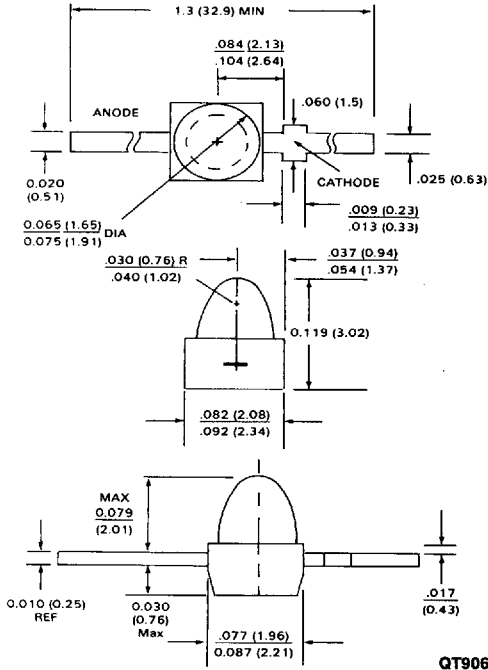


**AlGaAs HLMP-Q105
YELLOW HLMP-6405**

**HIGH EFF. RED HLMP-6305
HIGH EFF. GREEN HLMP-6505**

PACKAGE DIMENSIONS



- NOTES:
1. ALL DIMENSIONS IN INCHES (mm)
2. TOLERANCES ARE ±.010 INCH UNLESS OTHERWISE SPECIFIED

DESCRIPTION

These subminiature are constructed as axial leaded devices. Non-diffused packages are used to provide high brightness.

FEATURES

- Subminiature T 3/4 package
- Low package profile
- Excellence for back lighting and space limited applications
- "Gull Wing", "Yoke" and "Z" lead bents are available
- Axial and SMT version tape and reel are available

ABSOLUTE MAXIMUM RATING (T_A = 25°C Unless Otherwise Specified)

PARAMETER	A.RED	HER	YELLOW	GREEN	UNITS
Power dissipation	85	135	85	135	mW
DC forward current	30	30	20	30	mA
Peak forward current _{not}	300	90	60	90	mA
Reverse voltage at I _R =100 μA	5	5	5	5	V
Operating temperature range	-20 to 100	-55 to 100	-55 to 100	-55 to 100	°C
Storage temperature range					-55°C to 100°C
Lead soldering time at 260°C					3 Sec.
Surface mount reflow soldering					
Convective IR at 235°C					90 Sec
Vapour phase at 213°C					3 min

NOTE 1 - 1 μS PW & 0.1% DF

TYPICAL THERMAL CHARACTERISTICS

Thermal resistance θ_{Junc to pin} HLMP-Q105 220°C/W

ELECTRO-OPTICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$ Unless Otherwise Specified)

PARAMETER	MIN.	TYR.	MAX.	UNITS	TEST CONDITIONS
Forward voltage - V_F					
HLMP-Q105		1.8	2.2	V	$I_F = 20 \text{ mA}$
HLMP-6305/6405/6505	1.5	1.8	3.0	V	$I_F = 10 \text{ mA}$
Reverse voltage - V_R					
HLMP-Q105	5	15		V	$I_F = 100 \mu\text{A}$
HLMP-6305	5	30		V	$I_F = 100 \mu\text{A}$
HLMP-6405/6505	5	50		V	$I_F = 100 \mu\text{A}$
Viewing angle - $2\theta_{1/2}$		28		Degree	
Luminous intensity - I_L					
HLMP-Q105	15	35		mcd	$I_F = 20 \text{ mA}$
HLMP-6305/6405/6505	3	12		mcd	$I_F = 10 \text{ mA}$
Peak wavelength					
HLMP-Q105		645		nm	
HLMP-6305		635		nm	
HLMP-6405		583		nm	
HLMP-6505		565		nm	
Dominant wavelength					
HLMP-Q105		637		nm	
HLMP-6305		626		nm	
HLMP-6405		585		nm	
HLMP-6505		569		nm	
Spectral line half width					
HLMP-Q105		20		nm	
HLMP-6305/6405/6505		35		nm	
Capacitance - C					
HLMP-Q105		30		pF	$V_c = 0, F = 1 \text{ MHz}$
HLMP-6305/6405/6505		15		pF	$V_c = 0, F = 1 \text{ MHz}$

TYPICAL ELECTRO-OPTICAL CHARACTERISTIC CURVES

($T_A = 25^\circ\text{C}$ Unless Otherwise Specified)

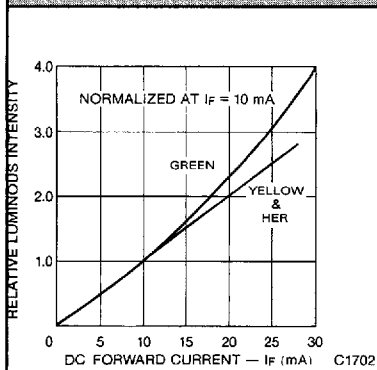


Fig. 1. Relative Luminous Intensity vs. Forward Current

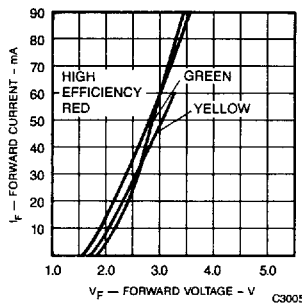


Fig. 2. Forward Current vs. Forward Voltage

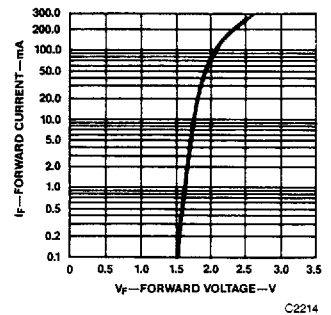


Fig. 3. Forward Current vs. Forward Voltage-AlGaAs