520 nm Laser Diode, 30 mW

L520A1

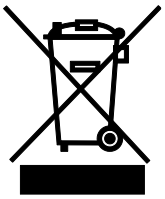
Description

This 520 nm, 30 mW laser is a compact light source that outputs a single transverse mode suited for a variety of applications such as use in appliances and tools, functional illumination, projection, outdoor and industrial lighting, and entertainment. It comes in a Ø5.6 mm TO package with an A 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**
Optical Output Power, CW	35 mW
LD Reverse Voltage	2 V
Operating Case Temperature	-20 °C to 60 °C
Storage Temperature	-40 °C to 85 °C

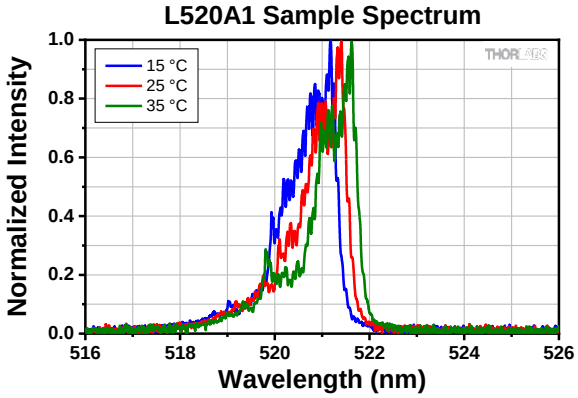
a. Absolute maximum rating specifications should never be exceeded. Operating at or beyond these conditions can permanently damage the laser.

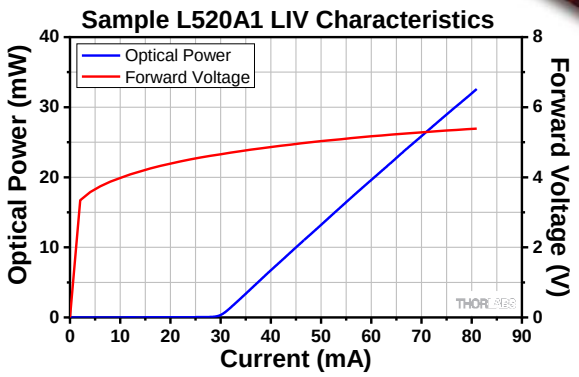


L520A1 Specifications[a]					
Specification		**Symbol**	**Min**	**Typical**	**Max**
Center Wavelength @ P_{op}		λ_o	510 nm	520 nm	530 nm
Optical Output Power, CW		P_{op}	30 mW	-	-
Threshold Current		I_{TH}	-	30 mA	45 mA
Operating Current CW @ P_{op}		I_{op}	-	80 mA	100 mA
Operating Voltage @ P_{op}		V_{op}	-	5.5 V	7.0 V
Slope Efficiency		η	-	0.6 W/A	-
Modulation Frequency		F	-	>100 MHz	-
Monitor Current		I_m	-	0.055 mA	-
Beam Divergence (FWHM) @ P_{op}	**Parallel**	$\theta_{\parallel}$	6°	8°	10°
	Perpendicular	$\theta_{\perp}$	19°	22°	25°

a. T_{CASE} = 25 °C if not specified.

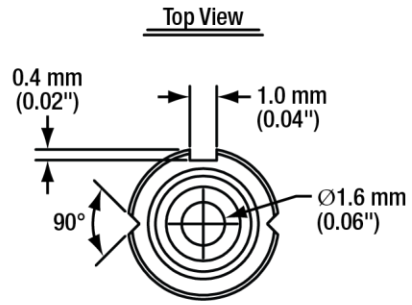
Performance Plots

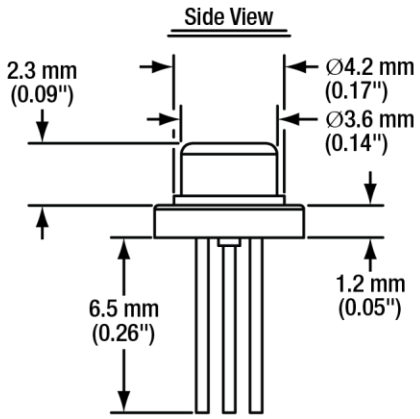




The data presented here is for one particular laser diode. Slight variations in performance data will occur from device to device. The sample spectrum of the L520A1 laser diode was measured at 15 °C, 25 °C, and 35 °C. The L-I-V characteristics data was taken at 25 °C. Please visit our website for raw spectral data and L-I-V characteristics.

Drawings





Pin	Description
1	Photodiode Anode
2	Case
3	Laser Diode Cathode