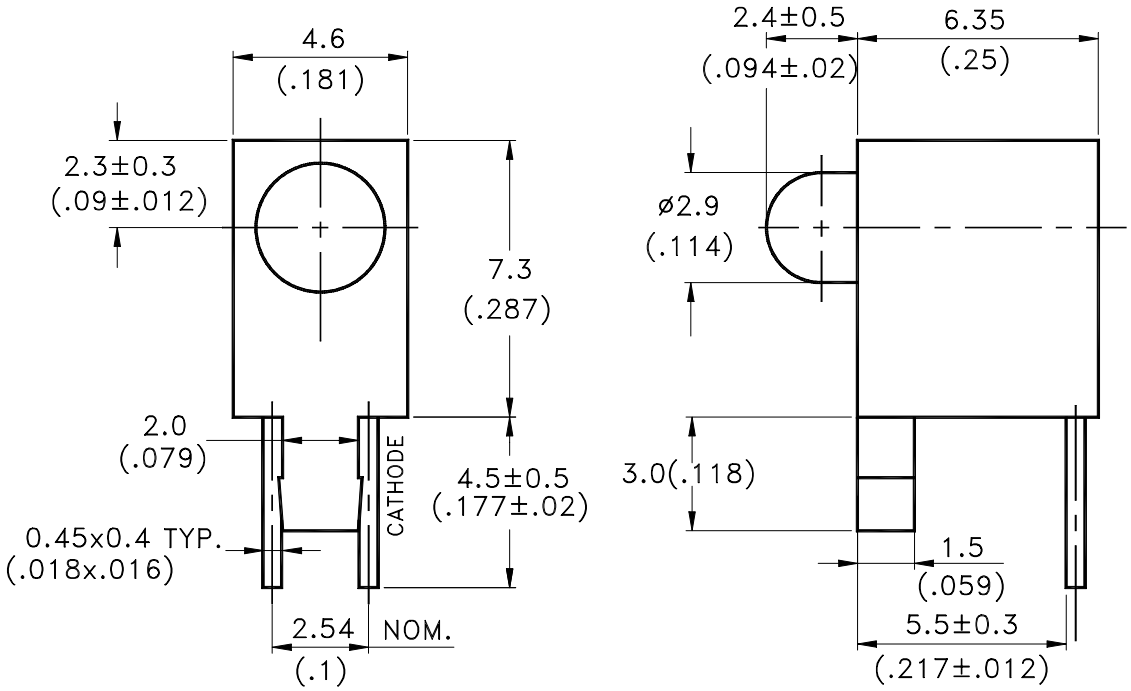
Features

* Designed for ease in circuit board assembly.
* Black case enhance contrast ratio.
* Solid state light source.
* Reliable and rugged.

Package Dimensions



Part No. LTL-	Lens	Source Color
4231N	Green Diffused	Green

NOTES:
1. All dimensions are in millimeters (inches).
2. Tolerance is ±0.25mm(.010") unless otherwise noted.
3. The holder color is black.
4. The holder raw material is PC.
5. The LED lamp is LTL-4231N.

Absolute Maximum Ratings at T_a=25℃

Parameter	Maximum Rating	Unit
Power Dissipation	100	mW
Peak Forward Current (1/10 Duty Cycle, 0.1ms Pulse Width)	120	mA
Continuous Forward Current	30	mA
Derating Linear From 50℃	0.4	mA/℃
Reverse Voltage	5	V
Operating Temperature Range	-55℃ to + 100℃	
Storage Temperature Range	-55℃ to + 100℃	
Lead Soldering Temperature [1.6mm(.063") From Body]	260℃ for 5 Seconds	

Electrical Optical Characteristics at T_a=25℃

Parameter	Symbol	Part No. LTL-	Min.	Typ.	Max.	Unit	Test Condition
Luminous Intensity	I_V	4231NPHA	3.7	12.6		mcd	I_F = 10mA Note 1,4
Viewing Angle	$2\theta_{1/2}$	4231NPHA		60		deg	Note 2 (Fig.6)
Peak Emission Wavelength	λ p	4231NPHA		565		nm	Measurement @Peak (Fig.1)
Dominant Wavelength	λ d	4231NPHA		569		nm	Note 3
Spectral Line Half-Width	$\Delta\lambda$	4231NPHA		30		nm	
Forward Voltage	V_F	4231NPHA		2.1	2.6	V	I_F = 20mA
Reverse Current	I_R	4231NPHA			100	μA	V_R = 5V
Capacitance	C	4231NPHA		35		pF	V_F = 0 , f = 1MHz

Note: 1. Luminous intensity is measured with a light sensor and filter combination that approximates the CIE eye-response curve.

