DPSS Laser Diode

DJ532-40

Description

Thorlabs' DJ532-40 is a compact diode-pumped solid state (DPSS) green laser diode module comprised of a combination of Nd:YVO4 and KTP crystals, pumped by a 808 nm laser diode. The front window is made from wedged filter glass, which blocks the IR source light and hermetically seals the module. This laser diode is compatible with both the AD9.5F collimator adapter and M9 thread adapters, such as the S1TM09.

A DPSS laser diode can be used as a typical semiconductor laser diode, and all precautions when handling a semiconductor laser diode apply to a DPSS laser diode as well. The properties of a DPSS laser diode differ from those of a typical laser diode in two ways:

1) A DPSS has a narrow operation temperature range. The efficiency of the nonlinear effect of the laser crystals is sensitive to the operation temperature.

2) A DPSS outputs a single mode laser beam, which has a much smaller divergence angle than a typical semiconductor laser diode.

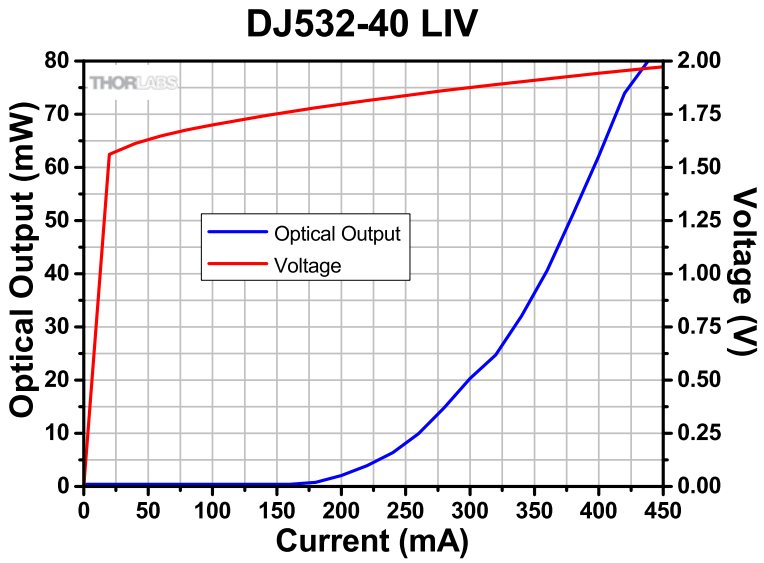
Specifications

DJ532-40 Specifications[a]				
	Symbol	**Min**	**Typical**	**Max**
Center Wavelength	λ_o	531 nm	532 nm	533 nm
Optical Output Power	P_o	-	40 mW	50 mW
Beam Divergence, Full Angle	θ	-	12 mrad	15 mrad
Slope Efficiency	η	0.1 W/A	0.2 W/A	-
Operating Current @ P_o	I_{op}	-	330 mA	400 mA
Operating Voltage @ P_o	V_{op}	-	1.9 V	2.2 V

a. Unless otherwise noted, all measurements are performed at 25 °C ambient temperature.

Absolute Maximum Ratings	
LD Reverse Voltage	2 V
Operating Temperature	20 to 25 °C
Storage Temperature	-30 to 70 °C
Pin Code	5E

Performance Plot



Drawings