



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 T_a=25°C

Parameter	Symbol	LTL-42M1NH71	Min.	Typ.	Max.	Unit	Test Condition
Luminous Intensity	I _v	Green	7.4	16.3	33.4	mcd	I _F = 10mA Note 1,4
		Yellow	4.7	11.0	21.9		
Viewing Angle	2θ _{1/2}	Green		60		deg	Note 2 (Fig.6)
		Yellow		60			
Peak Emission Wavelength	λ _p	Green		565		nm	Measurement @Peak (Fig.1)
		Yellow		585			
Dominant Wavelength	λ _d	Green		569		nm	Note 3
		Yellow		588			
Spectral Line Half-Width	Δλ	Green		30		nm	
		Yellow		35			
Forward Voltage	V _F	Green		2.1	2.6	V	I _F = 20mA
		Yellow		2.1	2.6		
Reverse Current	I _R	Green			100	μA	V _R = 5V
		Yellow					
Capacitance	C	Green		35		pF	V _F = 0, f = 1MHz
		Yellow		15			

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)

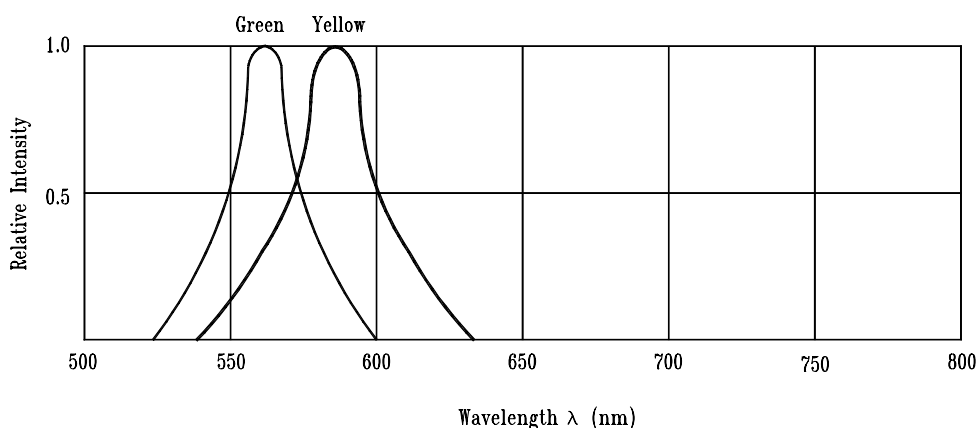


Fig.1 Relative Intensity vs. Wavelength

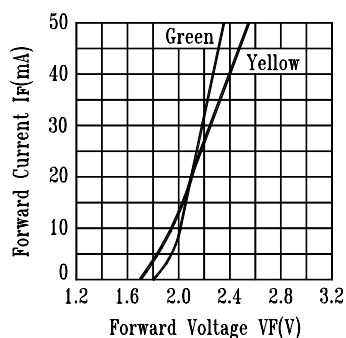


Fig.2 Forward Current vs. Forward Voltage

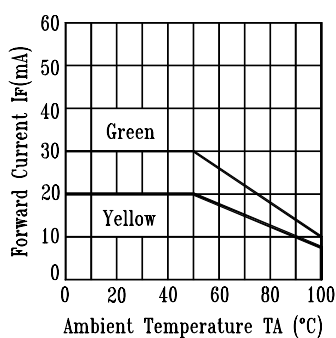


Fig.3 Forward Current Derating Curve

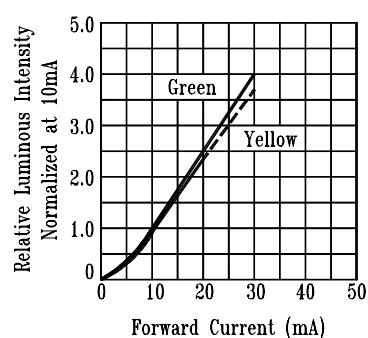


Fig.4 Relative Luminous Intensity vs. Forward Current

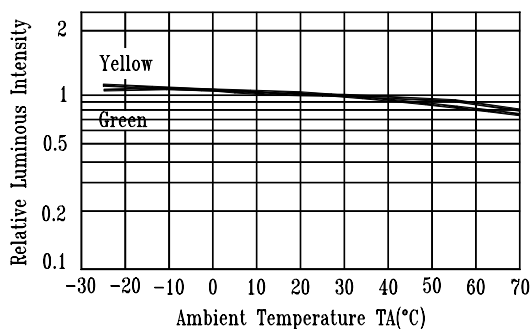


Fig.5 Luminous Intensity vs. Ambient Temperature

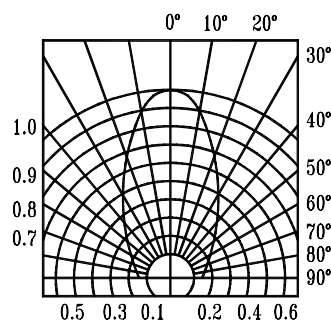


Fig.6 Spatial Distribution