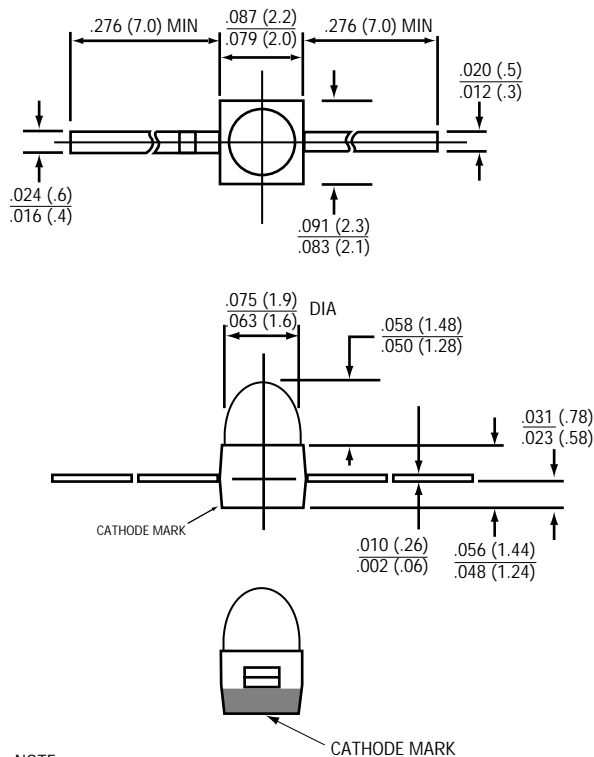


HIGH EFF. RED	HLMP-6305A	Water Clear	MV6700A	Diffused
YELLOW	HLMP-6405A	Water Clear	MV6300A	Diffused
GREEN	HLMP-6505A	Water Clear	MV6400A	Diffused
AIGaAs RED	HLMP-Q105A	Water Clear	HLMP-Q150A	Diffused

### PACKAGE DIMENSIONS



NOTE:

1. ALL DIMENSIONS ARE IN INCHES (mm)

### DESCRIPTION

The QT Optoelectronics family of T-3/4 subminiature LED lamps feature a square-base, transfer molded package for surface mount applications. A tinted diffused or water clear epoxy lens — available in AIGaAs red, high-efficiency red, green, and yellow — produces wide-angle beam emission and sharp on/off contrast. The LEDs are offered with gullwing lead bends for top mounting, as well as yoke lead bends and Z-bends for mounting to the back of a PCB.

### FEATURES

- Subminiature T-3/4 transfer molded
- Low package profile
- Axial leads
- Wide viewing angle
- SMT versions

### PHYSICAL CHARACTERISTICS

TYPE	SOURCE COLOR	LENS COLOR
HLMP-6305A	High Efficiency Red	Water Clear
HLMP-6405A	Yellow	Water Clear
HLMP-6505A	Green	Water Clear
HLMP-Q105A	AIGaAs Red	Water Clear
MV6700A	High Efficiency Red	Red Diffused
MV6300A	Yellow	Yellow Diffused
MV6400A	Green	Green Diffused
HLMP-Q150A	AIGaAs Red	Red Diffused

ABSOLUTE MAXIMUM RATING ( $T_A = 25^\circ\text{C}$ Unless otherwise specified)					
PARAMETER	HLMP-6305A MV6700A	HLMP-6405A MV6300A	HLMP-6505A MV6400A	HLMP-Q105A HLMP-Q150A	UNITS
Power dissipation	135	85	135	85	mW
Average forward current	30	20	30	30	mA
Peak forward current ( $1\mu\text{s}$ pulsewidth, 0.1% DF)	90	60	90	300	mA
Lead soldering time at $260^\circ\text{C}$	3	3	3	3	sec
Operating temperature	-55 to 100	-55 to 100	-55 to 100	-20 to 100	$^\circ\text{C}$
Storage temperature	-55 to 100	-55 to 100	-55 to 100	-55 to 100	$^\circ\text{C}$

ELECTRO-OPTICAL CHARACTERISTICS ( $T_A = 25^\circ\text{C}$ Unless otherwise specified)					
PART NUMBER QTLP-	MV6700A	MV6300A	MV6400A	HLMP- Q150A	TEST CONDITIONS
Luminous intensity (mcd)					$I_F = 10\text{ mA}$
minimum	1.0	1.0	1.0	1.0*	
typical	3.0	3.0	3.0	1.8*	
Forward voltage (V)					$I_F = 10\text{ mA}$
minimum	1.5	1.5	1.5		
typical	1.8	2.0	2.0	1.6*	*Tested at $I_F = 1\text{ mA}$
maximum	3.0	3.0	3.0	1.8*	
Peak wavelength (nm)	635	583	570	660	
Spectral line half width (nm)	40	36	28	20	$I_R = 100\ \mu\text{A}$
Reverse voltage (V)	5	5	5	5	
Viewing angle ( $^\circ$ )	50	50	28	50	

