

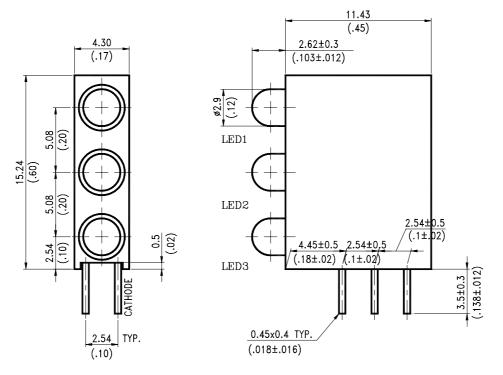
# LITEON ELECTRONICS, INC.

#### Property of Lite-On Only

#### **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  $\pm 0.25$ mm(.010") unless otherwise noted.
- 3. The holder color is black.
- 4. The LED1 lamp is LTL-4251N. The LED2 & LED3 lamps are LTL-4231N.
- 5. Specifications are subject to change without notice.

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### Absolute Maximum Ratings at Ta=25℃

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/℃		
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				

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### Electrical Optical Characteristics at Ta=25°C

Parameter	Symbol	LTL-4251N LTL-4231N	Min.	Тур.	Max.	Unit	Test Condition	
Luminous Intensity	Iv	Yellow	1.7	5.6		mcd	$I_F = 10 \text{mA}$	
		Green	3.7	12.6		inca	Note 1,4	
Viewing Angle	2 θ 1/2	Yellow		60		4	Note 2 (Fig.6)	
		Green		60		deg	11010 2 (11g.0)	
Peak Emission Wavelength	λp	Yellow		585		****	Measurement	
		Green		565		nm	@Peak (Fig.1)	
Dominant Wavelength	λd	Yellow		588		nm	Note 3	
		Green		569		nm	Tiole 5	
Spectral Line Half-Width	Δλ	Yellow		35		****		
		Green		30		nm		
Forward Voltage	V <sub>F</sub>	Yellow		2.1	2.6	V	$I_F = 20 \text{mA}$	
		Green		2.1	2.6	V		
Reverse Current	I <sub>R</sub>	Yellow			100	A		
		Green			100	$\mu$ A	$V_R = 5V$	
Capacitance	С	Yellow		15		рF	V 0 C 1NU	
		Green		35		РГ	$V_F = 0$ , $f = 1MHz$	

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,  $\lambda$  d is derived from the CIE chromaticity diagram and represents the single wavelength which defines the color of the device.
- 4. Iv needs  $\pm 15\%$  additionary for guaranteed limits.

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### Typical Electrical / Optical Characteristics Curves

(25°C Ambient Temperature Unless Otherwise Noted)

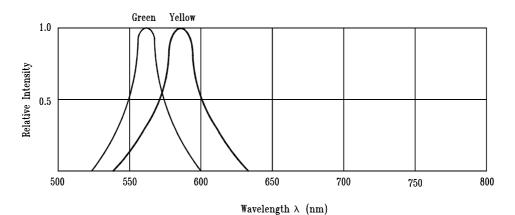


Fig.1 Relative Intensity vs. Wavelength

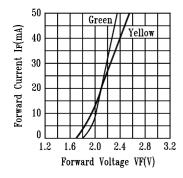


Fig.2 Forward Current vs. Forward Voltage

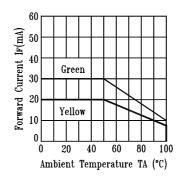


Fig.3 Forward Current Derating Curve

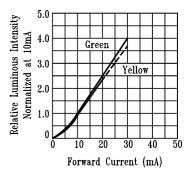


Fig.4 Relative Luminous Intensity vs. Forward Current

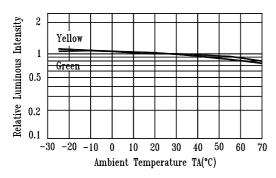


Fig.5 Luminous Intensity vs. Ambient Temperature

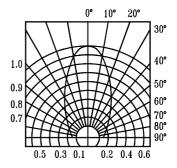


Fig.6 Spatial Distribution

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