



Through Hole Lamp Product Data Sheet

LTL-42M3NH51P

Spec No.: DS-20-99-0178

Effective Date: 06/01/2000

Revision: -

LITE-ON DCC

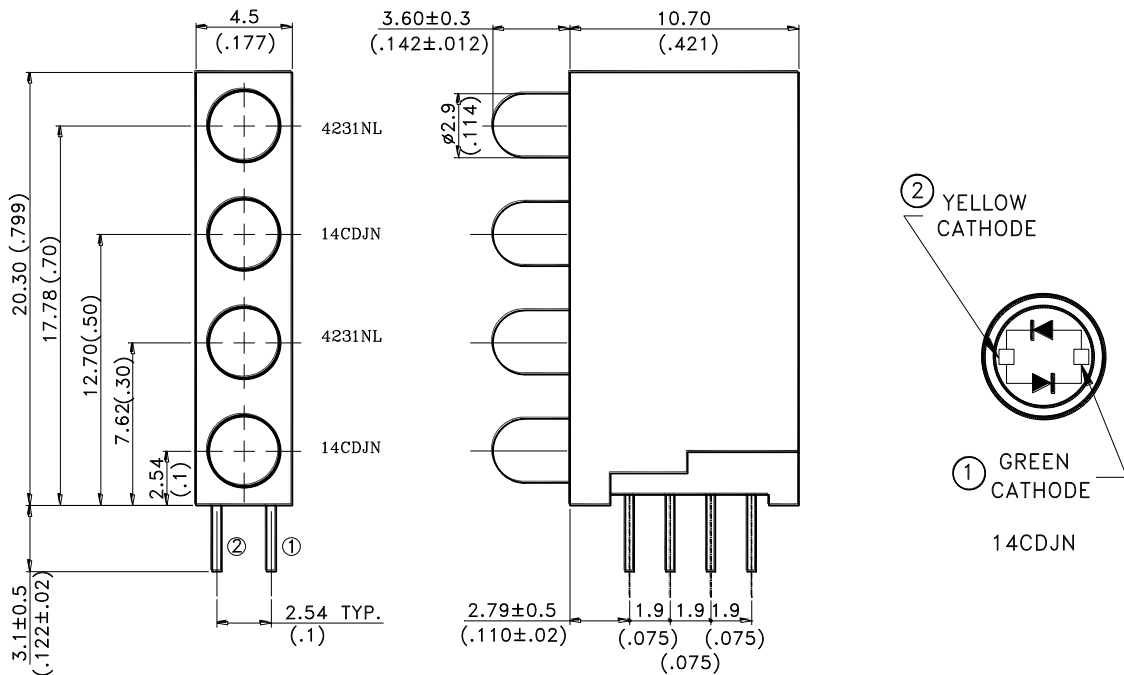
RELEASE

BNS-OD-FC001/A4

Features

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

Package Dimensions



	①	②
4231NL	Green Cathode	Green Anode
14CDJN	Green Cathode	Yellow Cathode

Part No.	Lens	Source Color
LTL-4231NL	Green Diffused	Green
LTL-14CDJN	White Diffused	Green/Yellow

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 holder raw material is nylon.



Absolute Maximum Ratings at $T_a=25^{\circ}\text{C}$

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/ $^{\circ}\text{C}$
Reverse Voltage (Note 1)	5	—	V
Operating Temperature Range	-55°C to $+100^{\circ}\text{C}$		
Storage Temperature Range	-55°C to $+100^{\circ}\text{C}$		
Lead Soldering Temperature [1.6mm(.063") From Body]	260°C for 5 Seconds		

Note : 1. Reverse voltage for LTL-4231NL only.

Electrical Optical Characteristics at $T_a=25^\circ\text{C}$

Parameter	Symbol	4231NL 14CDJN	Min.		Typ.		Max.	Unit	Test Condition
Luminous Intensity	I_v	GREEN	3.7		12.6			mcd	$I_F = 10\text{mA}$ Note 1,4
		GR YE	3.7	2.5	12.6	8.7			$I_F = 20\text{mA}$ Note 1,4
Viewing Angle	$2\theta_{1/2}$	GREEN			60			deg	Note 2 (Fig.6)
		GR YE			80				
Peak Emission Wavelength	λ_p	GREEN			565			nm	Measurement @Peak (Fig.1)
		GR YE			565	585			
Dominant Wavelength	λ_d	GREEN			569			nm	Note 3
		GR YE			569	588			
Spectral Line Half-Width	$\Delta\lambda$	GREEN			30			nm	
		GR YE			30	35			
Forward Voltage	V_F	GREEN			2.1		2.6	V	$I_F = 20\text{mA}$
		GR YE			2.1	2.1	2.6		
Reverse Current	I_R	GREEN					100	μA	$V_R = 5\text{V}$
		GR YE							$V_R = 5\text{V}$, Note 5
Capacitance	C	GREEN			35			PF	$V_F = 0$, $f = 1\text{MHz}$
		GR YE			35	15			

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. I_v needs $\pm 15\%$ additional for guaranteed limits.

