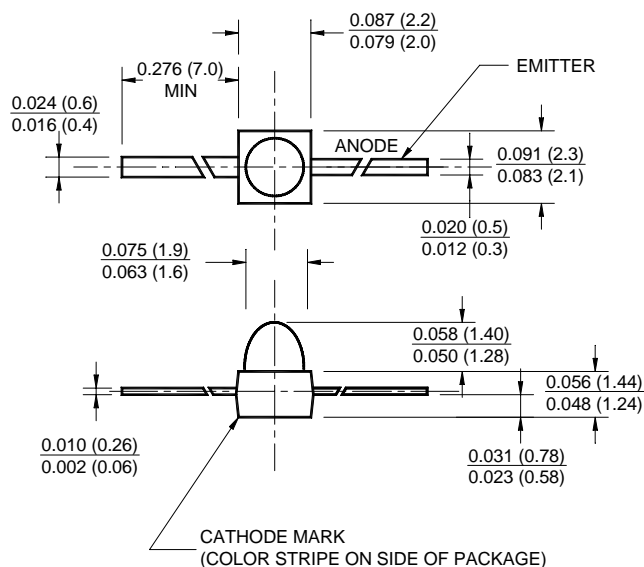


# SOLID STATE LED LAMPS

## SUBMINIATURE T-1 3/4 (1.9mm)

### PACKAGE DIMENSIONS

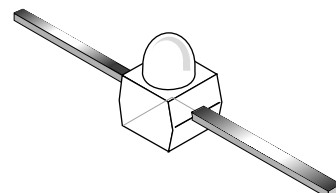


NOTE:  
Dimensions are in inches (mm).

<b>AlGaAs RED</b>	<b>HLMP-Q106A</b>	<b>Clear</b>
<b>AllnGaP ORANGE</b>	<b>HLMA-QH00A</b>	<b>Clear</b>
<b>AllnGaP YELLOW</b>	<b>HLMA-QL00A</b>	<b>Clear</b>

### FEATURES

- Subminiature package
- Low profile package
- Three lead bend options for surface mounting
- Available in tape and reel



### DESCRIPTION

These subminiature LED lamps are intended for high volume, low cost status indication on PCBs, as well as for backlighting keyboards and switches. Choices of "Yoke", "Z-Bend" or "Gull-Wing" lead bends are available.

### ABSOLUTE MAXIMUM RATINGS (T<sub>A</sub> = 25°C unless otherwise specified)

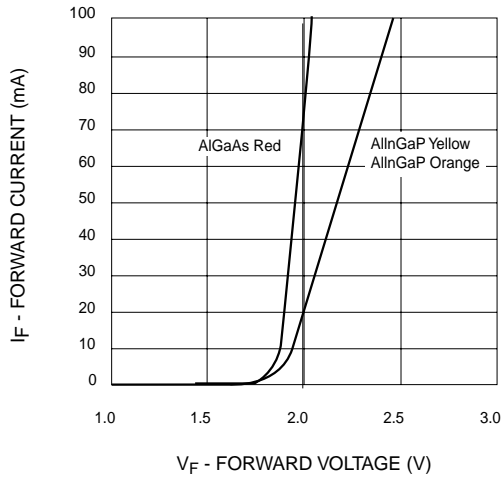
Parameter	AlGaAs Red HLMP-Q106A	AllnGaP Orange HLMA-QH00A	AllnGaP Yellow HLMA-QL00A	Units
Continuous Forward Current - I <sub>F</sub>	50	50	50	mA
Peak Forward Current - I <sub>F</sub> (f = 1.0 KHz, Duty Factor = 1/10)	200	100	100	mA
Reverse Voltage - V <sub>R</sub> (I <sub>R</sub> = 10 μA)	5	5	5	V
Power Dissipation - P <sub>D</sub>	100	120	120	mW
Operating Temperature - T <sub>OPR</sub>	-40 to +100			°C
Storage Temperature - T <sub>STG</sub>	-40 to +100			°C
Lead Soldering Time - T <sub>SOL</sub>				°C
Wave	260 for 5 sec			
Reflow	260 for 10 sec			

