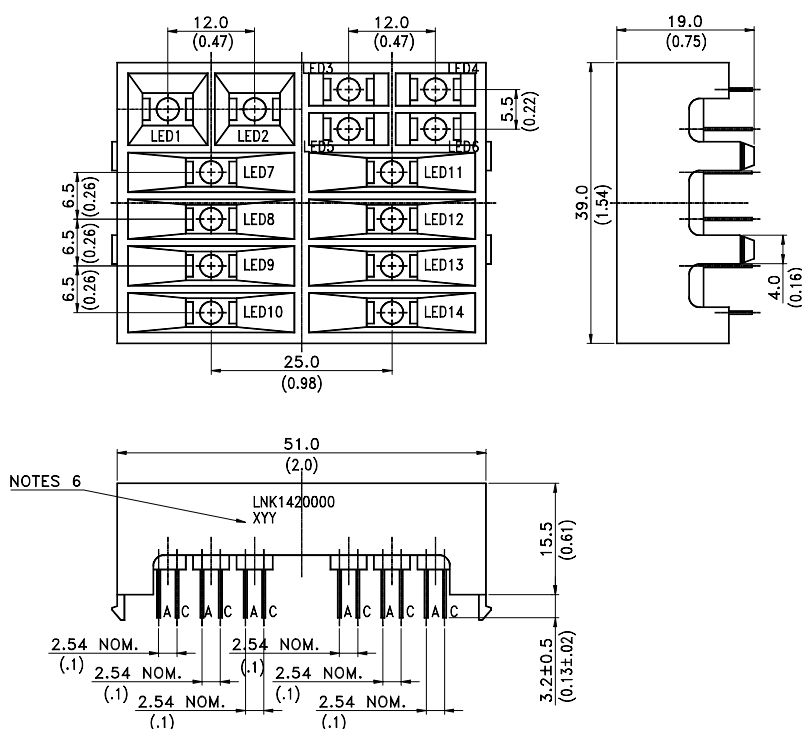


Features

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

Package Dimensions



Part No.	Lens	Source Color
LTL-81HCEP	Red Transparent	GaAlAs Red
81HYEP	Yellow Transparent	Yellow
81HGECP	Green Transparent	Green

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 LED1 ~ LED2 lamps are LTL-81HGECP
The LED3 ~ LED6 lamps are LTL-81HYEP
The LED7 ~ LED14 lamps are LTL-81HCEP.
6. XXX : Date Code.



LITE-ON ELECTRONICS, INC.

Property of Lite-On Only

Absolute Maximum Ratings at Ta=25°C

Parameter	Red	Yellow	Green	Unit
Power Dissipation	100	60	100	mW
Peak Forward Current (1/10 Duty Cycle, 0.1ms Pulse Width)	200	80	120	mA
Continuous Forward Current	40	20	30	mA
Derating Linear From 50°C	0.5	0.25	0.4	mA/°C
Reverse Voltage	4	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 Ta=25°C

Parameter	Symbol	LTL-81HM1H56	Min.	Typ.	Max.	Unit	Test Condition
Luminous Intensity	I _v	Red	3.75	12.6		mcd	I _F = 20mA Note 1,4
Viewing Angle	2 $\theta_{1/2}$	Red		130		deg	Note 2 (Fig.6)
Peak Emission Wavelength	λ_p	Red		660		nm	Measurement @Peak (Fig.1)
Dominant Wavelength	λ_d	Red		638		nm	Note 3
Spectral Line Half-Width	$\Delta \lambda$	Red		20		nm	
Forward Voltage	V _F	Red		1.8	2.4	V	I _F = 20mA
Reverse Current	I _R	Red			100	μ A	V _R = 5V
Capacitance	C	Red		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. I_v needs $\pm 15\%$ additinary for guaranteed limits.

Electrical Optical Characteristics at Ta=25°C

Parameter	Symbol	LTL-81HM1H56	Min.	Typ.	Max.	Unit	Test Condition
Luminous Intensity	I _v	Yellow	0.7	2.5		mcd	I _F = 10mA Note 1,4
Viewing Angle	2 θ _{1/2}	Yellow		130		deg	Note 2 (Fig.6)
Peak Emission Wavelength	λ _p	Yellow		585		nm	Measurement @Peak (Fig.1)
Dominant Wavelength	λ _d	Yellow		588		nm	Note 3
Spectral Line Half-Width	Δ λ	Yellow		35		nm	
Forward Voltage	V _F	Yellow		2.1	2.6	V	I _F = 20mA
Reverse Current	I _R	Yellow			100	μ A	V _R = 5V
Capacitance	C	Yellow		15		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% additinary for guaranteed limits.

Electrical Optical Characteristics at Ta=25°C

Parameter	Symbol	LTL-81HM1H56	Min.	Typ.	Max.	Unit	Test Condition
Luminous Intensity	I _v	Green	3.7	12.6		mcd	I _F = 20mA Note 1,4
Viewing Angle	2 θ _{1/2}	Green		130		deg	Note 2 (Fig.6)
Peak Emission Wavelength	λ _p	Green		565		nm	Measurement @Peak (Fig.1)
Dominant Wavelength	λ _d	Green		569		nm	Note 3
Spectral Line Half-Width	Δ λ	Green		30		nm	
Forward Voltage	V _F	Green		2.1	2.6	V	I _F = 20mA
Reverse Current	I _R	Green			100	μ A	V _R = 5V
Capacitance	C	Green		35		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)

