

CPS450



Description

The CPS450 has typical center wavelength close to 450 nm and produces an output beam that has an elliptical beam shape. It features an 11 mm diameter housing with an 18" (457 mm) strain relief cable and is compatible with our AD11F mounting adapter and LDS5 power supply. Each CPS450 diode module is shipped with a test datasheet that includes the lasing spectrum.

The CPS Series Compact Laser Diode Modules are engineered to withstand large temperature variations. These collimated diode modules are precision machined by a lathe after assembly to maintain the parallelism between the housing and output beam.

Direct viewing of laser diode emission may cause eye damage. Extreme care must be taken to prevent the beam from being viewed directly or through external optics or mirrors.

Specifications

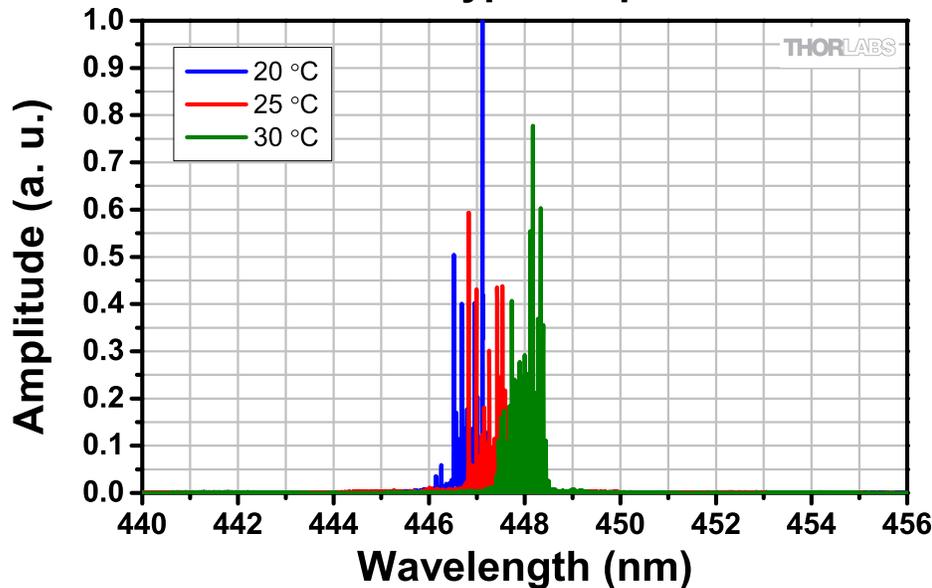
General Specifications	
Housing Material	Aluminum
Housing Dimensions	Ø11.0 mm X 40.0 mm
Beam Shape	Elliptical, 3.2 mm X 1.0 mm
Operating Temperature	-10 to 60 °C
Storage Temperature	-30 to 70 °C
Operating Voltage	4.9 V to 5.2 V
Laser Safety Class	3R



Optical and Electrical Specifications			
	Min	Typical	Max
Wavelength	440 nm	450 nm	460 nm
Power	4.0 mW	4.5 mW	5.0 mW
Polarization Extinction Ratio	-	25 dB	-
Power Stability (8 hours)	-	-	2%
Power Stability (1 Minute)	-	-	1%
Axis Deviation	-	-	5 mrad
Beam Divergence	-	-	1.5 mrad
Operating Current	-	105 mA	150 mA

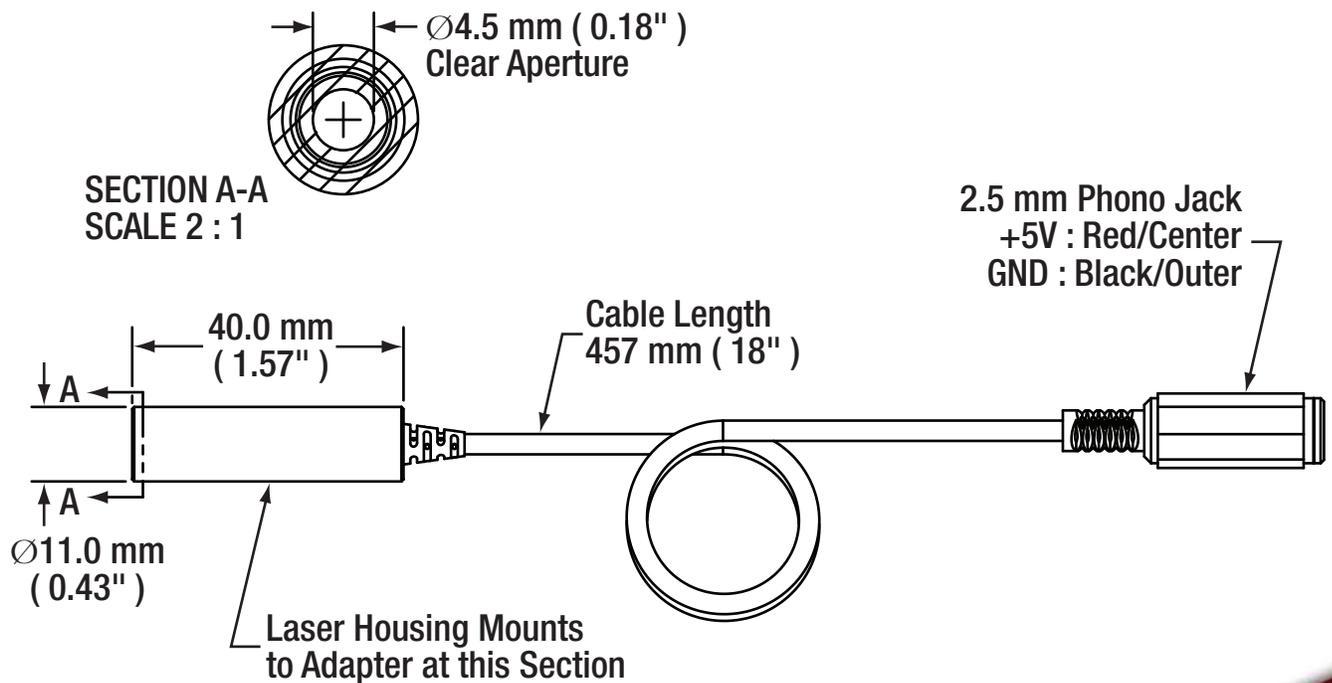
Typical Performance Plots

CPS450 Typical Spectrum



Spectrum of the CPS450 Diode Module taken at 20 °C, 25 °C, and 30 °C. The measurement was taken using Thorlabs OSA201 Spectrum Analyzer, which has a resolution of 7.5 GHz (0.25 cm^{-1}). This data is typical and will vary for each module.

Drawings



May 13, 2014

QTN005690-S01, Rev B