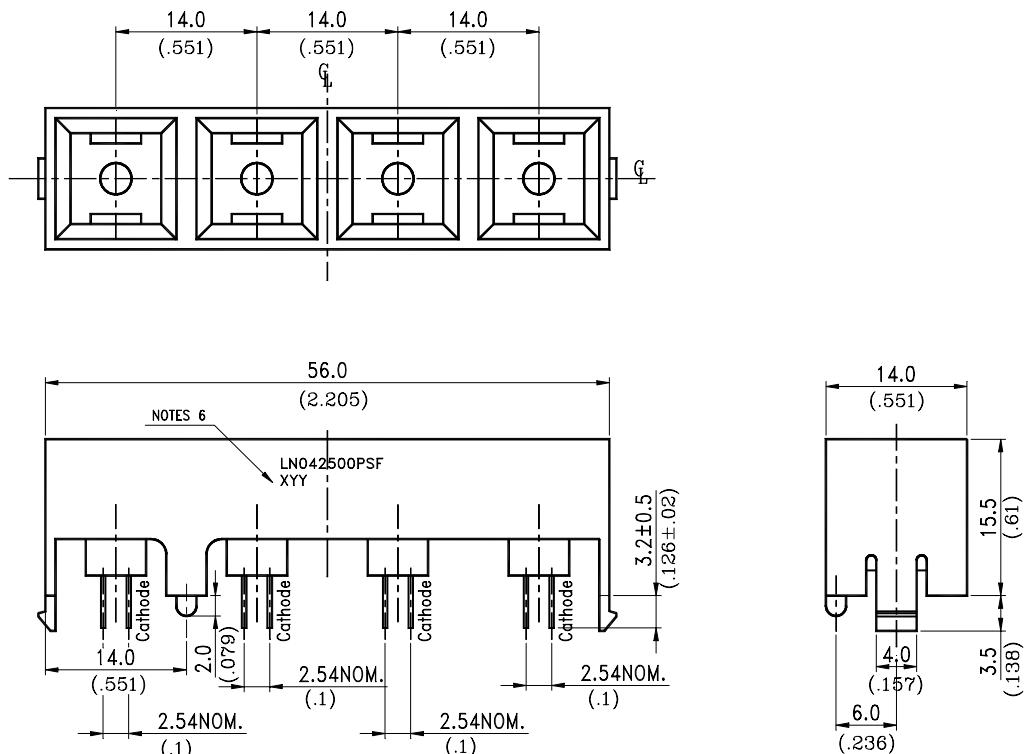


Features

- * Designed for ease in circuit board assembly.
- * Solid state light source.
- * Reliable and rugged.

Package Dimensions

Part No. LTL-	Lens	Source Color
81HCEP	Red Transparent	GaAlAs Red

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 white.
4. The holder raw material is ABS.
5. The LED lamps are LTL-81HCEP.
6. XYY : Date Code.



LITE-ON ELECTRONICS, INC.

Property of Lite-On Only

Absolute Maximum Ratings at Ta=25°C

Parameter	Maximum Rating	Unit
Power Dissipation	100	mW
Peak Forward Current (1/10 Duty Cycle, 0.1ms Pulse Width)	200	mA
Continuous Forward Current	40	mA
Derating Linear From 50°C	0.5	mA/°C
Reverse Voltage	4	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	Part No. LTL-	Min.	Typ.	Max.	Unit	Test Condition
Luminous Intensity	I _V	81HCEH66	3.75	12.6		mcd	I _F = 20mA Note 1,4
Viewing Angle	2θ _{1/2}	81HCEH66		130		deg	Note 2 (Fig.6)
Peak Emission Wavelength	λ _p	81HCEH66		660		nm	Measurement @Peak (Fig.1)
Dominant Wavelength	λ _d	81HCEH66		638		nm	Note 3
Spectral Line Half-Width	Δ λ	81HCEH66		20		nm	
Forward Voltage	V _F	81HCEH66		1.8	2.4	V	I _F = 20mA
Reverse Current	I _R	81HCEH66			100	μA	V _R = 5V
Capacitance	C	81HCEH66		30		pF	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. 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)

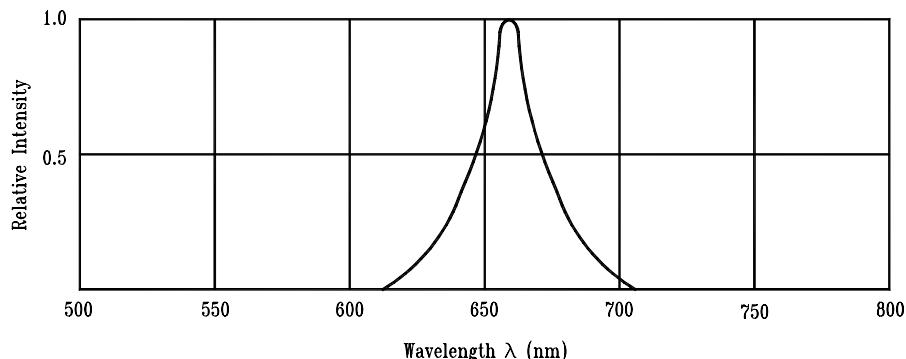


Fig.1 Relative Intensity vs. Wavelength

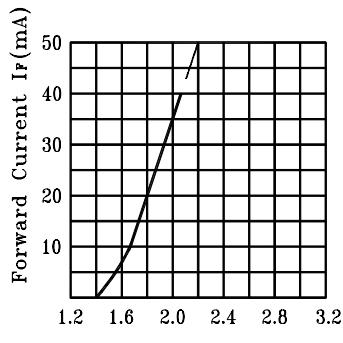


Fig.2 Forward Current vs.
Forward Voltage

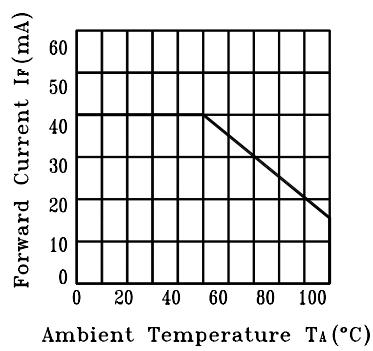


Fig.3 Forward Current
Derating Curve

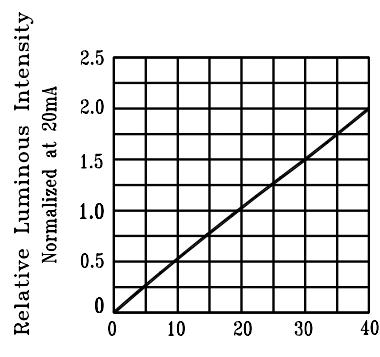


Fig.4 Relative Luminous Intensity
vs. Forward Current

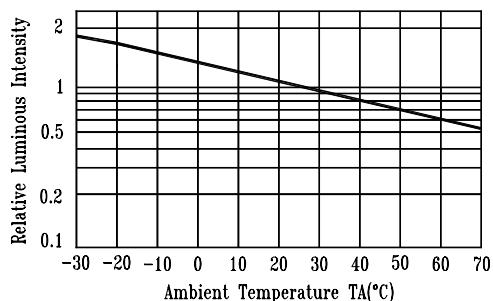


Fig.5 Luminous Intensity vs.
Ambient Temperature

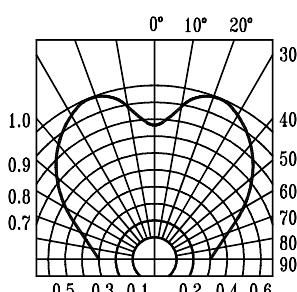


Fig.6 Spatial Distribution