



Through Hole Lamp Product Data Sheet LTL-42M1NMHKP

Spec No.: DS-20-99-0124

Effective Date: 10/06/2001

Revision: A

LITE-ON DCC

RELEASE

BNS-OD-FC001/A4

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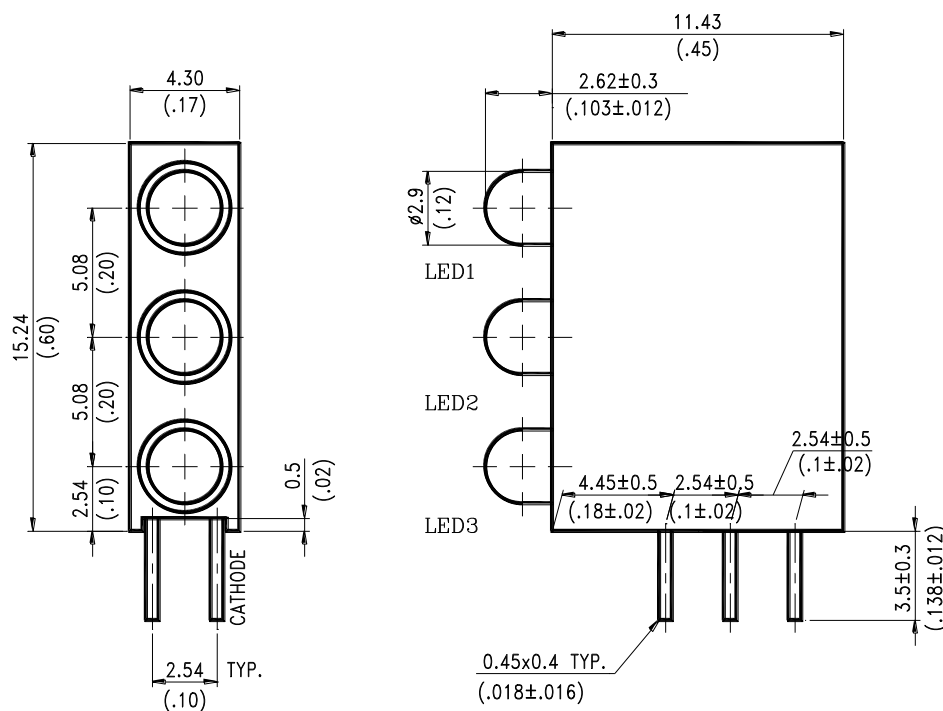
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<http://www.liteon.com/opto>

Features

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

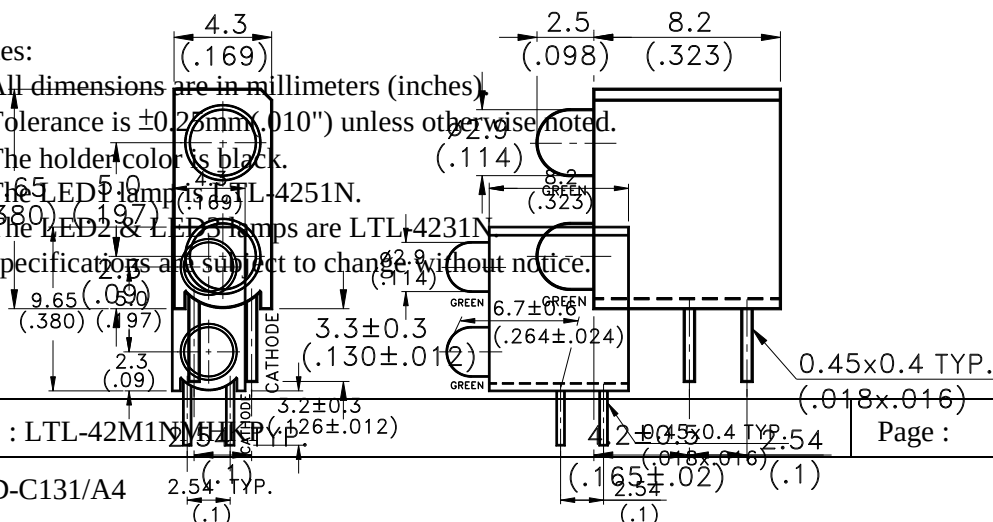
Package Dimensions



Lamp Part No.	Lens	Source Color
LTL-4251N	Yellow Diffused	Yellow
LTL-4231N	Green Diffused	Green

Notes:

1. All dimensions are in millimeters (inches).
2. Tolerance is $\pm 0.25\text{mm}$ (.010") unless otherwise noted.
3. The holder color is black.
4. The LED1 lamp is LTL-4251N.
5. The LED2 & LED3 lamps are LTL-4231N.
6. Specifications are subject to change without notice.





L I T E - O N E L E C T R O N I C S , I N C .

