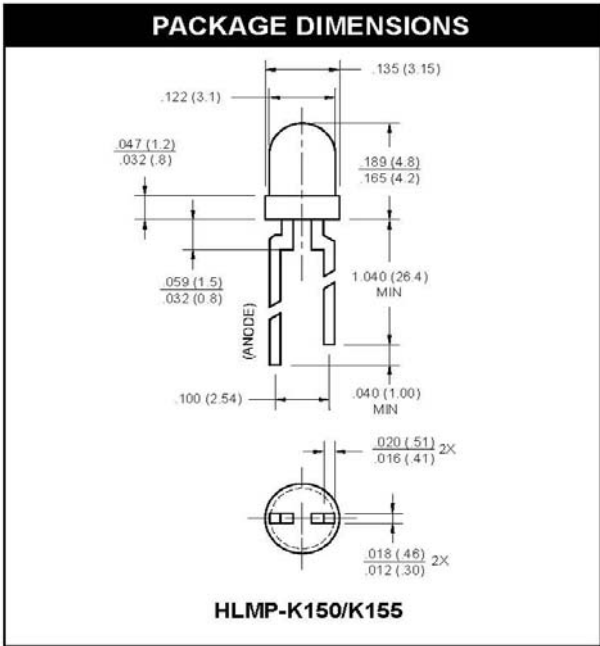




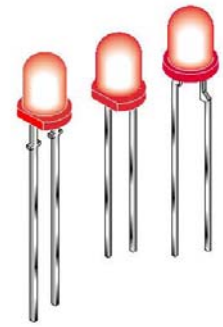
# DOUBLE HETEROJUNCTION AlGaAs LOW CURRENT RED LED LAMPS

T-1 3/4 (5mm)	HLMP-D150A HLMP-D155A	Red Diffused Red Clear with Standoff
T-100 (3mm)	HLMP-K150 HLMP-K155	Red Diffused Red Clear



### FEATURES

- Wide Viewing Angle
- Deep Red Color

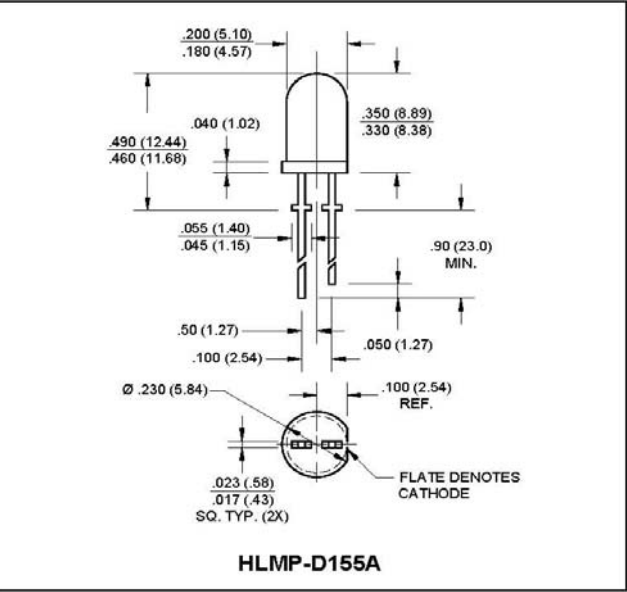
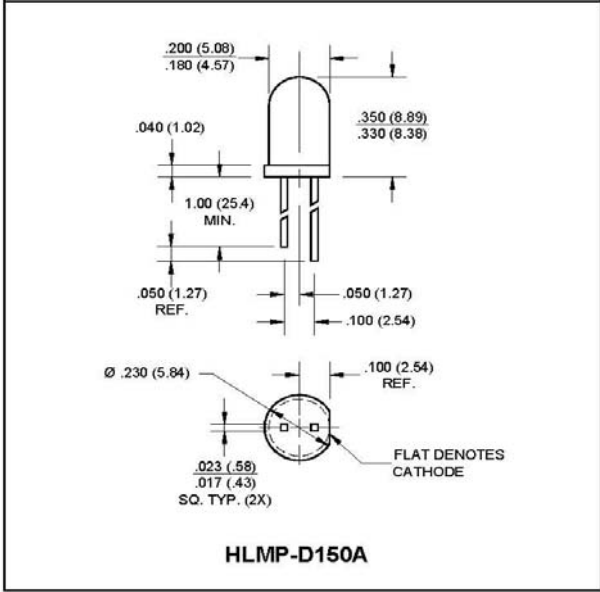


### DESCRIPTION

Exceptional light output typifies these devices and provides for their use over a broad range of drive currents. The LED material is based on double heterojunction (DH) AlGaAs/GaAs technology.