ELECTRO-OPTICAL CHARACTERISTICS ( $T_A = 25^\circ\text{C}$ Unless otherwise specified)					
PART NUMBER QTLP-	HLMP- 6305A	HLMP- 6405A	HLMP- 6505A	HLMP- Q105A	TEST CONDITIONS
Luminous intensity (mcd)					$I_F = 10\text{ mA}$
minimum	3.0	3.0	3.0	20.0*	
typical	12.0	12.0	12.0	50.0*	
Forward voltage (V)					$I_F = 10\text{ mA}$
minimum	1.5	1.5	1.5		
typical	1.8	2.0	2.0	1.8*	*Tested at $I_F = 20\text{ mA}$
maximum	3.0	3.0	3.0	2.4*	
Peak wavelength (nm)	635	583	570	660	
Spectral line half width (nm)	40	36	28	20	
Reverse voltage (V)	5	5	5	5	$I_R = 100\ \mu\text{A}$
Viewing angle ( $^\circ$ )	25	25	25	25	

TYPICAL ELECTRO-OPTICAL CHARACTERISTIC CURVES ( $T_A = 25^\circ C$ )

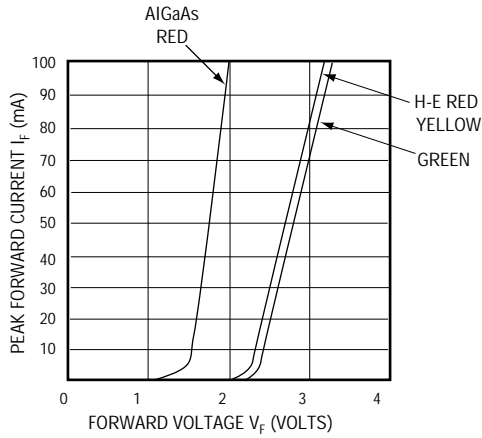


FIG. 1 - Forward Current vs. Forward Voltage

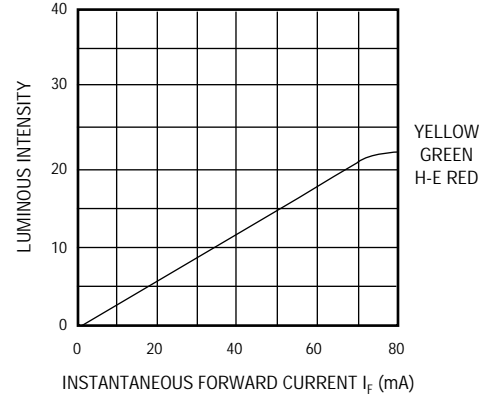


FIG. 2 - Luminous Intensity vs. Forward Current

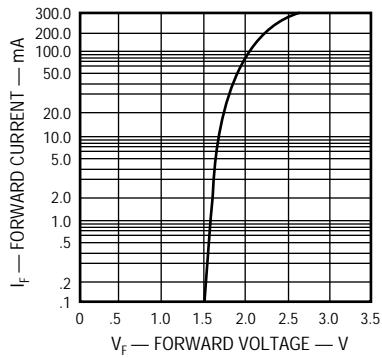


FIG. 3 - Forward Current vs. Forward Voltage—AlGaAs

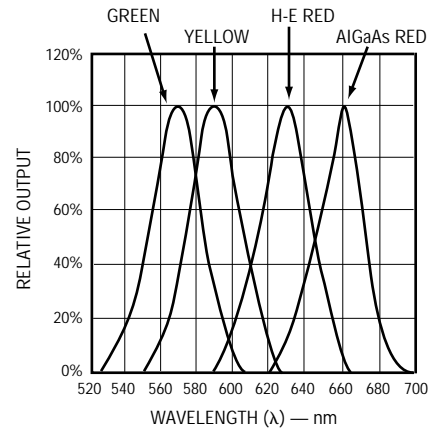
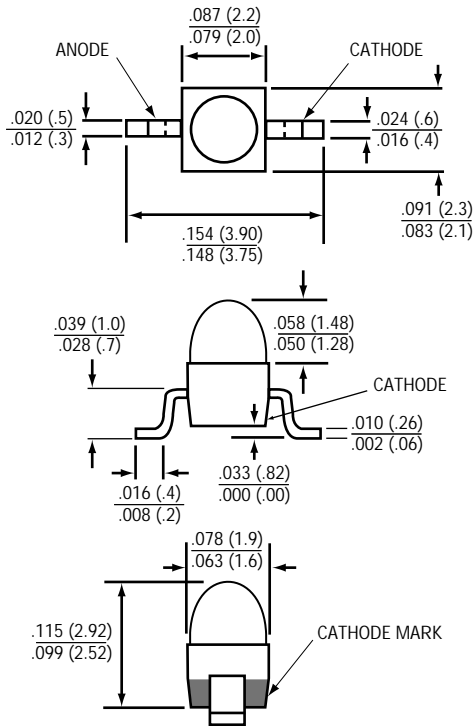


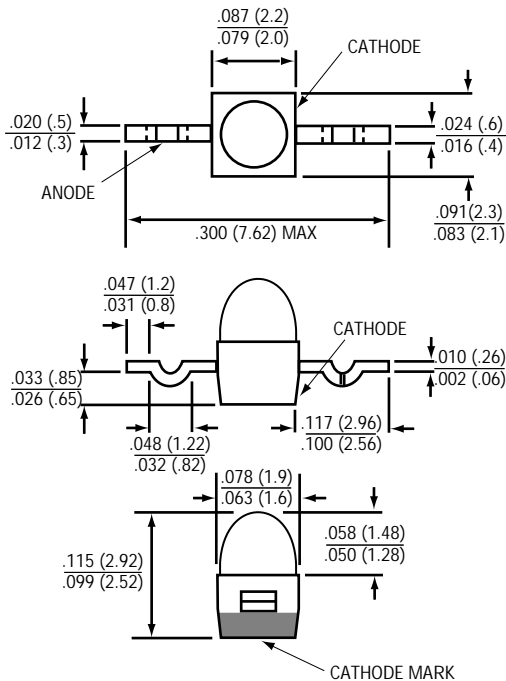