### ELECTRICAL / OPTICAL CHARACTERISTICS (T<sub>A</sub> = 25°C)

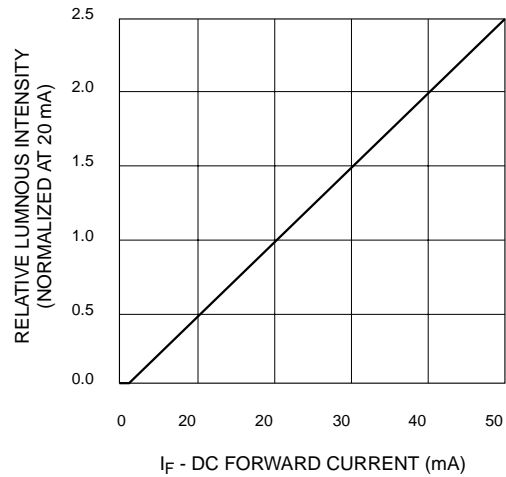
Part Number	AlGaAs Red HLMP-Q106A	AllnGaP Orange HLMA-QH00A	AllnGaP Yellow HLMA-QL00A	Condition
Luminous Intensity (mcd)				I <sub>F</sub> = 20mA
Minimum	50	150	150	
Typical	500	500	500	
Forward Voltage (V)				I <sub>F</sub> = 20mA
Maximum	2.4	2.4	2.4	
Typical	1.9	1.9	1.9	
Peak Wavelength (nm)	660	620	590	I <sub>F</sub> = 20mA
Spectral Line Half Width (nm)	20	18	15	I <sub>F</sub> = 20mA
Viewing Angle (°)	25	25	25	I <sub>F</sub> = 20mA

AlGaAs RED	HLMP-Q106A	Clear
AllnGaP ORANGE	HLMA-QH00A	Clear
AllnGaP YELLOW	HLMA-QL00A	Clear

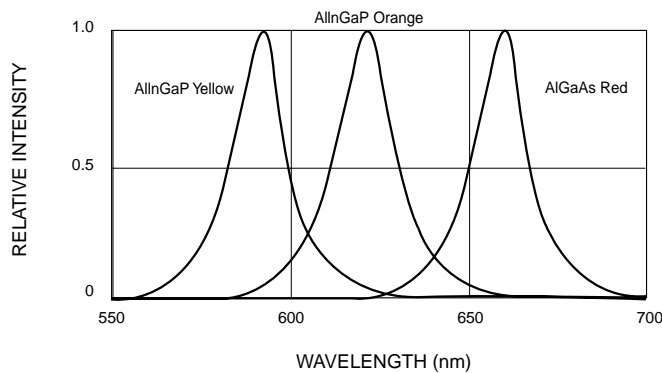
### TYPICAL PERFORMANCE CURVES



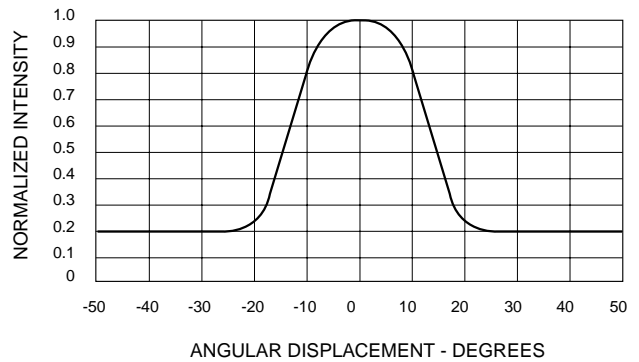
**Fig. 1 Forward Current vs. Forward Voltage**



