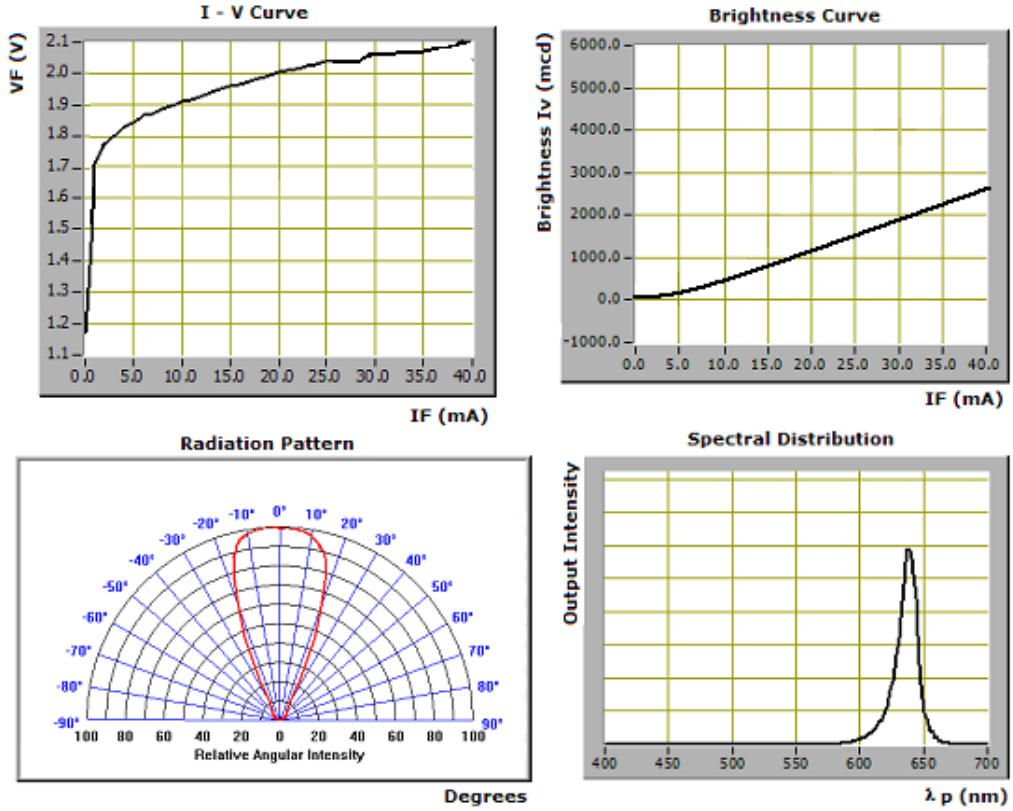
HB FULL COLOR (RGB) LED Lamp

5mm Round Through-Hole Package

BL–LxFC5N40C series

RED COLOR

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



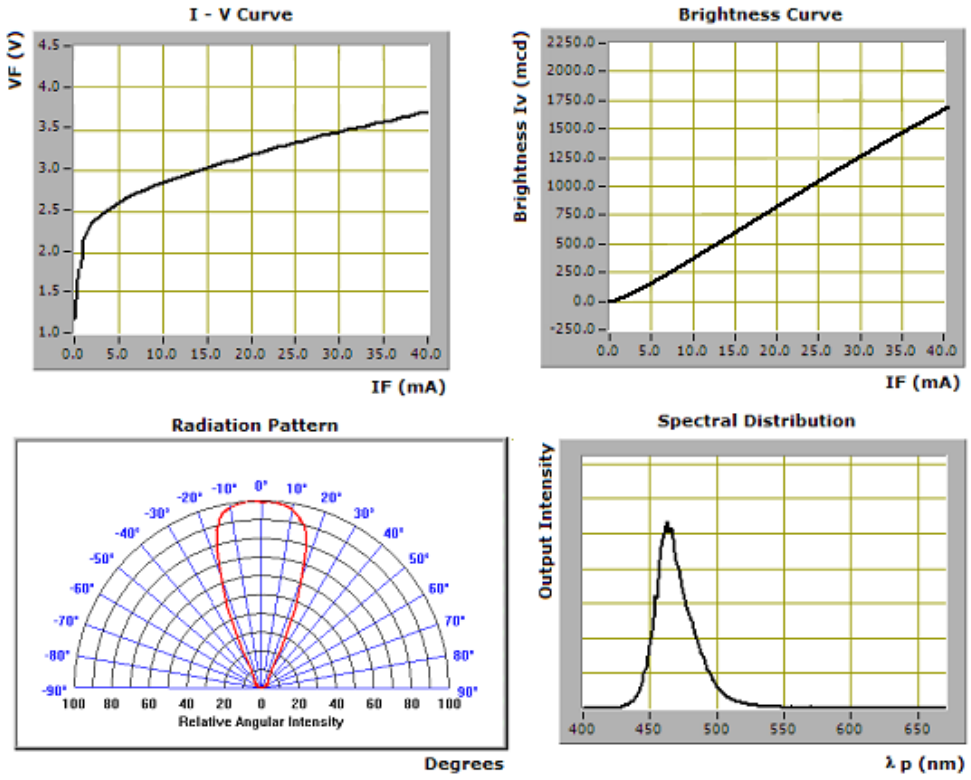
HB FULL COLOR (RGB) LED Lamp

5mm Round Through-Hole Package

BL–LxFC5N40C series

BLUE COLOR

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



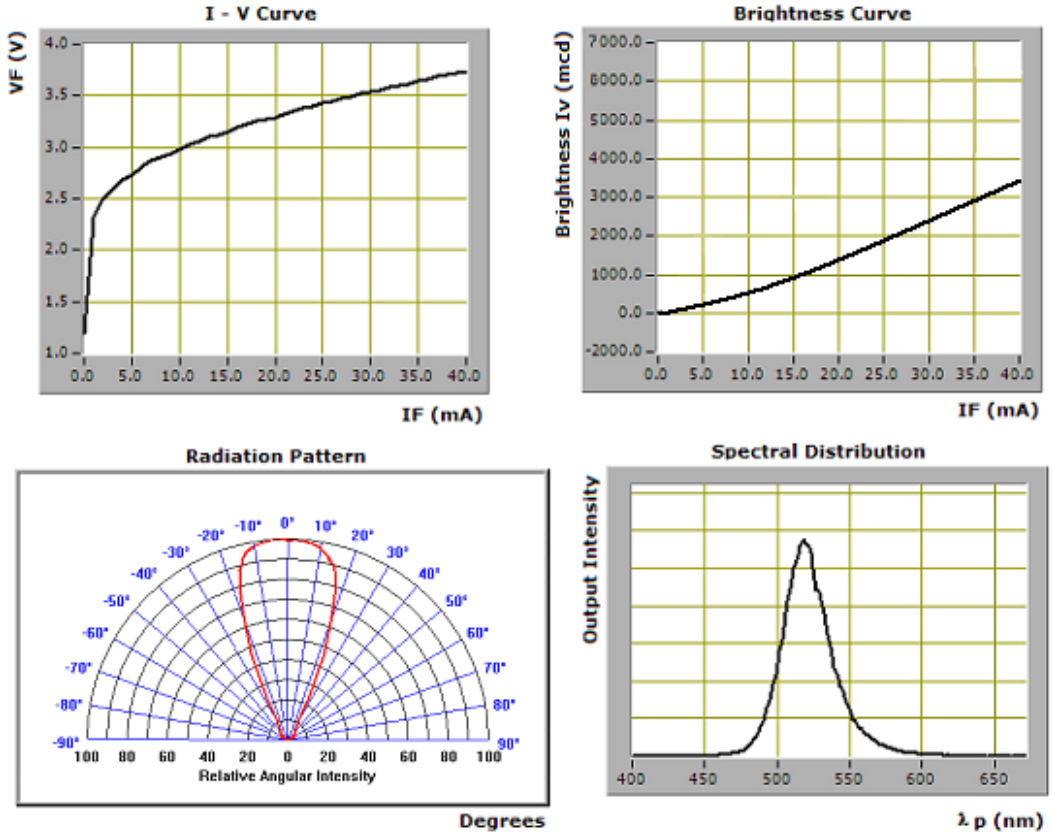
HB FULL COLOR (RGB) LED Lamp

5mm Round Through-Hole Package

BL–LxFC5N40C series

GREEN COLOR

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.

HB FULL COLOR (RGB) LED Lamp

5mm Round Through-Hole Package

BL–LxFC5N40C series

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

Configuration
C = Common Cathode
A = Common Anode

Emitted Color
FC= Full Color

Lens Size
5= 5 mm

Lens Shape
N= Normal round

Viewing Angle
40= 40° ± 3°

Lens Resin
C= Clear

Lead Stoppers
N= No Stoppers
S= with Stoppers

Delivery
B= Bulk
R= Reel
A= Ammo