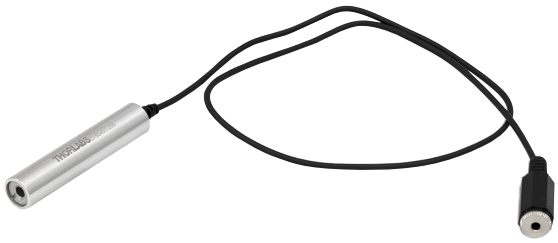
Collimated Laser Diode Module
635 nm, 1.2 mW, Circular Beam

CPS635R



Description

The CPS635R Collimated Laser Diode Module has a typical center wavelength close to 635 nm and produces an output beam that has a circularized beam shape. This beam shape was obtained by using a series of custom apertures. These apertures create relatively little near-field noise and also reflect less light to the laser diode, compared to a typical aperture.

Our CPS Series of Compact Laser Diode Modules are engineered to withstand large temperature variations. The module housing is precision machined by a lathe after assembly to maintain the parallelism (axis deviation) between the housing and output beam. The CPS635R features an Ø11 mm housing with an 18" (457 mm) strain relief cable and is compatible with our AD11F, AD11BA, AD11NT, KAD11F, and KAD11NT mounting adapters and LDS5 power supply. Each CPS635R laser 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

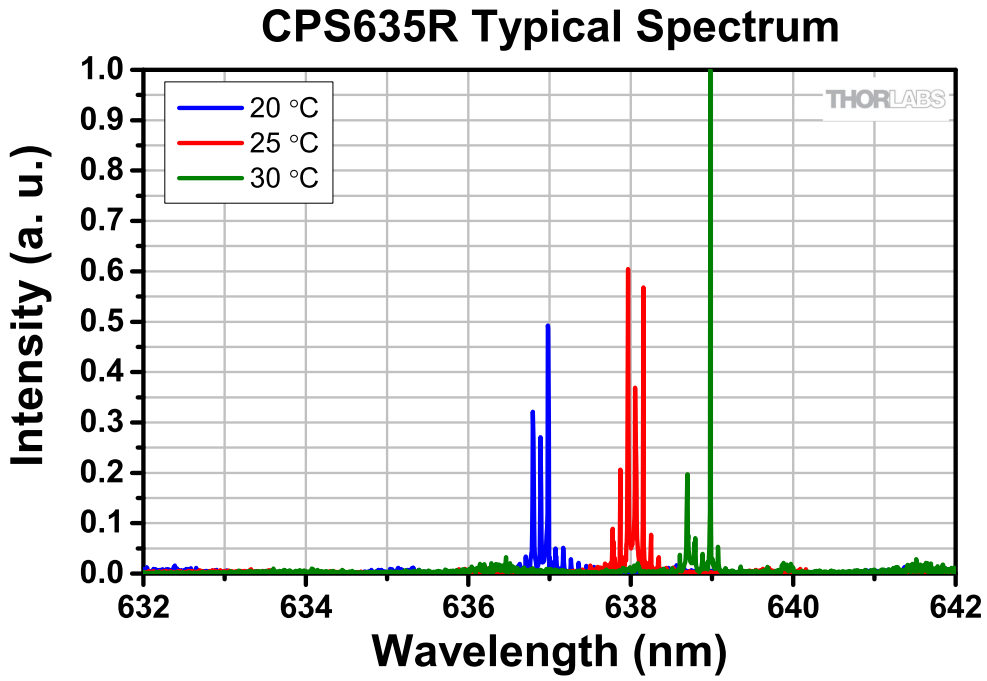
General Specifications	
Housing Material	Aluminum
Housing Dimensions	Ø11.0 mm X 58.0 mm
Beam Dimensions	Round, Ø2.9 mm
Operating Temperature	-10 to 50 °C
Storage Temperature	-30 to 70 °C
Operating Voltage	4.9 V to 5.2 V
Laser Safety Class	3R

Optical and Electrical Specifications[a]			
	Min	**Typical**	**Max**
Wavelength	630 nm	635 nm	645 nm
Power	1.0 mW	1.2 mW	1.4 mW
Polarization Extinction Ratio	-	20 dB	-
Power Stability (8 hours)	-	-	2%
Power Stability (1 Minute)	-	-	1%
Axis Deviation[b]	-	-	5 mrad
Beam Divergence	-	0.6 mrad	-
Operating Current	-	50 mA	70 mA

a. Case temp = 25 °C

b. Parallelism between the housing and output beam

Typical Performance Plots



Spectrum of the CPS635R Laser 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 unit.

Drawings