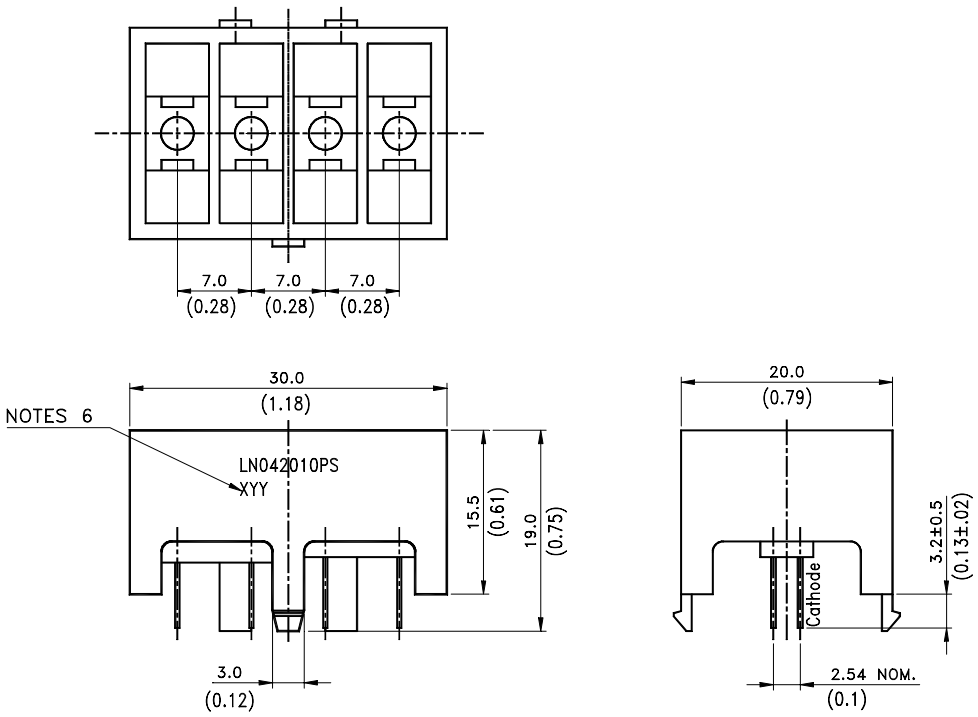
Features

* 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 ±0.25mm(.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.

Absolute Maximum Ratings at T_a=25℃

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℃	0.5	mA/℃
Reverse Voltage	4	V
Operating Temperature Range	-55℃ to + 100℃	
Storage Temperature Range	-55℃ to + 100℃	
Lead Soldering Temperature [1.6mm(.063") From Body]	260℃ for 5 Seconds	

Electrical Optical Characteristics at T_a=25℃

Parameter	Symbol	Part No. LTL-	Min.	Typ.	Max.	Unit	Test Condition
Luminous Intensity	I_V	81HCEH53	3.75	12.6		mcd	I_F = 20mA Note 1,4
Viewing Angle	$2\theta_{1/2}$	81HCEH53		130		deg	Note 2 (Fig.6)
Peak Emission Wavelength	λ p	81HCEH53		660		nm	Measurement @Peak (Fig.1)
Dominant Wavelength	λ d	81HCEH53		638		nm	Note 3
Spectral Line Half-Width	$\Delta\lambda$	81HCEH53		20		nm	
Forward Voltage	V_F	81HCEH53		1.8	2.4	V	I_F = 20mA
Reverse Current	I_R	81HCEH53			100	μA	V_R = 5V
Capacitance	C	81HCEH53		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. $\theta_{1/2}$ 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. Iv needs ±15% additionary for guaranteed limits.

Typical Electrical / Optical Characteristics Curves

(25℃ Ambient Temperature Unless Otherwise Noted)

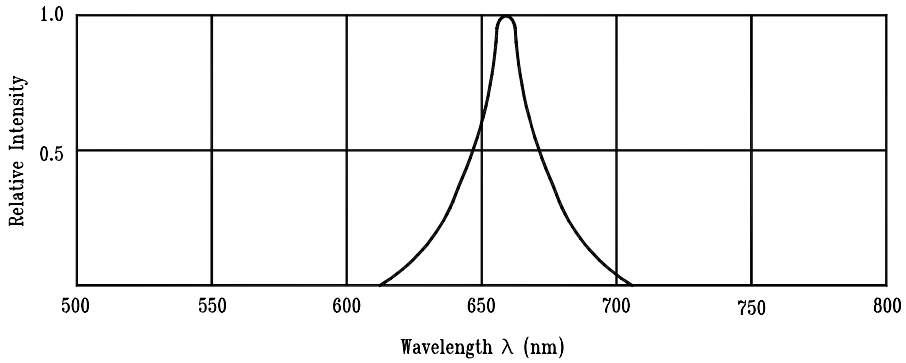


Fig.1 Relative Intensity vs. Wavelength

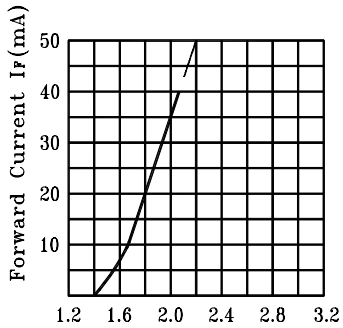


Fig.2 Forward Current vs. Forward Voltage

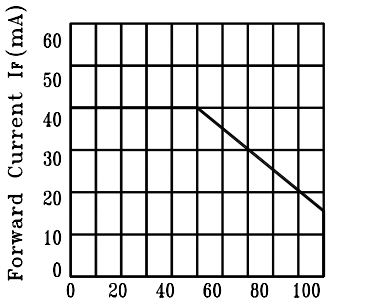


Fig.3 Forward Current Derating Curve

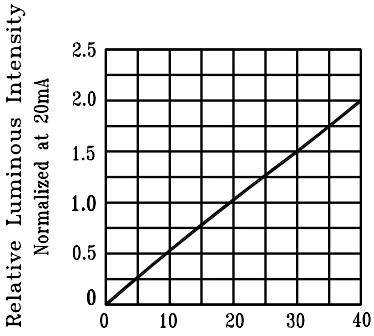


Fig.4 Relative Luminous Intensity vs. Forward Current

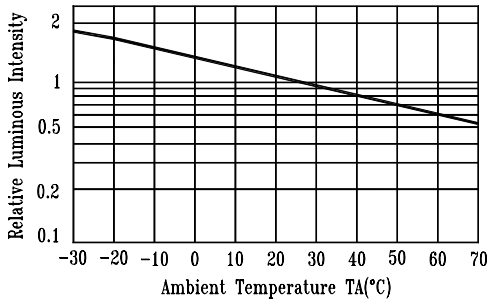


Fig.5 Luminous Intensity vs. Ambient Temperature

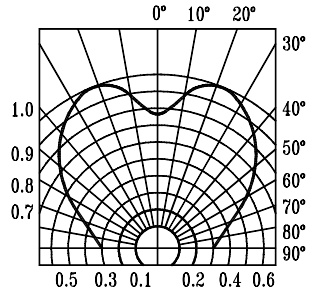


Fig.6 Spatial Distribution