



# American Opto Plus LED L513HD

5mm Dia LED LAMP – Red Diffused

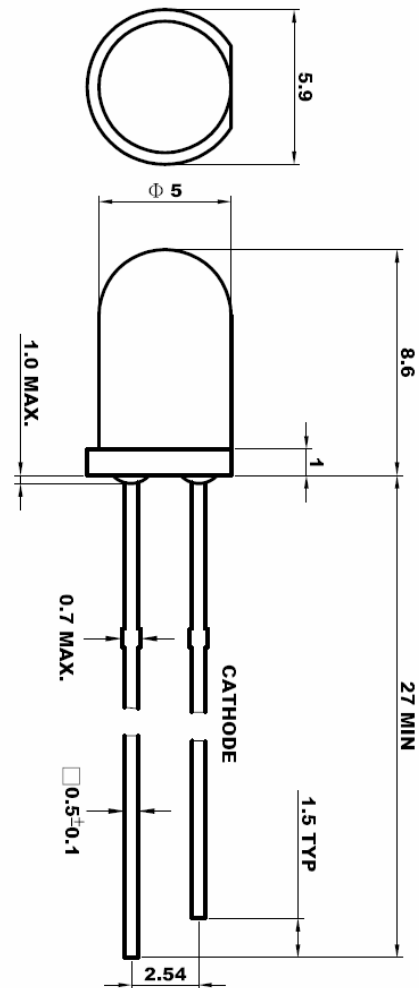
- ◆ 5.0mm DIA LED LAMP
- ◆ I.C. COMPATIBLE
- ◆ LOW POWER CONSUMPTION
- ◆ LONG LAMP LIFE

## DESCRIPTION

- Round type
- T1-3/4 (5mm) diameter
- Lens color: Red Diffused
- With flange
- Solder leads without stand-off

## FEATURES

- Emitted color: Red
- Technology: GaP
- Viewing angle: 60°
- Peak wavelength  $\lambda_p = 700\text{nm}$



## SELECTION GUIDE

Chip Material	Chip Emitted	Lens Color	Viewing Angle
GaP	Red	Red Diffused	60°



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## ABSOLUTE MAXIMUM RATINGS

(Ta=25°C)

Parameter	Symbol	Max Rating	Unit
Power Dissipation	$P_D$	60	mW
Peak Forward Current (1/10 Duty Cycle @1KHz )	$I_{PF}$	100	mA
Forward Current	$I_F$	25	mA
Reverse Voltage	$V_R$	5.0	V
Operating Temperature Range	$T_{OPR}$	-40~+85	°C
Storage Temperature Range	$T_{STG}$	-40~+85	°C

Solder temperature 2 mm from body for 3 seconds at 260°C

## OPTICAL-ELECTRICAL CHARACTERISTICS

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Luminous Intensity	$I_V$	$I_F = 10\text{mA}$	2.5	6		mcd
Forward Voltage	$V_F$	$I_F = 10\text{mA}$		1.80	2.4	V
Reverse Current	$I_R$	$V_R = 5\text{V}$			10	uA
Viewing Angle	2θ1/2	$I_F = 10\text{mA}$		60		deg.
Peak Wavelength	$\lambda_P$	$I_F = 10\text{mA}$		700		nm
Dominant Wavelength	$\lambda_D$	$I_F = 10\text{mA}$		653		nm
Spectrum Radiation Bandwidth	$\Delta\lambda$	$I_F = 10\text{mA}$		100		nm

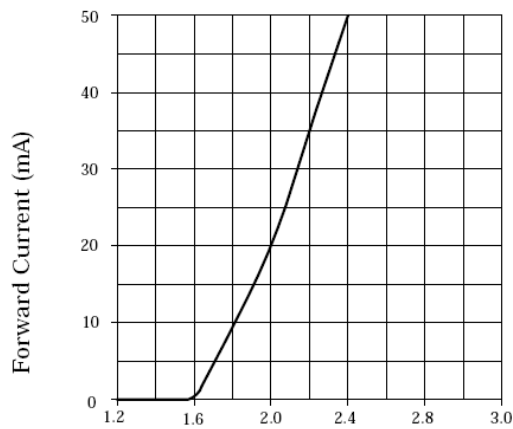


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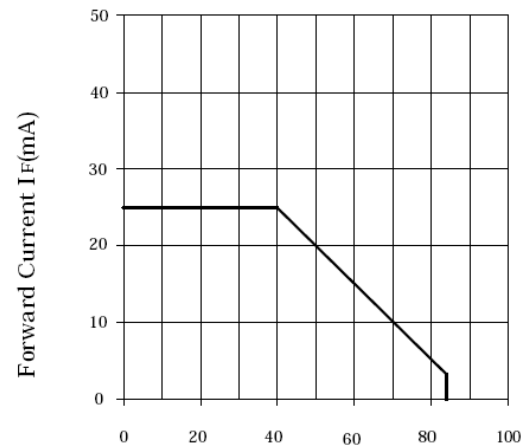
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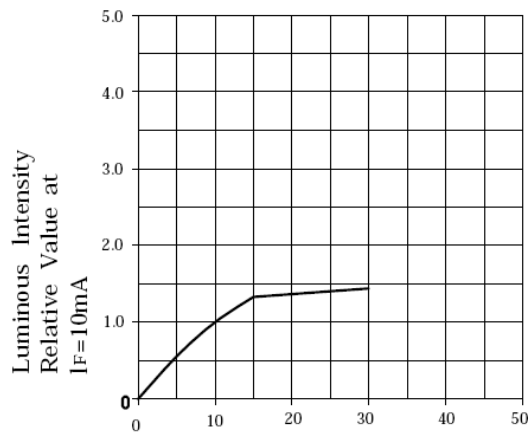
## TYPICAL ELECTRO-OPTICAL CHARACTERISTIC CURVES



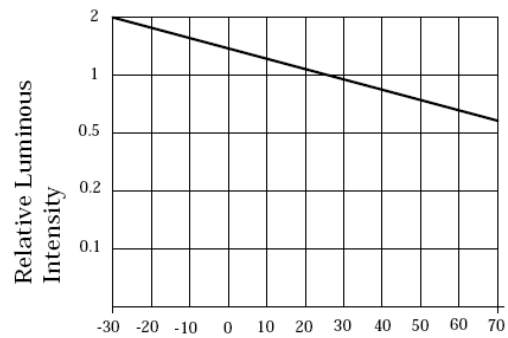
Forward Voltage (V)  
Forward Current Vs.  
Forward Voltage



Ambient Temperature  
Ta (°C)  
Forward Current  
Derating Curve



IF-Forward Current(mA)  
Luminous Intensity Vs.  
Forward Current



Ambient Temperature  
Ta (°C)  
Luminous Intensity Vs.  
Ambient Temperature