**Fig. 2 Relative Luminous Intensity vs. DC Forward Current**



**Fig. 3 Relative Intensity vs. Peak Wavelength**

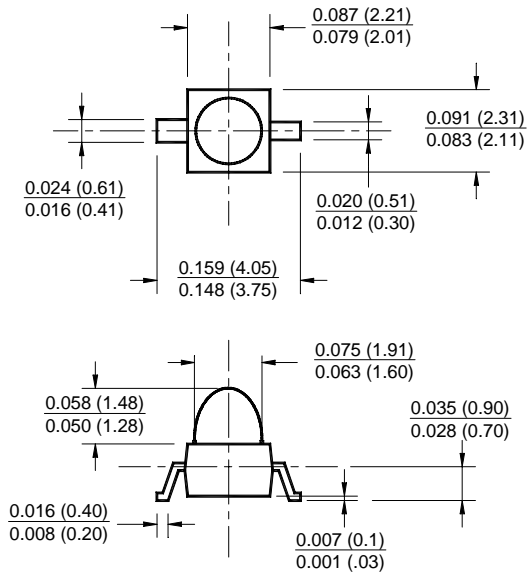


**Fig. 4 Relative Luminous Intensity vs. Angular Displacement**

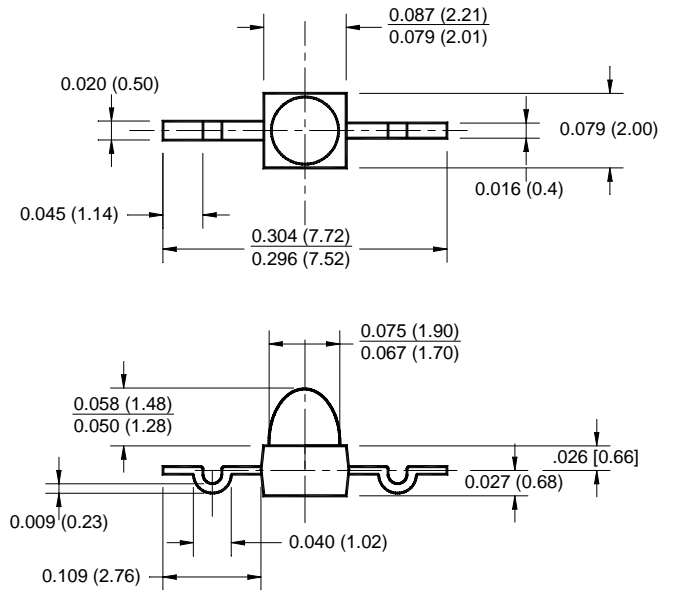
# SOLID STATE LED LAMPS SUBMINIATURE T-1 3/4 (1.9mm)

AlGaAs RED	HLMP-Q106A	Clear
AlInGaP ORANGE	HLMA-QH00A	Clear
AlInGaP YELLOW	HLMA-QL00A	Clear

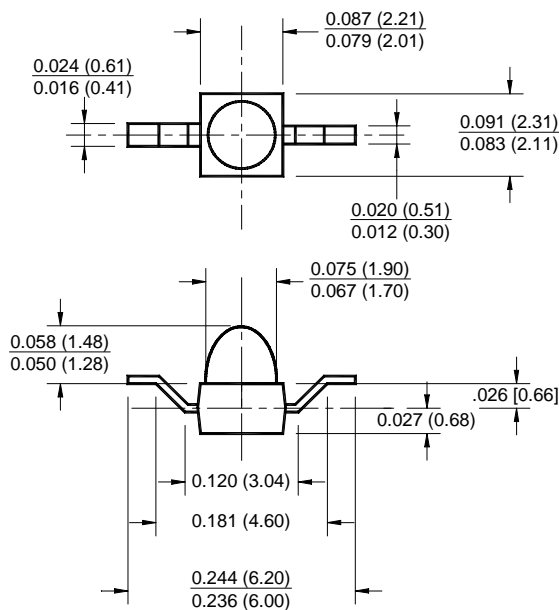
## Gull-Wing Lead Option



## Yoke Lead Option



## Z-Bend Lead Option



**NOTE**

All dimensions are in inches (millimeters)

[www.qtopto.com](http://www.qtopto.com)

Call QT Optoelectronics for more information or the phone number of your nearest distributor.

United States 800-533-6786 • France 33 [0] 1.45.18.78.78 • Germany 49 [0] 89/96.30.51 • United Kingdom 44 [0] 1296 394499 • Asia/Pacific 603-7352417

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