



DOUBLE HETEROJUNCTION AlGaAs HIGH INTENSITY RED LED LAMPS

T-1 3/4 (5mm)

HLMP-D101A

Red Diffused

T-100 (3mm)

HLMP-D105A

Red Clear with Standoff

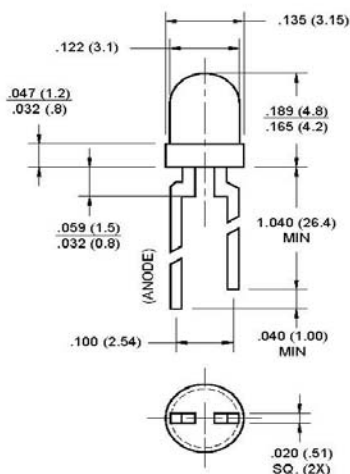
HLMP-K101

Red Diffused

HLMP-K105

Red Clear

PACKAGE DIMENSIONS



HLMP-K101/K105

FEATURES

- Wide Viewing Angle
- Deep Red Color

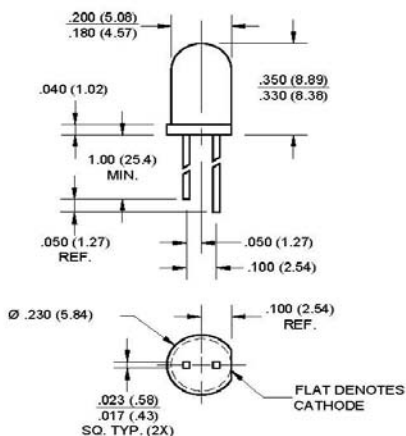
DESCRIPTION

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.

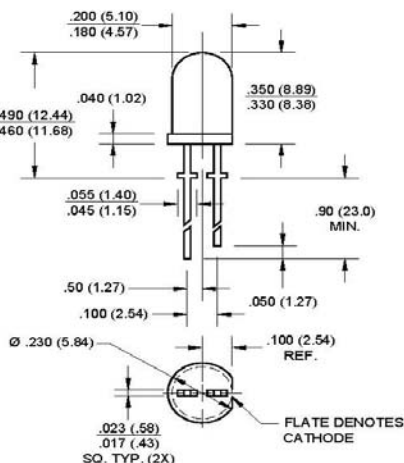


NOTES:

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



HLMP-D101A



HLMP-D105A



DOUBLE HETEROJUNCTION AlGaAs HIGH INTENSITY RED LED LAMPS

Viewing Angle (°)	00	42	02	42	Am05 = 1°
Reverse Voltage (V)	2	2	2	2	Am01 = 100µA
Spectral Line Half Width	50	50	50	50	Am05 = 1°
Peak Wavelength (nm)	000	000	000	000	Am05 = 1°
Typical	8.1	8.1	8.1	8.1	
Maximum	5.5	5.5	5.5	5.5	
Forward Voltage (V)					Am05 = 1°
Typical	42	02	10	42	
Minimum	55	32	32	100	
Luminous Intensity (mcd)					Am05 = 1°
Parameter	HGMР-K101	HGMР-K102	HGMР-D101A	HGMР-D102A	Condition

ELECTRICAL \ OPTICAL CHARACTERISTICS (T_v = 25°C)

Storage Temperature	-25 to +100	°C
Operating Temperature	-50 to +100	°C
Lead Soldering Time at 260°C	2	sec
Continuous DC Forward Current	30	Am
Peak Forward Current (t=1KHz, DF=10%)	300	Am
Power Dissipation	78	Wm
Parameter	RED	UNIT

ABSOLUTE MAXIMUM RATING (T_v = 25°C)



DOUBLE HETEROJUNCTION AlGaAs HIGH INTENSITY RED LED LAMPS

TYPICAL PERFORMANCE CURVES (TA = 25°C)

