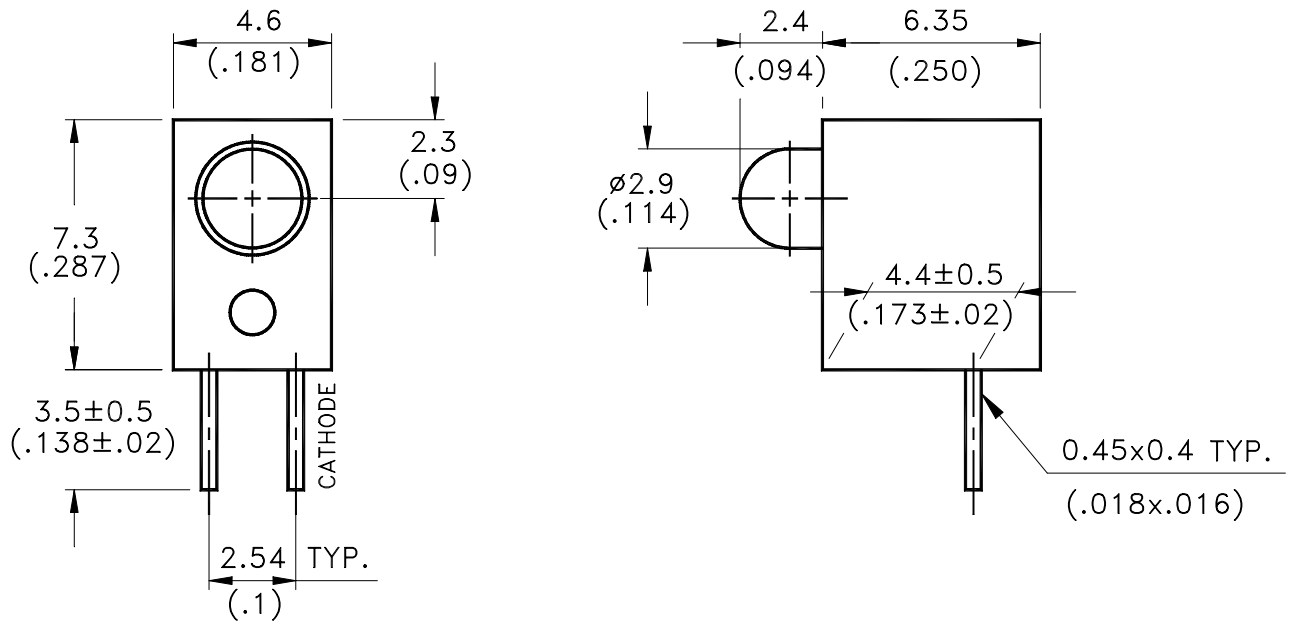


Features

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

Package Dimensions



Part No.	Lens	Source Color
LTL-4211N	Red Diffused	Bright Red

Notes:

1. All dimensions are in millimeters (inches).
2. Tolerance is $\pm 0.25\text{mm}(.010\text{'})$ unless otherwise noted.
3. The holder color is black.
5. The LED lamp is LTL-4211N.



Absolute Maximum Ratings at Ta=25°C

Parameter	Maximum Rating	Unit
Power Dissipation	40	mW
Peak Forward Current (1/10 Duty Cycle, 0.1ms Pulse Width)	60	mA
Continuous Forward Current	15	mA
Derating Linear From 50°C	0.2	mA/°C
Reverse Voltage	5	V
Operating Temperature Range	-55°C to + 100°C	
Storage Temperature Range	-55°C to + 100°C	
Lead Soldering Temperature [1.6mm(.063") From Body]	260°C for 5 Seconds	

Electrical Optical Characteristics at Ta=25°C

Parameter	Symbol	Part No. LTL-	Min.	Typ.	Max.	Unit	Test Condition
Luminous Intensity	I _v	4211NHBP	1.3	4.4		mcd	I _F = 10mA Note 1,4
Viewing Angle	2θ _{1/2}	4211NHBP		60		deg	Note 2 (Fig.6)
Peak Emission Wavelength	λ _p	4211NHBP		697		nm	Measurement @Peak (Fig.1)
Dominant Wavelength	λ _d	4211NHBP		657		nm	Note 3
Spectral Line Half-Width	Δλ	4211NHBP		90		nm	
Forward Voltage	V _F	4211NHBP		2.1	2.6	V	I _F = 20mA
Reverse Current	I _R	4211NHBP			100	μA	V _R = 5V
Capacitance	C	4211NHBP		55		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. θ_{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. I_v needs ±15% additional for guaranteed limits.