FIG. 4 - Spectral Distribution

PACKAGE DIMENSIONS

GULLWING LEAD CONFIGURATION



YOKE LEAD CONFIGURATION



DESCRIPTION

These subminiature solid state lamps are transfer molded in an axial lead package. They are available in yellow, green, high efficiency red and AlGaAs red in both diffused and water clear lens.

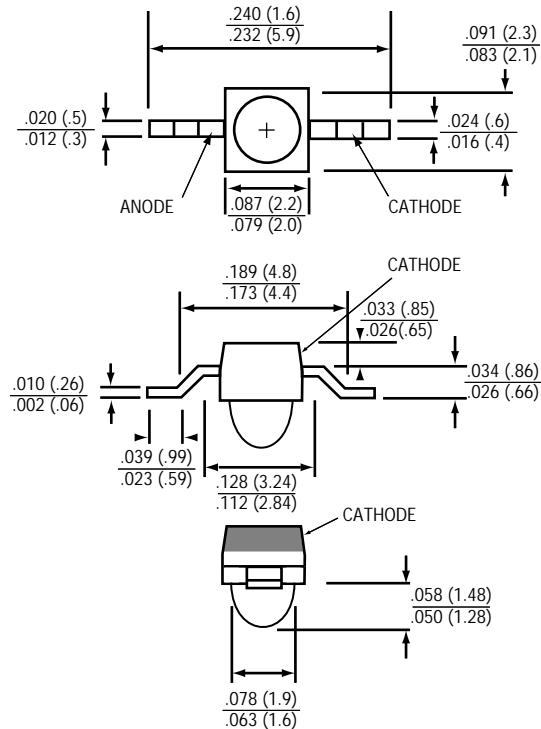
Automatic placement equipment can be used to mount the LEDs on the PC board. The lamps can be mounted using either batch or in line vapor phase reflow solder processes.

FEATURES

- Available in Gullwing, Yoke and Z-bend lead formings
- Compatible with automatic placement equipment
- Compatible with vapor phase reflow soldering processes
- Long life — solid state reliability
- Reel and tape or bulk packaging available

NOTE:  
ALL DIMENSIONS ARE IN INCHES (mm)

Z-BEND LEAD CONFIGURATION



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

United States 800-533-6786 ■ France 33 01/43.99.25.12 ■ Germany 49 089/96.30.51 ■ United Kingdom 44 01296/39.44.99 ■ Asia/Pacific 603/735-2417