### NOTES:

1. ALL DIMENSIONS ARE IN INCHES (mm).
2. TOLERANCE ARE ±.010" UNLESS OTHERWISE SPECIFIED.
3. AN EPOXY MENISCUS MAY EXTEND ABOUT .040"(1 mm) DOWN THE LEADS.





# DOUBLE HETEROJUNCTION AlGaAs LOW CURRENT RED LED LAMPS

ABSOLUTE MAXIMUM RATING (T <sub>A</sub> =25°C)		
Parameter	RED	UNITS
Power Dissipation	87	mW
Peak Forward Current (f=1kHz, DF=10%)	300	mA
Continuous DC Forward Current	30	mA
Lead Soldering Time at 260° C	5	sec
Operating Temperature	-20 to +100	°C
Storage Temperature	-55 to +100	°C

ELECTRICAL / OPTICAL CHARACTERISTICS (T <sub>A</sub> =25°C)					
Parameter	HLMP-K150	HLMP-K155	HLMP-D150A	HLMP-D155A	Condition
Luminous Intensity (mcd)					I <sub>F</sub> = 1mA
Minimum	1.2	2.0	1.2	3.0	
Typical	2.0	3.0	3.0	10.0	
Forward Voltage (V)					I <sub>F</sub> = 1mA
Maximum	1.8	1.8	1.8	1.8	
Typical	1.6	1.6	1.6	1.6	
Peak Wavelength (nm)	660	660	660	660	I <sub>F</sub> = 1mA
Spectral Line Half Width	20	20	20	20	I <sub>F</sub> = 1mA
Reverse Voltage (V)	5	5	5	5	I <sub>R</sub> = 100μA
Viewing Angle (°)	60	45	65	24	I <sub>F</sub> = 1mA



