638 nm Laser Diode, 150 mW

L638P150

Description

This 638 nm, 150 mW laser diode is suited for a variety of applications. Packaged in Ø3.8 mm TO can with a G pin configuration. This laser is compatible with our line of laser diode and TEC controllers as well as our selection of laser diode mounts and collimation solutions. It is recommended to have the base of the TO package in good thermal contact with a low thermal resistance heat sink.

Specifications

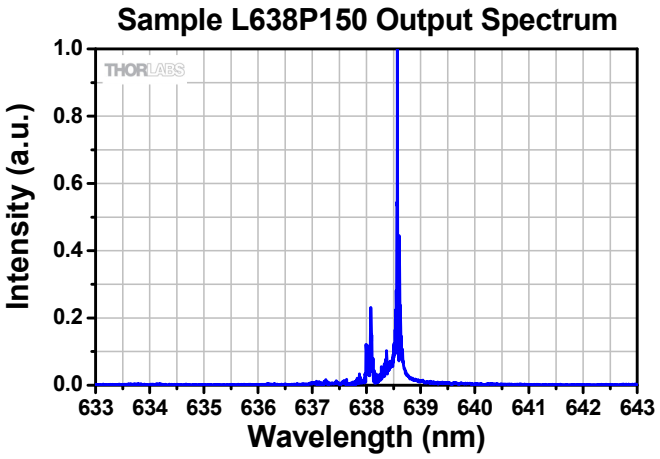
Absolute Maximum Ratings[a]		
Specification	**Symbol**	**Maximum**
Output Power, CW	P_{max}	150 mW
LD Reverse Voltage	$V_{reverse}$	2 V
Operating Case Temperature	T_{op}	-10 to +60 °C
Storage Temperature	T_{stor}	-40 to +85 °C

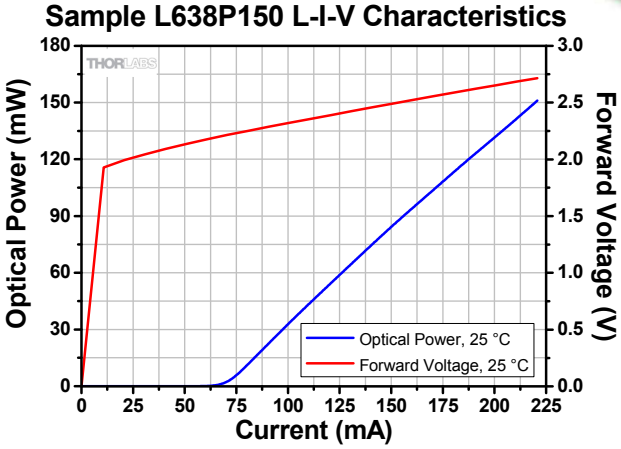
a. Absolute Maximum Rating specifications should never be exceeded. Operating at or beyond these conditions can permanently damage the laser.

L638P150 Specifications					
Specification		**Symbol**	**Min**	**Typical**	**Max**
Center Wavelength @ P_{op}		λ_o	633nm	638nm	643nm
Output Power, CW		P_{op}	-	150 mW	-
Threshold Current		I_{TH}	-	75 mA	100 mA
Operating Current CW @ P_{op}		I_{op}	-	230 mA	300 mA
Operating Voltage @ P_{op}		V_{op}	-	2.7 V	3.1 V
Slope Efficiency		η	-	1.0 W/A	-
Beam Divergence (FWHM) @ P_{op}	**Parallel**	$\theta_{\parallel}$	5°	9°	13°
	Perpendicular	$\theta_{\perp}$	13°	18°	23°

T_{CASE} = 25°C, CW

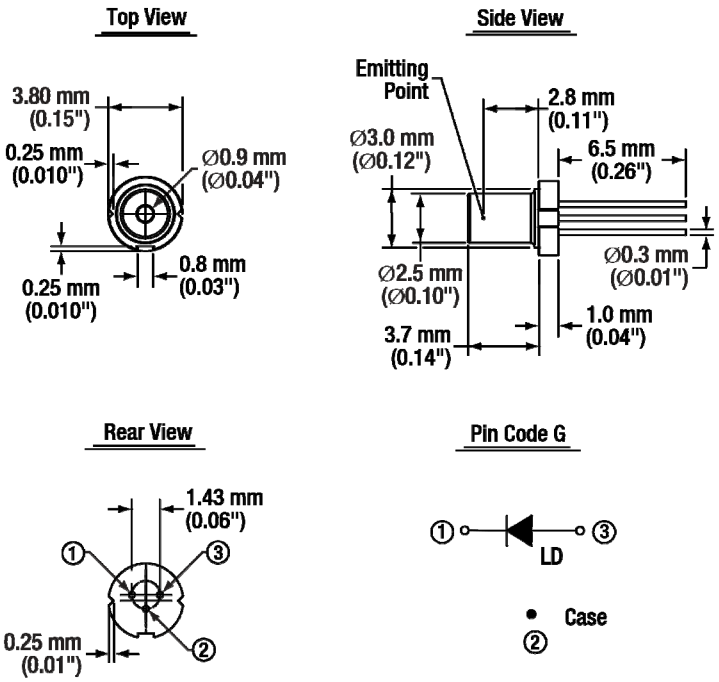
Performance Plots





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 L638P150 laser diode was taken at 25 °C, using a Thorlabs OSA201C Spectrum Analyzer with resolution of 7.5 GHz. The L-I-V characteristics data was taken at 25 °C. Please visit our website for the raw data.

Drawings



Pin	Description
1	Laser Cathode
2	Case Common
3	Laser Anode