



## Selection Guide

Part Number HLMP-	Package & Lens Type	I <sub>v</sub> (mcd) @ 20 mA		Typical Viewing Angle 20 <sub>m</sub>
		Min.	Typ.	
1000	A-Tinted Diffused	0.5	1.0	60°
1002	A-Tinted Diffused	1.5	2.5	60°
1080	A-Untinted Diffused	0.5	1.5	60°
1071	A-Untinted Non-Diffused	1.0	2.0	45°
1200	B-Untinted Non-Diffused	0.5	1.0	55°
1201	B-Untinted Non-Diffused	1.5	2.5	55°

## Absolute Maximum Ratings at T<sub>A</sub> = 25°C

Parameter	1000 Series	Units
Power Dissipation	100	mW
DC Forward Current <sup>(1)</sup>	50	mA
Average Forward Current	50	mA
Peak Operating Forward Current	1000	mA
Reverse Voltage (I <sub>R</sub> = 100 μA)	5	V
Transient Forward Current <sup>(1)</sup> (10 μs Pulse)	2000	mA
LED Junction Temperature	110	°C
Operating and Storage Temperature Range	-55 to +100°C	
Lead Soldering Temperature (1.6 mm [0.063 in.] below package base)	260°C for 5 seconds	

**Note:**

1. Derate linearly from 50°C at 0.2 mA/°C.

### Electrical Characteristics at $T_A = 25^\circ\text{C}$

Symbol	Description	Min.	Typ.	Max.	Units	Test Conditions
$\lambda_{\text{PEAK}}$	Peak Wavelength		655		nm	Measurement at Peak
$\lambda_d$	Dominant Wavelength		648		nm	
$\Delta\lambda^{1/2}$	Spectral Line Halfwidth		24		nm	
$\tau_S$	Speed of Response		10		ns	
C	Capacitance		100		pF	$V_F = 0, f = 1 \text{ MHz}$
$R\theta_{J-PIN}$	Thermal Resistance		290		$^\circ\text{C/W}$	Junction to Cathode Lead
$V_F$	Forward Voltage	1.4	1.6	2.0	V	$I_F = 20 \text{ mA}$
$V_R$	Reverse Breakdown Voltage	5			V	$I_R = 100 \mu\text{A}$

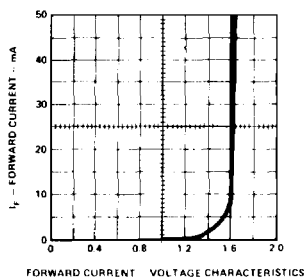


Figure 1. Forward Current vs. Voltage Characteristic.

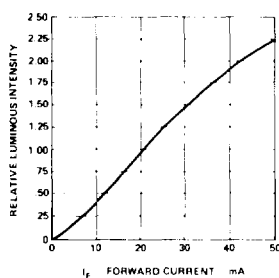


Figure 2. Luminous Intensity vs. Forward Current ( $I_F$ ).

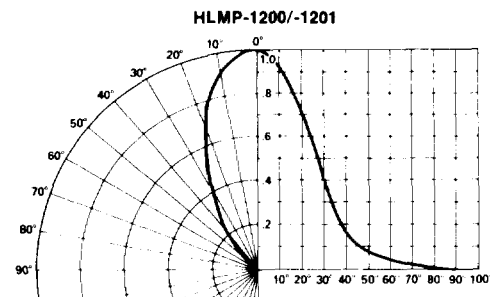
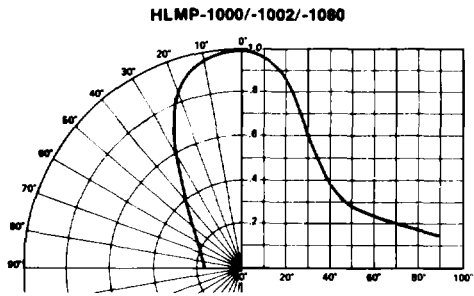
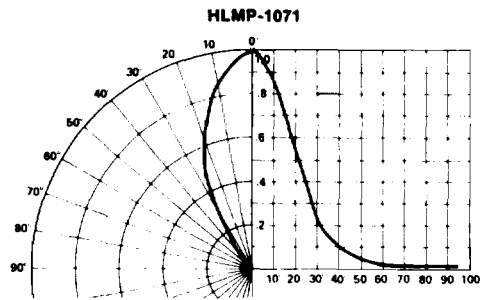


Figure 3. Typical Relative Luminous Intensity vs. Angular Displacement.



**Figure 4. Relative Luminous Intensity vs. Angular Displacement.**



**Figure 5. Relative Luminous Intensity vs. Angular Displacement.**