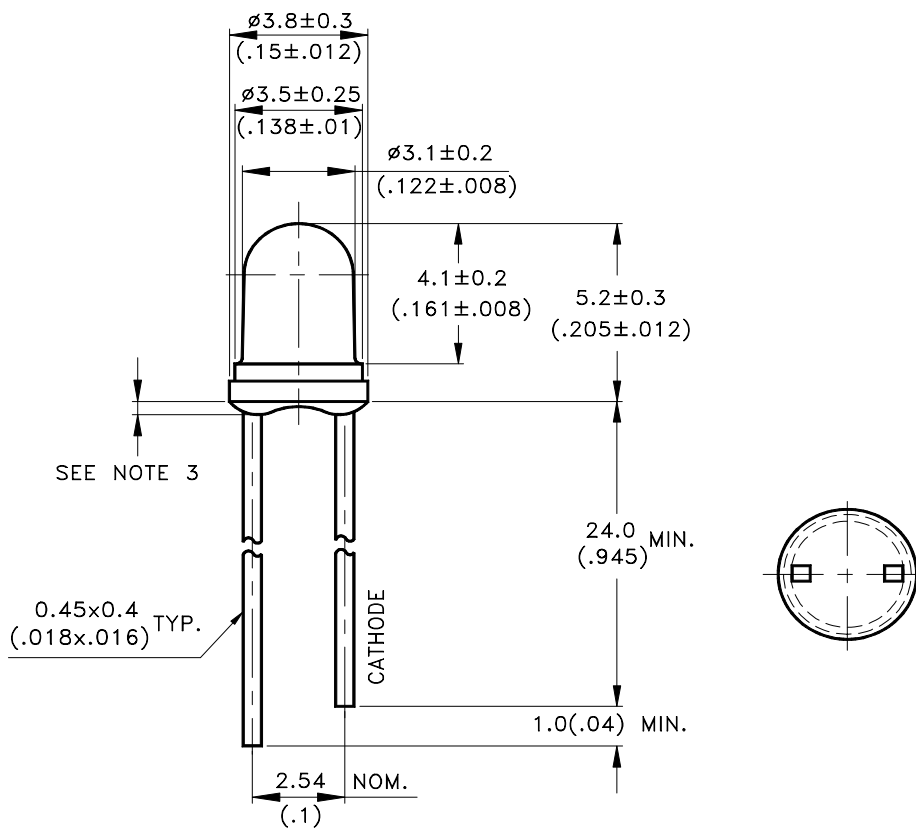


### Features

- \* Low power consumption.
- \* High efficiency.
- \* Versatile mounting on P.C. board or panel.
- \* I.C. compatible/low current requirement.
- \* 3.1 mm diameter package.

### Package Dimensions



Part No.	Lens	Source Color
LTL-1CHR	Red Diffused	Red

### NOTES:

1. All dimensions are in millimeters (inches).
2. Tolerance is  $\pm 0.25\text{mm}(.010\text{'})$  unless otherwise noted.
3. Protruded resin under flange is  $1.0\text{mm}(.04\text{'})$  max.
4. Lead spacing is measured where the leads emerge from the package.
5. Specifications are subject to change without notice.



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

Parameter	Maximum Rating	Unit
Power Dissipation	80	mW
Peak Forward Current (1/10 Duty Cycle, 0.1ms Pulse Width)	200	mA
Continuous Forward Current	40	mA
Derating Linear From $50^{\circ}\text{C}$	0.5	mA/ $^{\circ}\text{C}$
Reverse Voltage	5	V
Operating Temperature Range	$-55^{\circ}\text{C}$ to $+100^{\circ}\text{C}$	
Storage Temperature Range	$-55^{\circ}\text{C}$ to $+100^{\circ}\text{C}$	
Lead Soldering Temperature [1.6mm(.063") From Body]	$260^{\circ}\text{C}$ for 5 Seconds	

**Electrical Optical Characteristics at T<sub>A</sub>=25°C**

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Condition
Luminous Intensity	I <sub>v</sub>	0.4	1.1		mcd	I <sub>F</sub> = 10mA Note 1,4
Viewing Angle	2θ <sub>1/2</sub>		60		deg	Note 2 (Fig.6)
Peak Emission Wavelength	λ <sub>P</sub>		655		nm	Measurement @Peak (Fig.1)
Dominant Wavelength	λ <sub>d</sub>		651		nm	Note 3
Spectral Line Half-Width	Δλ		24		nm	
Forward Voltage	V <sub>F</sub>		1.7	2.0	V	I <sub>F</sub> = 20mA
Reverse Current	I <sub>R</sub>			100	μA	V <sub>R</sub> = 5V
Capacitance	C		30		pF	V <sub>F</sub> = 0 , f = 1MHz

Note: 1. Luminous intensity is measured with a light sensor and filter combination that approximates the CIE (Commission International De L'Eclairage) eye-response curve.