2. $\theta_{1/2}$ is the off-axis angle at which the luminous intensity is half the axial luminous intensity.

3. The dominant wavelength, λ d is derived from the CIE chromaticity diagram and represents the single wavelength which defines the color of the device.

4. Iv needs ±15% additionary for guaranteed limits.

Typical Electrical / Optical Characteristics Curves

(25℃ Ambient Temperature Unless Otherwise Noted)

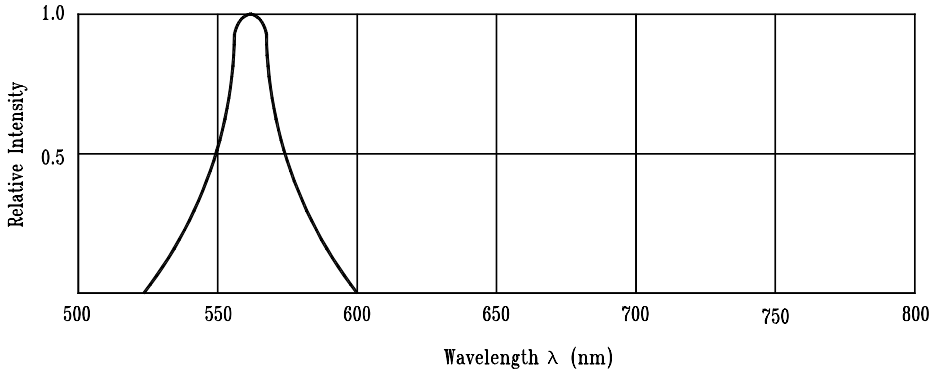


Fig.1 Relative Intensity vs. Wavelength

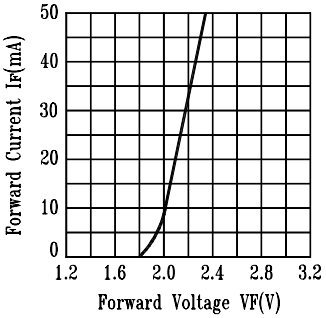


Fig.2 Forward Current vs. Forward Voltage

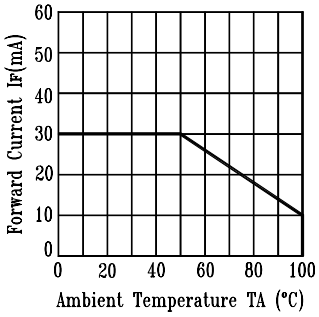


Fig.3 Forward Current Derating Curve

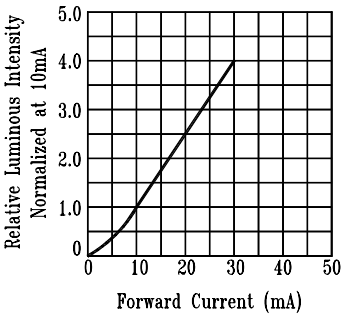


Fig.4 Relative Luminous Intensity vs. Forward Current

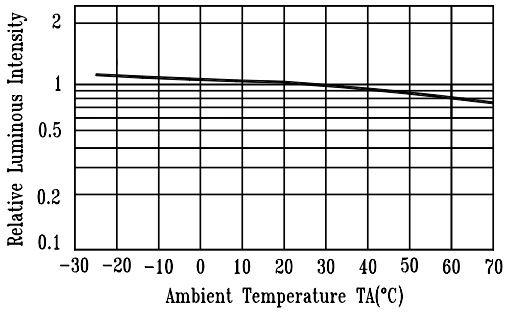


Fig.5 Luminous Intensity vs. Ambient Temperature

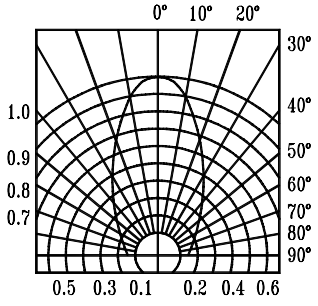


Fig.6 Spatial Distribution