Property of Lite-On Only

Absolute Maximum Ratings at Ta=25°C

Parameter	Green	Yellow	Unit
Power Dissipation	100	60	mW
Peak Forward Current (1/10 Duty Cycle, 0.1ms Pulse Width)	120	80	mA
Continuous Forward Current	30	20	mA
Derating Linear From 50°C	0.4	0.25	mA/°C
Reverse Voltage	5	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	LTL-4251N LTL-4231N	Min.	Typ.	Max.	Unit	Test Condition
Luminous Intensity	I _v	Yellow Green	1.7 3.7	5.6 12.6		mcd	I _F = 10mA Note 1,4
Viewing Angle	2θ _{1/2}	Yellow Green		60		deg	Note 2 (Fig.6)
Peak Emission Wavelength	λ _p	Yellow Green		585 565		nm	Measurement @Peak (Fig.1)
Dominant Wavelength	λ _d	Yellow Green		588 569		nm	Note 3
Spectral Line Half-Width	Δλ	Yellow Green		35 30		nm	
Forward Voltage	V _F	Yellow Green		2.1 2.1	2.6 2.6	V	I _F = 20mA
Reverse Current	I _R	Yellow Green			100	μA	V _R = 5V
Capacitance	C	Yellow Green		15 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. 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)

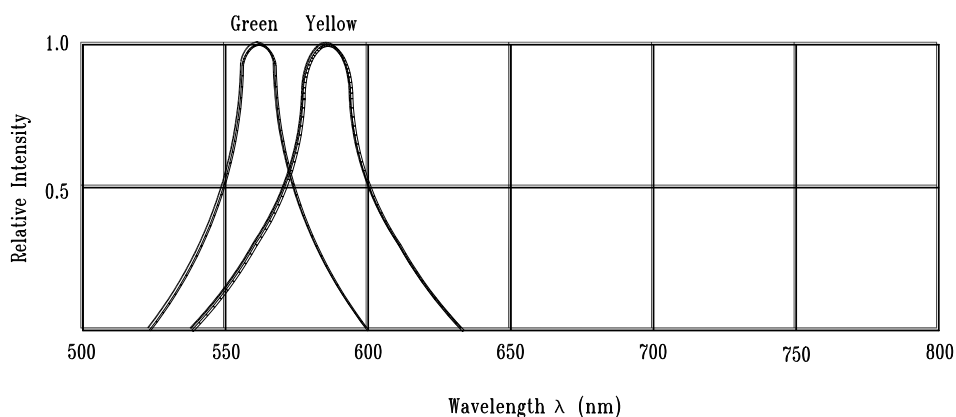


Fig.1 Relative Intensity vs. Wavelength

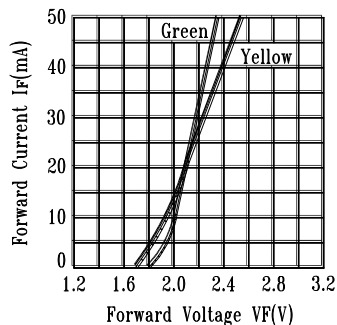


Fig.2 Forward Current vs. Forward Voltage

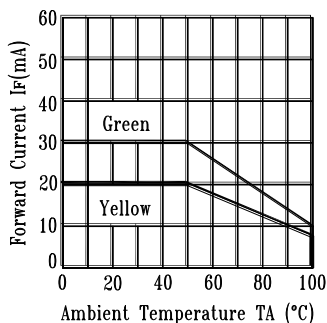


Fig.3 Forward Current Derating Curve

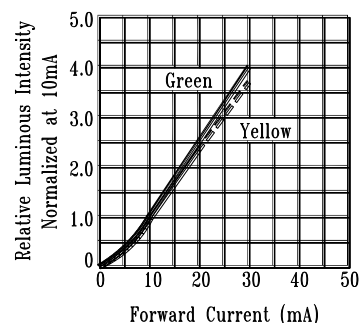


Fig.4 Relative Luminous Intensity vs. Forward Current

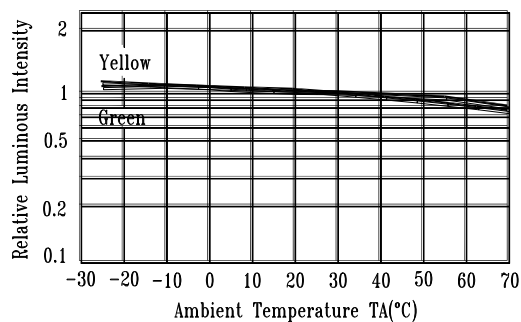


Fig.5 Luminous Intensity vs. Ambient Temperature

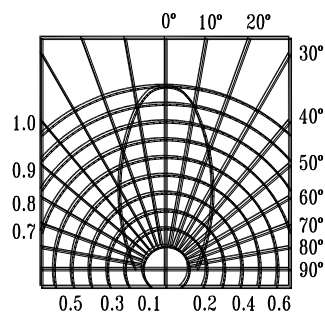


Fig.6 Spatial Distribution