450 nm Laser Diode, 100 mW

L450G2

Description

This 450 nm, 100 mW laser diode is a compact light source that outputs a single transverse mode and is suited for a variety of applications, such as outdoor and industrial lighting, projection, and visualization. It is packaged in a standard Ø5.6 mm TO package with a G pin configuration. This laser diode is compatible with our line of laser diode and TEC controllers as well as our selection of collimation solutions and TO can laser diode mounts.

Specifications

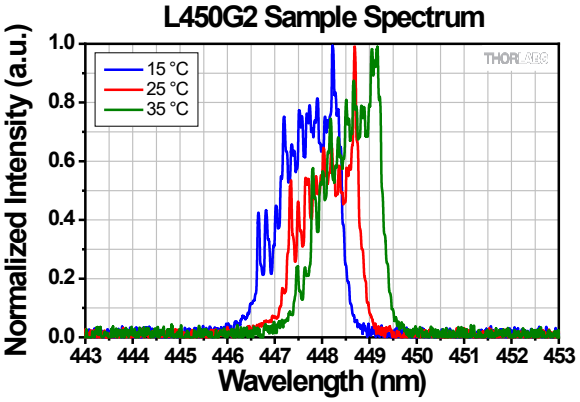
Absolute Maximum Ratings[a]	
Specification	**Value**
Operating Current	110 mA
LD Reverse Voltage	2 V
Operating Case Temperature	-20 to 70 °C
Storage Temperature	-40 to 85 °C

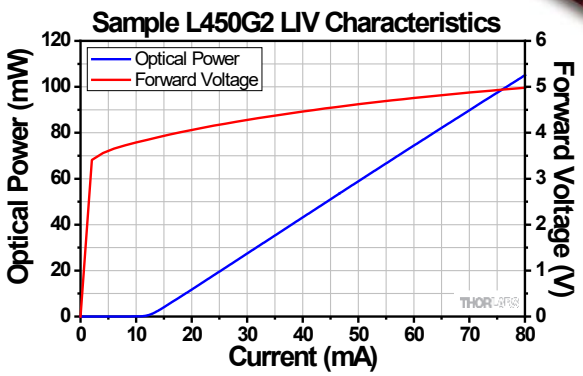
a. Absolute maximum rating specifications should never be exceeded. Operating at or beyond these conditions can permanently damage the laser.

L450G2 Specifications[a]					
Specification		**Symbol**	**Min**	**Typical**	**Max**
Center Wavelength @ P_{op}		λ_o	440 nm	450 nm	460 nm
Output Power, CW		P_{op}	100 mW	-	-
Threshold Current		I_{TH}	-	12 mA	30 mA
Operating Current CW @ P_{op}		I_{op}	-	80 mA	-
Operating Voltage @ P_{op}		V_{op}	-	5.0 V	7.0 V
Slope Efficiency		η	-	1.5 W/A	-
Modulation Frequency		F	-	>100 MHz	-
Beam Divergence (FWHM) @ P_{op}	**Parallel**	$\theta_{\parallel}$	5°	8.4°	10°
	Perpendicular	$\theta_{\perp}$	18°	21.5°	25°

a. T_{CASE} = 25 °C if not specified.

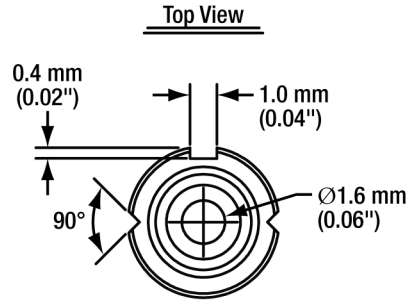
Performance Plots

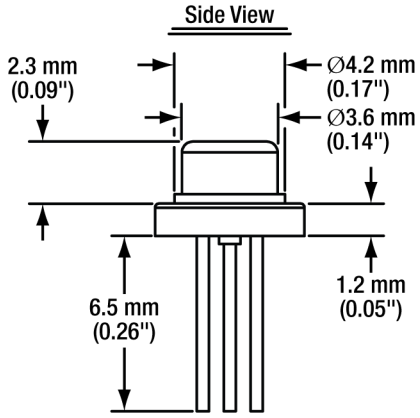




The data presented here is for one particular laser diode. Slight variations in performance data will occur from device to device. The sample spectrum of the L450G2 laser diode was measured at 15 °C, 25 °C, and 35 °C. The L-I-V characteristics data was taken at 25 °C. Please visit our website for raw spectral data and L-I-V characteristics.

Drawings





Pin	Description
1	Laser Cathode
2	Case Common
3	Laser Anode