Typical Electrical / Optical Characteristics Curves

(25°C Ambient Temperature Unless Otherwise Noted)

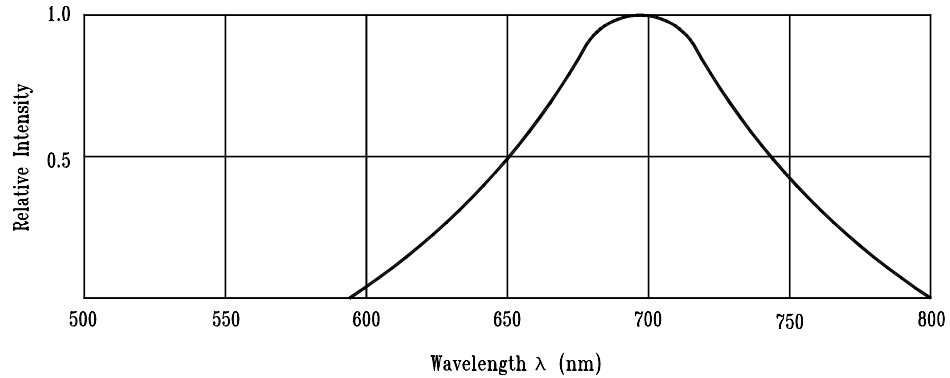


Fig.1 Relative Intensity vs. Wavelength

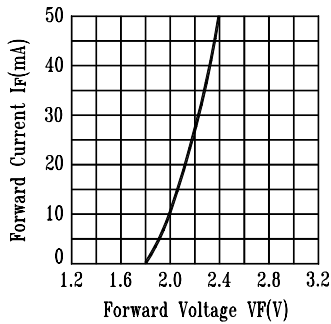


Fig.2 Forward Current vs. Forward Voltage

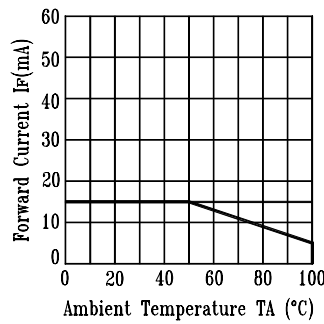


Fig.3 Forward Current Derating Curve

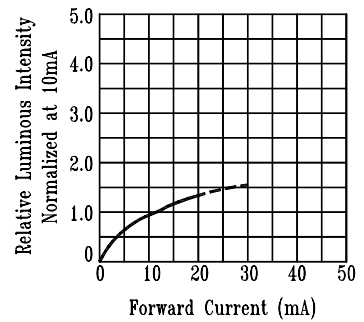


Fig.4 Relative Luminous Intensity vs. Forward Current

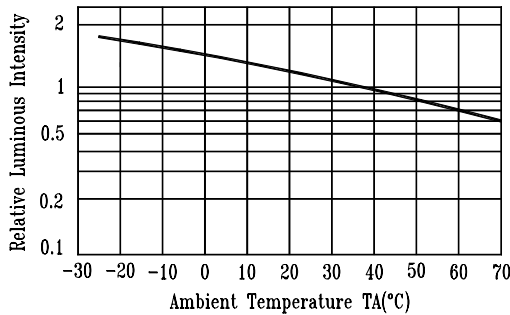


Fig.5 Luminous Intensity vs. Ambient Temperature

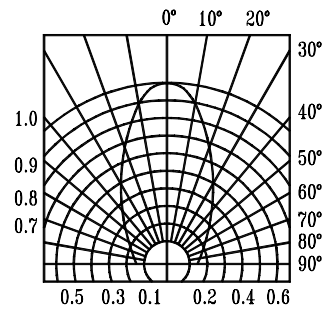


Fig.6 Spatial Distribution