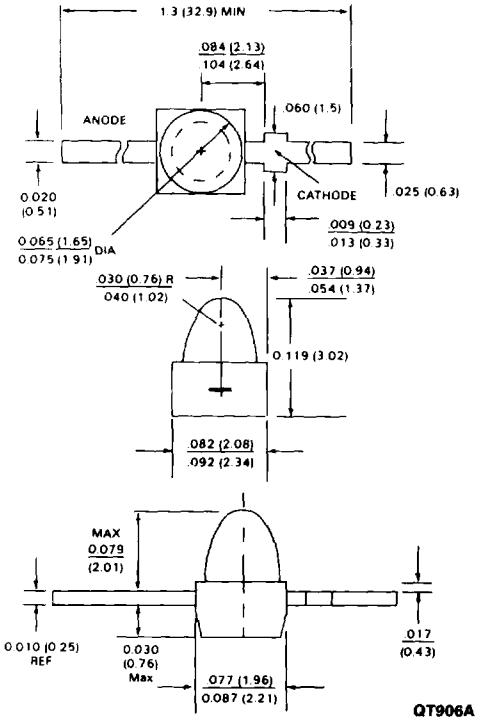
QT OPTOELECTRONICS

SUBMINIATURE T-¾ 5 - VOLT RESISTOR LAMPS

HIGH EFFICIENCY RED HLMP-6600/20
YELLOW HLMP-6700/20
HIGH EFFICIENCY GREEN HLMP-6800/20

PACKAGE DIMENSIONS



QT906A

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

DESCRIPTION

These T-¾ square based LEDs contain an integral resistor which is in series with the emitter chip. This construction allows for the operation in circuits with 5V supply voltage; without the use of an external resistor. Color tinted, diffused epoxy packages are used for these lamps.

FEATURES

- Integral current limiting resistor.
- TTL compatible
- Wide viewing angle
- Solid-state reliability
- SMT lead formings and T&R available

ABSOLUTE MAXIMUM RATING (T_A = 25°C unless otherwise specified)

PARAMETER	HER	YELLOW	GREEN	UNITS
Power dissipation	135	85	135	mW
DC forward voltage	6	6	6	V
Lead soldering time at	3	3	3	Sec
Surface mount reflow soldering				
Convective IR at 235°C				90 Seconds
Vapour phase at 213°C				3 Minutes
Operating temperature range				−40°C to 85°
Storage temperature range				−55°C to 100°C

TYPICAL THERMAL CHARACTERISTICS

Thermal resistance $Ø_{JA}$	120°C/W

ELECTRO-OPTICAL CHARACTERISTICS (T_A = 25°C Unless Otherwise Specified)

PARAMETER	MIN.	TYP.	MAX.	UNITS	TEST CONDITIONS
Forward current - I_F					
HLMP-6600/6700/6800		9.6	13.0	mA	V_F=5 V
HLMP-6620/6720/6820		3.5	5.0	mA	V_F=5 V
Reverse voltage - V_R	5	30		V	I_R=100μA
Viewing angle - 2θ		90		Degree	
Luminous intensity - I_v					
HLMP-6600/6700/6800	1.3	5.0		mcd	V_F=5 V
HLMP-6620/6720/6820	0.8	2.0		mcd	V_F=5 V
Peak wavelength					
HLMP-6600/20		635		nm	
HLMP-6700/20		583		nm	
HLMP-6800/20		565		nm	
Dominant wavelength					
HLMP-6600/20		626		nm	
HLMP-6700/20		585		nm	
HLMP-6800/20		569		nm	
Spectral line half-width					
HLMP-6600/20		40		nm	
HLMP-6700/20		36		nm	
HLMP-6800/20		28		nm	
Capacitance - C					
HLMP-6600/20		11		pF	V_F=, F=1 MHz
HLMP-6700/20		15		pF	V_F=, F=1 MHz
HLMP-6800/20		18		pF	V_F=, F=1 MHz

TYPICAL ELECTRO-OPTICAL CHARACTERISTIC CURVES
(T_A = 25°C Unless Otherwise Specified)

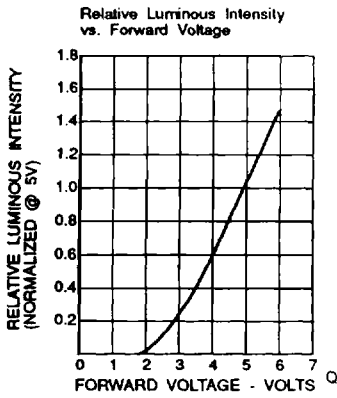


Fig. 1. Relative Luminous Intensity vs. Forward Voltage

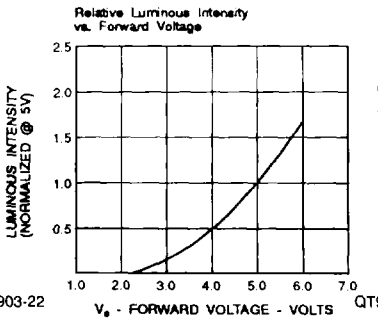


Fig. 2. Relative Luminous Intensity vs. Forward Voltage

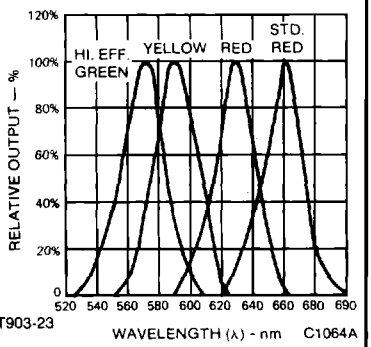


Fig. 3. Spectral Distribution