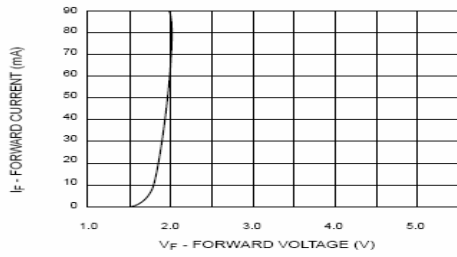


Fig. 1 Forward Current vs. Forward Voltage

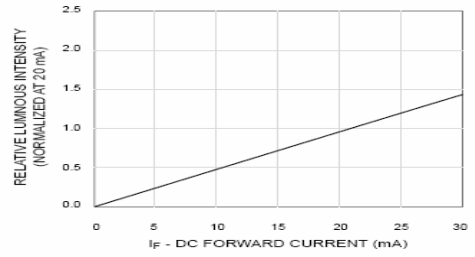


Fig. 2 Relative Luminous Intensity vs. DC Forward Current

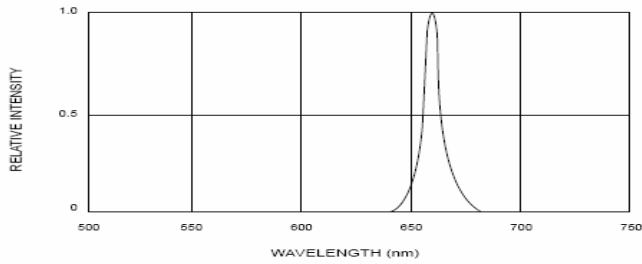


Fig. 3 Relative Intensity vs. Peak Wavelength

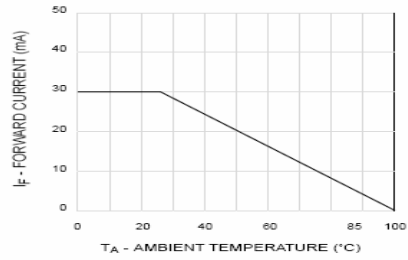
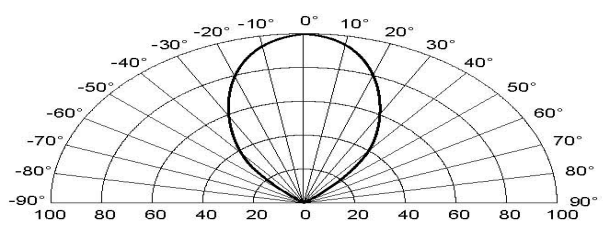


Fig. 4 Current Derating Curve

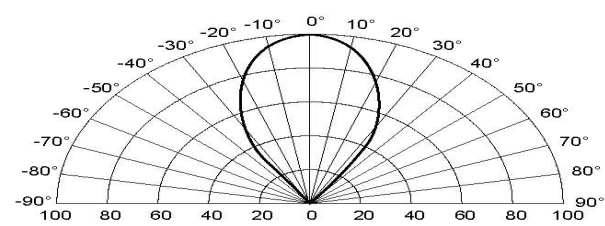


DOUBLE HETEROJUNCTION AlGaAs HIGH INTENSITY RED LED LAMPS

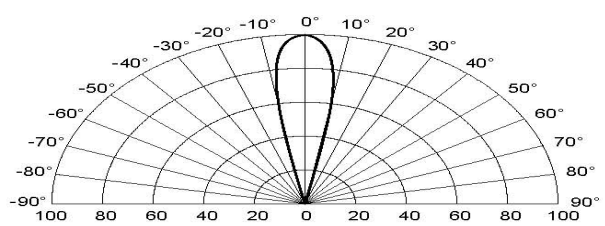
TYPICAL PERFORMANCE CURVES (T_A = 25°C)



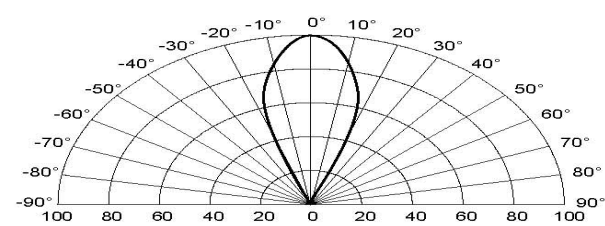
REL. LUMINOUS INTENSITY (%)
Fig. 5A Radiation Diagram (HLMP-D101A)



REL. LUMINOUS INTENSITY (%)
Fig. 5B Radiation Diagram (HLMP-K101)



REL. LUMINOUS INTENSITY (%)
Fig. 5C Radiation Diagram (HLMP-D105A)



REL. LUMINOUS INTENSITY (%)
Fig. 5D Radiation Diagram (HLMP-K105)



DOUBLE HETEROJUNCTION AlGaAs HIGH INTENSITY RED LED LAMPS

DISCLAIMER

FAIRCHILD SEMICONDUCTOR RESERVES THE THE RIGHT TO MAKE CHANGES WITHOUT FURTHER NOTICE TO ANY PRODUCTS HEREIN TO IMPROVE RELIABILITY, FUNCTION OR DESIGN. FAIRCHILD DOES NOT ASSUME ANY LIABILITY ARISING OUT OF THE APPLICATION OR USE OF ANY PRODUCT OR CIRCUIT DESCRIBED HEREIN; NEITHER DOES IT CONVEY ANY LICENSE UNDER ITS PATENT RIGHTS, NOR THE RIGHTS OF OTHERS.

LIFE SUPPORT POLICY

FAIRCHILD'S PRODUCTS ARE NOT AUTHORIZED FOR USE AS CRITICAL COMPONENTS IN LIFE SUPPORT DEVICES OR SYSTEMS WITHOUT THE EXPRESS WRITTEN APPROVAL OF THE PRESIDENT OF FAIRCHILD SEMICONDUCTOR CORPORATION. As used herein:

1. Life support devices or systems are devices or systems which, (a) are intended for surgical the body, or (b) support or sustain life, whose failure to perform when properly support used in accordance with instructions for use provided in labeling, can be reasonably expected to result in a significant injury of the user.
2. A critical component in any component of a life support device or system whose failure to perform can be implant into reasonably expected to cause the failure of the life and (c) device or system, or to affect its safety or effectiveness.

