



CPS635F

Description

The CPS635F Adjustable Focus Laser Diode Module has typical center wavelength close to 635 nm and produces an output beam that has an elliptical beam shape. The collimated output beam can be focused to a spot using the knurled knob at the front of the housing. This knurled knob can be locked with two setscrews using the included 0.9 mm hex wrench. Please note that trying to force the adjustment knob without loosening the locking setscrews can damage the focus adjustment mechanism.

It features an 11 mm diameter housing with an 18" (457 mm) strain relief cable and is compatible with our Ø 11 mm mounting adapters, such as the AD11F, and LDS5 power supply. Each unit can be mounted to these adapters by threading the cord and phono plug through the adapter, or by removing the knurled knob. The CPS Series Compact Laser Diode Modules are engineered to withstand large temperature variations. Each CPS635F diode module is shipped with a test datasheet that includes the lasing spectrum.

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

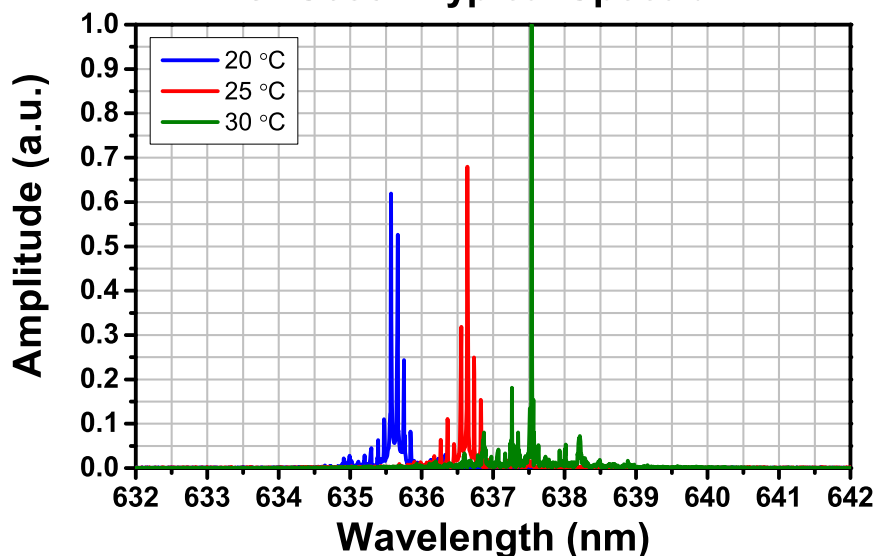
General Specifications	
Housing Material	Aluminum
Housing Dimensions	Ø11.0 mm X 54.0 mm
Beam Shape (Collimated)	Elliptical, 5.0 mm X 1.9 mm
Operating Temperature	-10 to 50 °C
Storage Temperature	-30 to 70 °C
Operating Voltage	4.9 V to 5.2 V
Laser Safety Class	3R



Optical and Electrical Specifications			
	Min	Typical	Max
Wavelength	630 nm	635 nm	645 nm
Power	4.0 mW	4.5 mW	5.0 mW
Polarization Extinction Ratio	-	24 dB	-
Power Stability (8 hours)	-	-	2%
Power Stability (1 Minute)	-	-	1%
Axis Deviation	-	-	5 mrad
Beam Divergence (Collimated)	-	-	1.6 mrad
Focal Range (From Exit Window)	80 mm	-	Collimated
Focused Spot Diameter (100 mm, 1/e ²)	-	30 µm	-
Operating Current	-	50 mA	70 mA

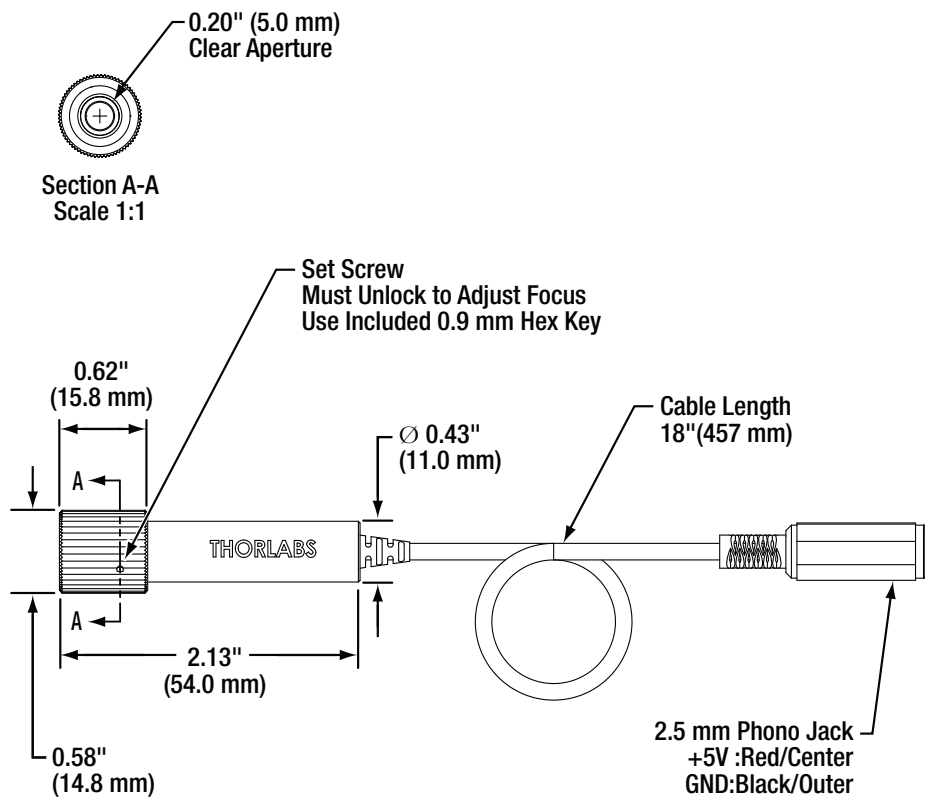
Typical Performance Plots

CPS635F Typical Spectrum



Spectrum of the CPS635F 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



November 4, 2014

QTN008320-S01, Rev A