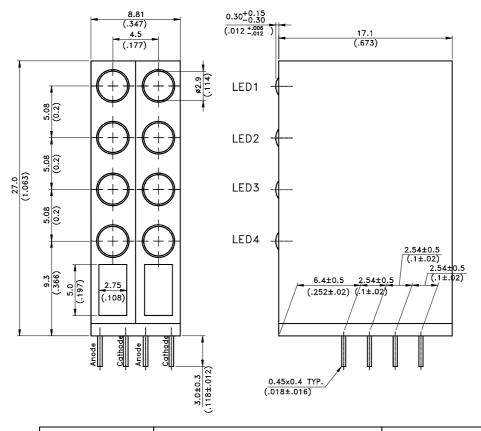
## LITEON ELECTRONICS, INC.

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**



Part No.	*	Source	
LTL-	Lens	Color	
4251NL	Yellow Diffused	Yellow	
4231NL	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 holder raw material is nylon.
- 5. LED1 & LED3 are LTL-4251NL. LED2 & LED4 are LTL-4231NL.
- 6. The holder is 46L071/46L036B.

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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/°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			

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# LITEON ELECTRONICS, INC.

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## Electrical Optical Characteristics at Ta=25°C

Parameter	Symbol	LTL- 42M1NH71	Min.	Тур.	Max.	Unit	Test Condition	
Luminous Intensity	T	Green	7.4	16.3	33.4	mcd	$I_F = 10 \text{mA}$	
Lummous mensity	Iv	Yellow	4.7	11.0	21.9	11100	Note 1,4	
Viewing Angle	2 θ <sub>1/2</sub>	Green		60		deg	Note 2 (Fig.6)	
Viewing Angle	2 0 1/2	Yellow		60		ueg	(8.0)	
Peak Emission Wavelength	) n	Green		565		nm	Measurement	
Teak Emission wavelength	λр	Yellow		585		11111	@Peak (Fig.1)	
Dominant Wavelength	λd	Green		569		nm	Note 3	
Dominant wavelength		Yellow		588		11111	1,000	
Spectral Line Half-Width	Δλ	Green		30		nm		
Spectral Line Han-width		Yellow		35		11111		
Forward Voltage	$V_{\mathrm{F}}$	Green		2.1	2.6	V	$I_F = 20 \text{mA}$	
	VI	Yellow		2.1	2.6	·	II Zomi	
Reverse Current	$I_R$	Green			100	100 μA		
		Yellow			100	$\mu$ A	$V_R = 5V$	
Capacitance	С	Green		35		рF	$V_F = 0$ , $f = 1MHz$	
		Yellow		15		rı.	v <sub>r</sub> - 0 , 1 - 11v111Z	

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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## LITE-ON ELECTRONICS, INC.

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## Typical Electrical / Optical Characteristics Curves

(25°C Ambient Temperature Unless Otherwise Noted)

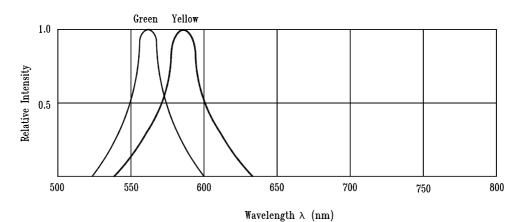


Fig.1 Relative Intensity vs. Wavelength

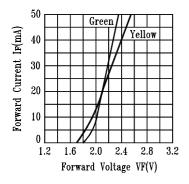


Fig.2 Forward Current vs.
Forward Voltage

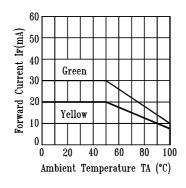


Fig.3 Forward Current
Derating Curve

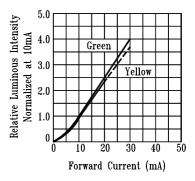


Fig.4 Relative Luminous Intensity vs. Forward Current

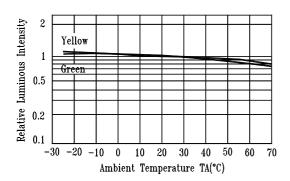


Fig.5 Luminous Intensity vs.
Ambient Temperature

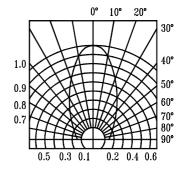


Fig.6 Spatial Distribution

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