2. θ<sub>1/2</sub> is the off-axis angle at which the luminous intensity is half the axial luminous intensity.

3. The dominant wavelength, λ<sub>d</sub> is derived from the CIE chromaticity diagram and represents the single wavelength which defines the color of the device.

4. The I<sub>v</sub> guarantee should be added ± 15% .

Property of Lite-On Only

## Typical Electrical / Optical Characteristics Curves

(25°C Ambient Temperature Unless Otherwise Noted)

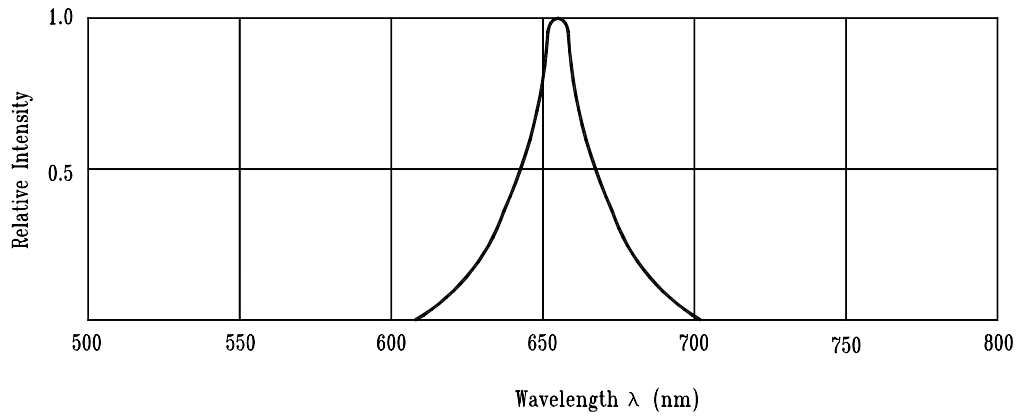


Fig.1 Relative Intensity vs. Wavelength

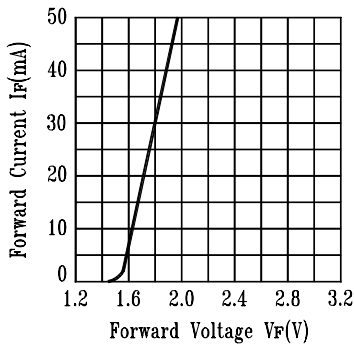


Fig.2 Forward Current vs. Forward Voltage

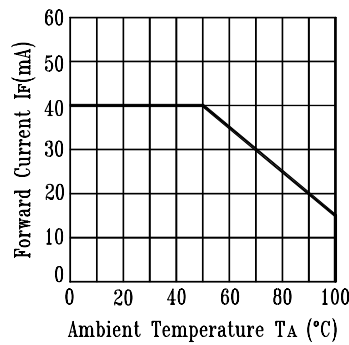


Fig.3 Forward Current Derating Curve

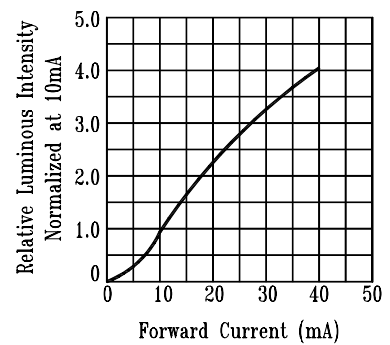


Fig.4 Relative Luminous Intensity vs. Forward Current

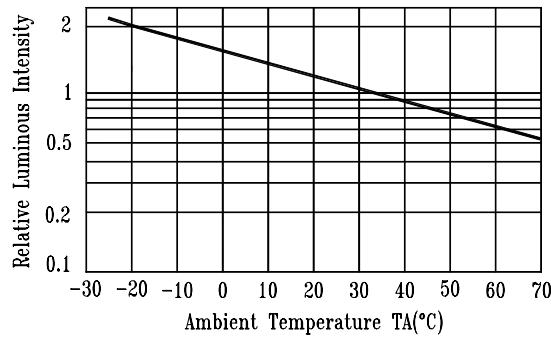


Fig.5 Luminous Intensity vs. Ambient Temperature

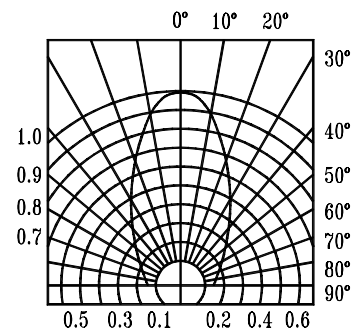


Fig.6 Spatial Distribution