# DOUBLE HETEROJUNCTION AlGaAs LOW CURRENT RED LED LAMPS

## TYPICAL PERFORMANCE CURVES ( $T_A = 25^\circ\text{C}$ )

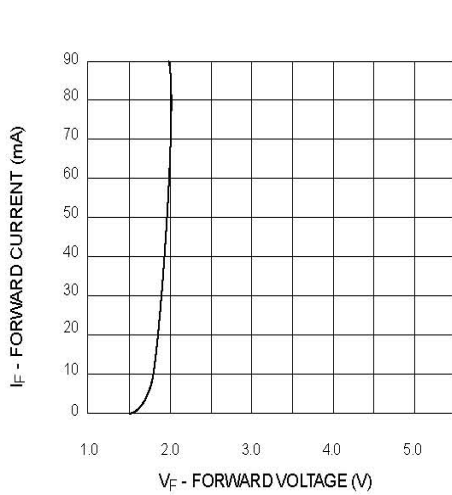


Fig. 1 Forward Current vs. Forward Voltage

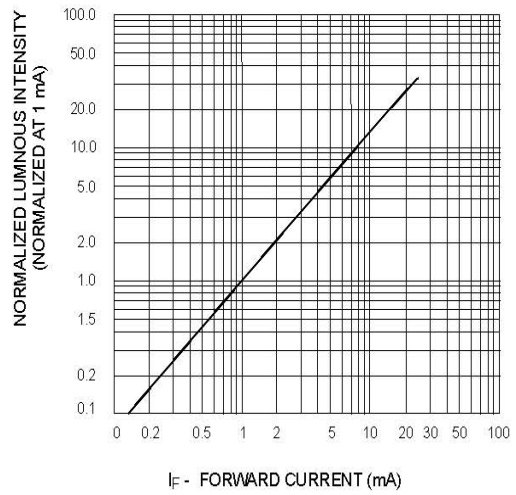


Fig. 2 Relative Luminous Intensity vs. DC Forward Current

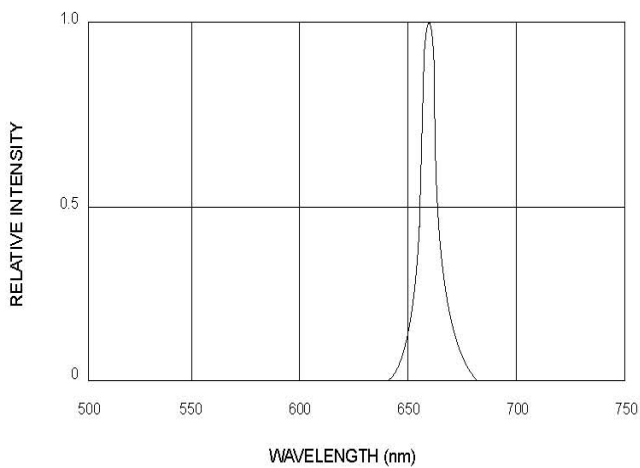


Fig. 3 Relative Intensity vs. Peak Wavelength

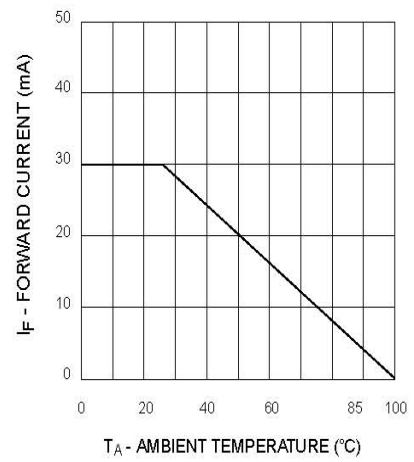
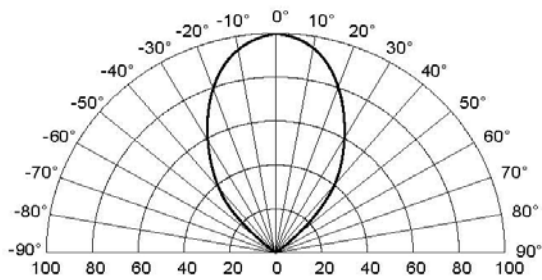


Fig. 4 Current Derating Curve



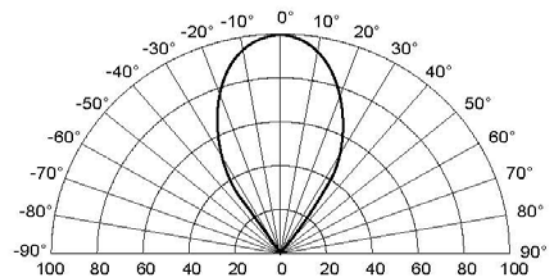
# DOUBLE HETEROJUNCTION AlGaAs LOW CURRENT RED LED LAMPS

## TYPICAL PERFORMANCE CURVES ( $T_A = 25^\circ\text{C}$ )



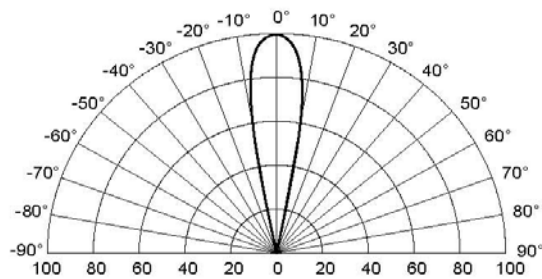
REL. LUMINOUS INTENSITY (%)

**Fig. 5A Radiation Diagram (HLMP-D150A)**



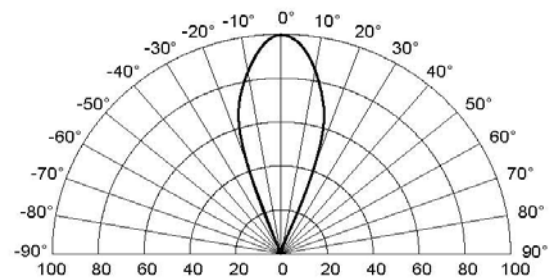
REL. LUMINOUS INTENSITY (%)

**Fig. 5B Radiation Diagram (HLMP-K150)**



REL. LUMINOUS INTENSITY (%)

**Fig. 5C Radiation Diagram (HLMP-D155A)**



REL. LUMINOUS INTENSITY (%)

**Fig. 5D Radiation Diagram (HLMP-K155)**



## DOUBLE HETEROJUNCTION AlGaAs LOW CURRENT RED LED LAMPS

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2. A critical component in any component of a life support device or system whose failure to perform can be implant reasonably expected to cause the failure of the life and (c) device or system, or to affect its safety or effectiveness.

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