

Infra Red LED Lamp

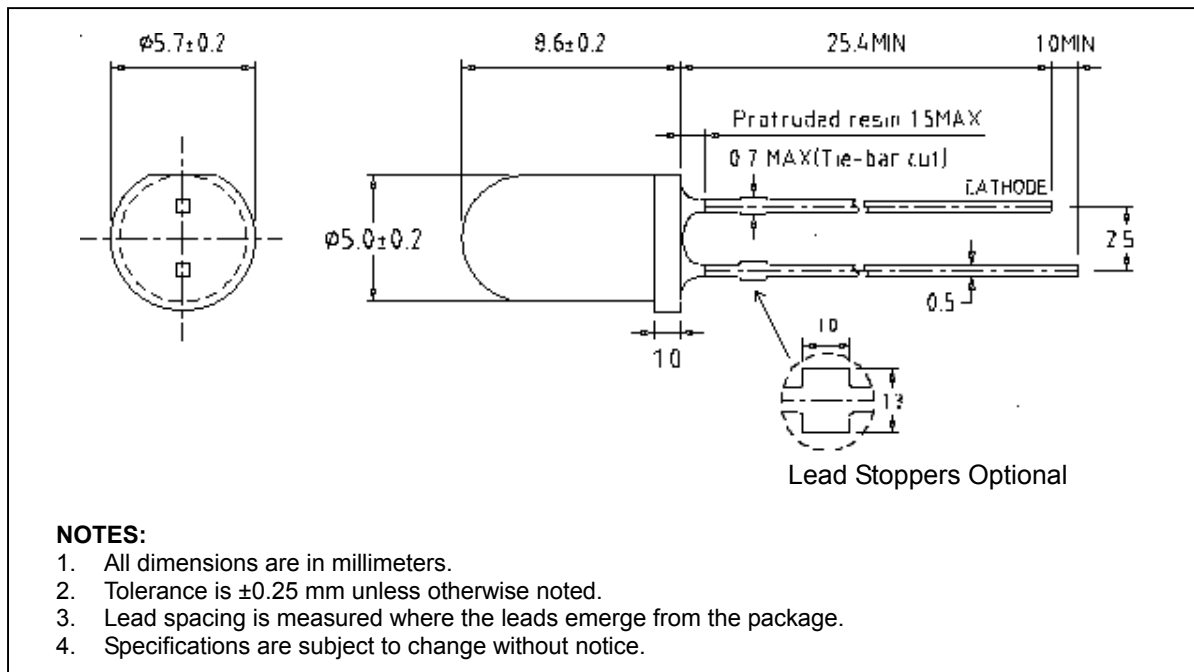
5mm Through-Hole Package

BL-L8IR5N30T series

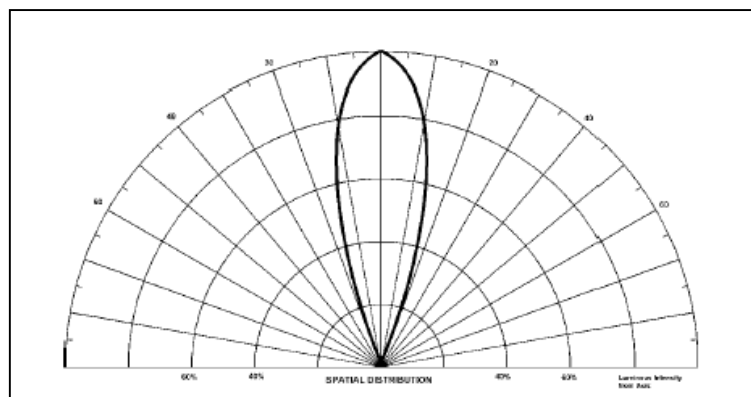


FEATURES	APPLICATIONS
<ul style="list-style-type: none"> • High Output IR LED. • AlGaAs on GaAs die. • 5mm round resin mold. • Blue Transparent Lens. • Wide viewing angle (30°). 	<ul style="list-style-type: none"> • Remote Control • Smoke Alarms • IrDA • Communications. • Signal transfer.