5. Reverse current is controlled by dice source.

Property of Lite-On Only

Typical Electrical / Optical Characteristics Curves

(25°C Ambient Temperature Unless Otherwise Noted)

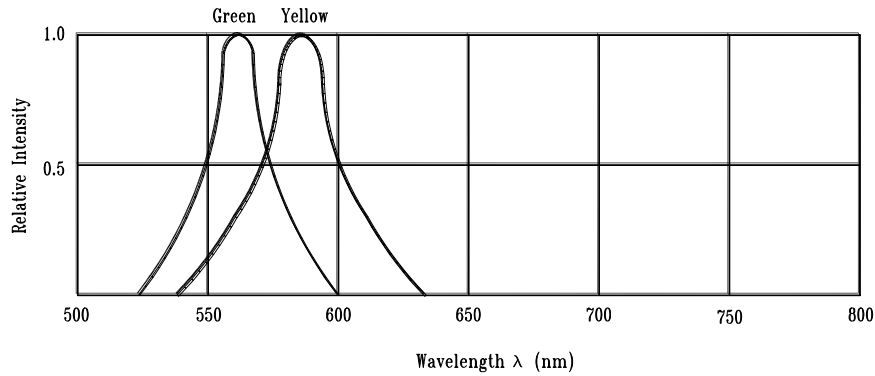


Fig.1 Relative Intensity vs. Wavelength

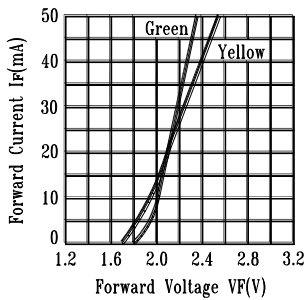


Fig.2 Forward Current vs. Forward Voltage

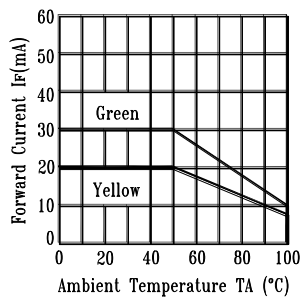


Fig.3 Forward Current Derating Curve

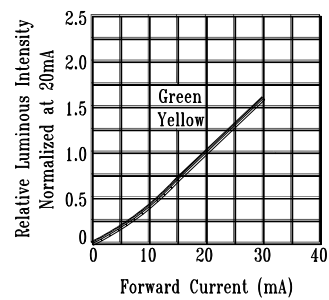


Fig.4 Relative Luminous Intensity vs. Forward Current

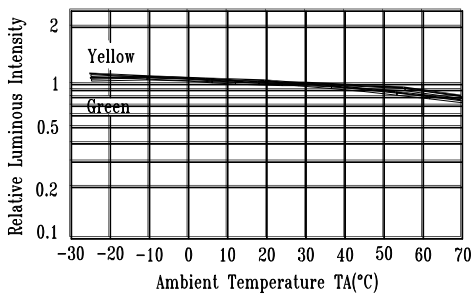


Fig.5 Luminous Intensity vs. Ambient Temperature

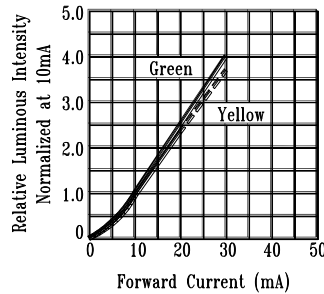


Fig.4 Relative Luminous Intensity vs. Forward Current

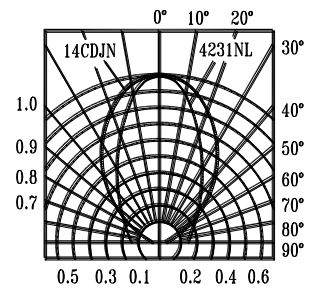


Fig.6 Spatial Distribution