980 nm Laser Diode, 30 mW

L980P030

Description

Thorlabs Ø5.6 mm, TO-18 can package 980 nm laser diode is a compact light source suited to many applications. Our lasers are fully compatible with our entire line of Laser Diode and TEC Controllers as well as our selection of Laser Diode Mounts and Collimation Solutions.

This laser diode emits high intensity invisible light which can be hazardous to the human eye. Products which incorporate these devices have to follow the safety precautions found in IEC 60825-1 "Safety of laser products."

Specifications

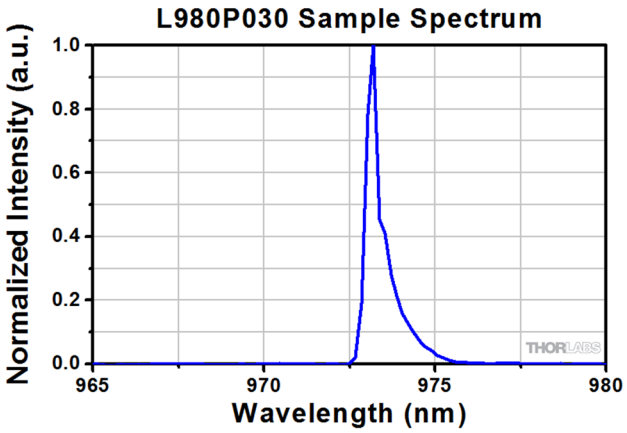
Absolute Maximum Ratings[a]		
	Symbol	**Maximum**
Operating Current	I_F	100 mA
Optical Power	P_o	35 mW
LD Reverse Voltage	V_R (LD)	2 V
PD Reverse Voltage	V_R (PD)	30 V
Operating Case Temperature	T_{op}	-10 to 50 °C
Storage Temperature	T_{stor}	-40 to 85 °C

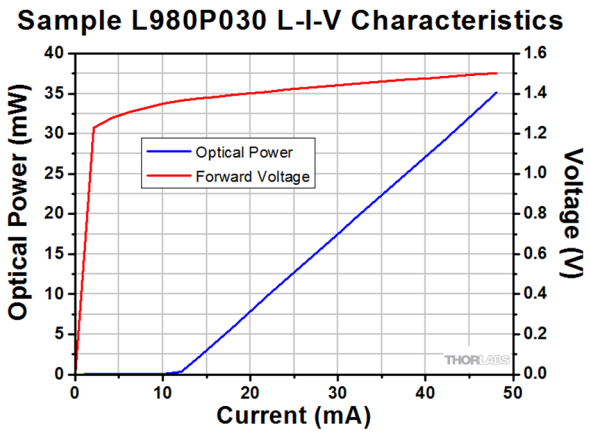
a. Absolute maximum rating specifications should never be exceeded. Operating at or beyond these conditions can permanently damage the laser.

L980P030 Specifications[b]					
Specification		**Symbol**	**Min**	**Typical**	**Max**
Center Wavelength @ P_{op}		λ_o	970 nm	980 nm	990 nm
Output Power, CW		P_{op}	-	30 mW	-
Threshold Current		I_{TH}	-	15 mA	30 mA
Operating Current CW @ P_{op}		I_{op}	-	50 mA	70 mA
Operating Voltage @ P_{op}		V_{op}	-	1.5 V	2.0 V
Slope Efficiency		η	-	0.9 mW/mA	-
Monitor Current, mA		I_m	-	0.2 mA	-
Beam Divergence (FWHM) @ P_{op}	**Parallel**	$\theta_{\parallel}$	7°	10°	14°
	Perpendicular	$\theta_{\perp}$	30°	35°	40°

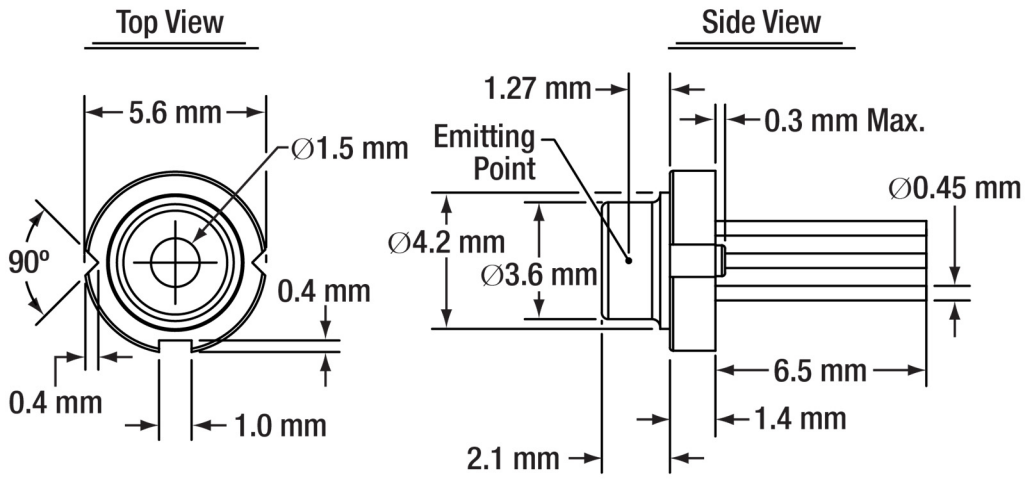
b. T_{CASE} = 25 °C, CW Current Operation

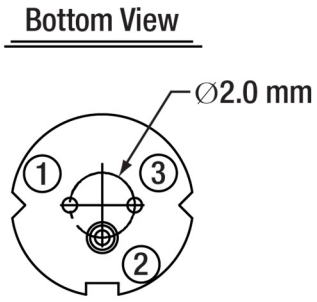
Performance Plots

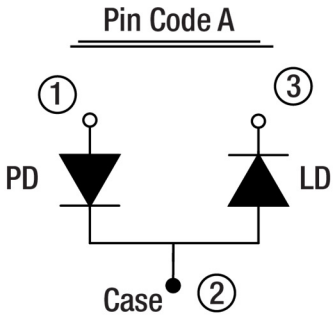




Drawing







Pin	Description
1	Monitor Diode Anode
2	Case Common
3	Laser Cathode