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	100	mA
Peak Forward Current (1/10 Duty Cycle @ 1Khz)	I_{Fp}	1	A
Power Dissipation	P_d	120	mW
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 3 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		1.5	1.8	V
Radiant Intensity	$I_F = 20 \text{ mA}$ I_e	1.5	4		mW/sr
Peak Wavelength	$I_F = 20 \text{ mA}$ λ_p	820	850	880	nm
Spectrum Radiation Bandwidth	$I_F = 20 \text{ mA}$ $\Delta \lambda$		30		nm
Viewing Angle	$2 \theta_{1/2}$	25	30	35	deg
Reverse Voltage	$I_R = 100 \mu\text{A}$ V_R	5			V
Optical Rise Time	$I_F = 20 \text{ mA}$ T_R		11		nS
Optical Fall Time	$I_F = 20 \text{ mA}$ T_F		7		nS

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

● Typical Electro-Optical Characteristics Curve:

Fig 1. Forward Current vs. Forward Voltage

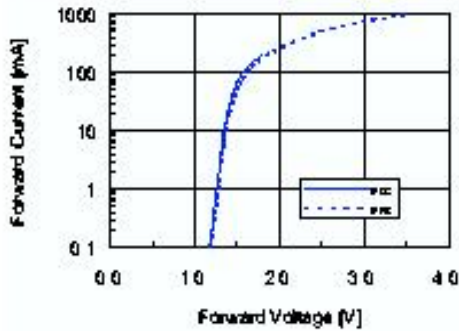


Fig 2. Relative Radiant Power vs. Wavelength

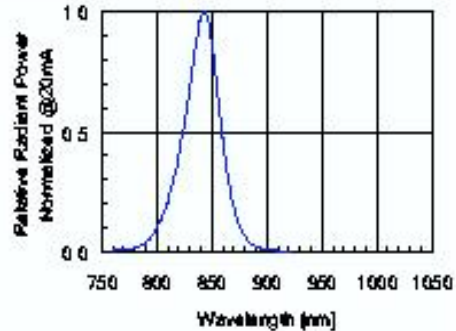


Fig 3. Relative Radiant Power vs. Forward DC Current

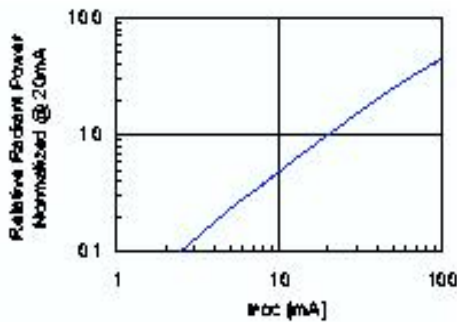


Fig 4. Relative Radiant Power vs. Forward Peak Current

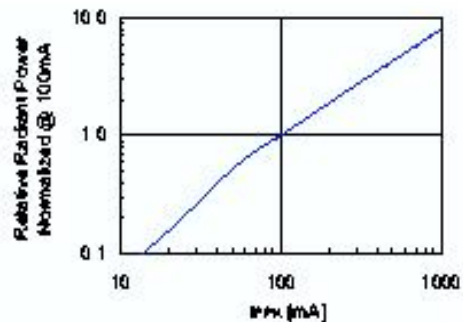


Fig 5. Forward DC Voltage vs. Temperature

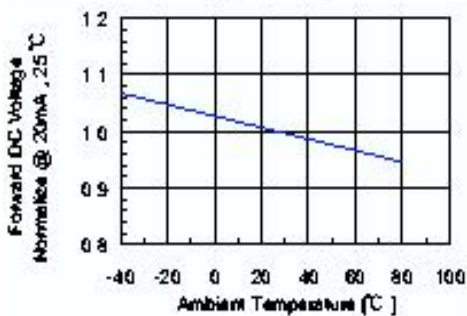
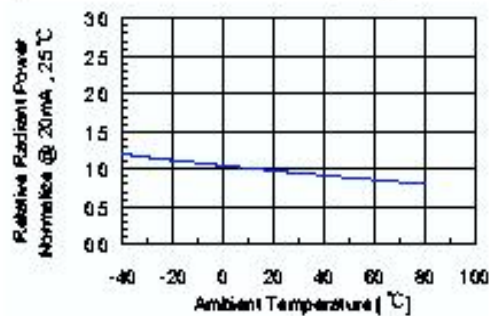


Fig 6. Relative Radiant Power vs. Temperature



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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 $\pm 15\%$ 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 $\pm 5^\circ$.
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.

PRODUCT CODE BREAKDOWN

