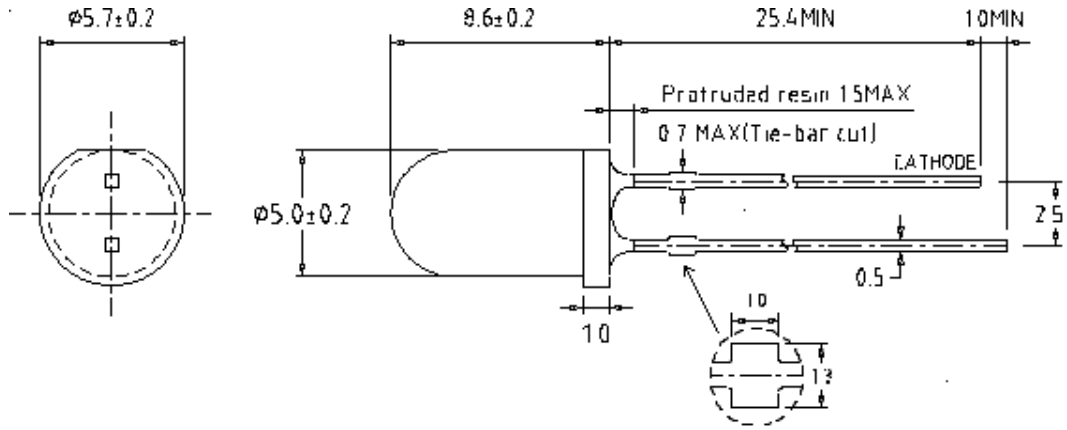
Infra Red LED Lamp

5mm Through-Hole Package

BL–L9IR5N50C series

FEATURES	APPLICATIONS
• High Output IR LED (940nm λ_p). • AlGaAs on GaAs die. • 5mm round resin mold. • Water Clear Lens. • Wide viewing angle (50°).	• Remote Control • Smoke Alarms • IrDA • Communications. • Signal transfer.

PACKAGE OUTLINE DIMENSIONS:

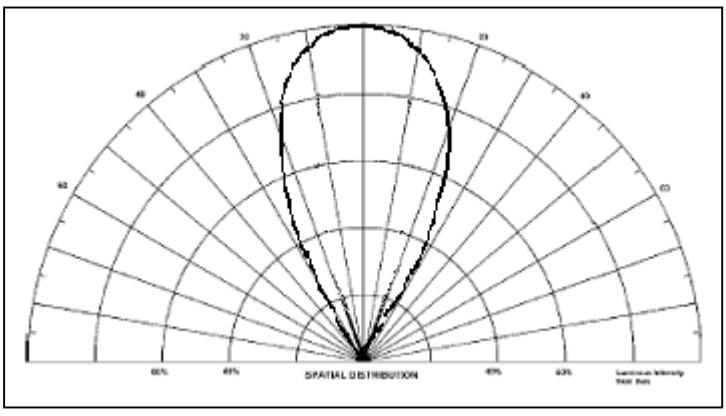


Lead Stoppers Optional

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



Infra Red LED Lamp

5mm Through-Hole Package

BL–L9IR5N50C series

ABSOLUTE MAXIMUN RATING (at T_A = 25°C)

Parameter	Symbol	Value	Unit
Continuous Forward Current	I_F	100	mA
Peak Forward Current (1/10 Duty Cycle @ 1Khz)	I_{Fp}	1.2	A
Power Dissipation	P_d	150	mW
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 3 seconds**		

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

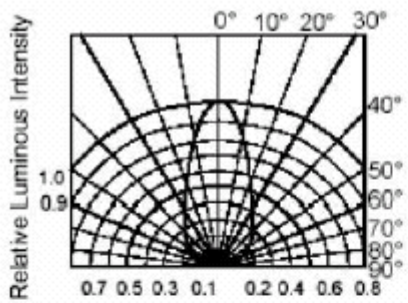
Parameter		Symbol	Min	Typ	Max	Unit
Forward Voltage	I_F= 20 mA	V_F		1.3	1.45	V
Radiant Intensity	I_F= 20 mA	I_e	1.3	3.7		mW/sr
Peak Wavelength	I_F= 20 mA	λ_p	930	940	950	nm
Spectrum Radiation Bandwidth	I_F= 20 mA	$\Delta\lambda$		50		nm
Viewing Angle		2θ 1/2	45	50	55	deg
Reverse Voltage	I_R= 100 µA	V_R	5			V
Optical Rise Time	I_F= 20 mA	T_R		11		nS
Optical Fall Time	I_F= 20 mA	T_F		7		nS

Infra Red LED Lamp

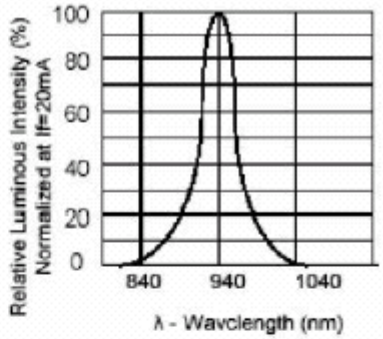
5mm Through-Hole Package

BL–L9IR5N50C series

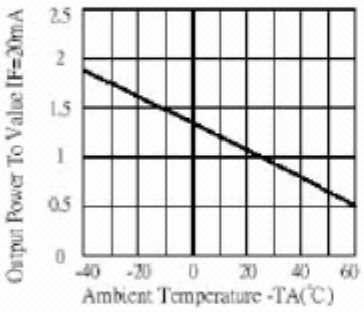
TYPICAL ELECTRICAL CHARACTERISTICS CURVES (at 20 mA DC / T_A = 25°C)



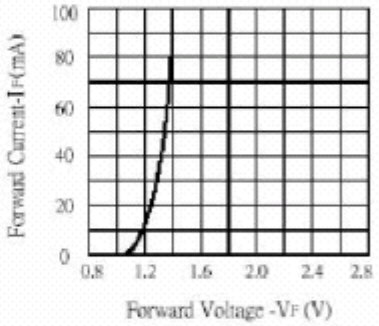
RADIATION DIAGRAM



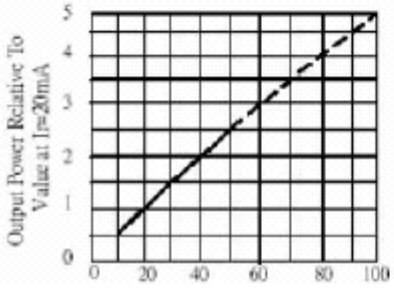
RELATIVE LUMINOUS INTENSITY
Vs. WAVELENGTH



LUMINOUS INTENSITY
Vs. AMBIENT TEMPERATURE



FORWARD CURRENT
Vs. FORWARD VOLTAGE



GENERAL NOTES:

1. Radiant Intensity (I_e), a radiometric measurement, is obtained by measuring with a sensor and filter combination (spectroradiometer) and is the portion of the energy emitted by the LED lamp within a 3° solid angle in the optical axis.
2. Radiant 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 +/- 5°.
4. Peak wavelength measurement uncertainty is +/- 0.05 due to variations.
5. 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.
6. Do not apply excess mechanical stress to the leads, especially when heated or while soldering.

Infra Red LED Lamp

5mm Through-Hole Package

BL–L9IR5N50C 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

Product Series
9= 940nm

Emitted Color
IR= Infra Red

Lens Size
5= 5mm

Lens Shape
N= Normal Round

Viewing Angle
50= 50° ± 5°

Lens Resin
C= Clear

Lead Stoppers
N=No Stoppers
S= with Stoppers

Delivery
B= Bulk
R= Reel
A= Ammo