

# 633nm, 40/70mW High-Power Wavelength Stabilized Lasers



High Power, Single Mode Collimated Output Beam

Ondax's 633nm High-Power Wavelength Stabilized Laser is a high-power, spectrum-narrowed, single-mode collimated laser packaged in an ultra-compact, TO-can footprint. The narrowed linewidth, low power consumption, and broad temperature operating characteristics deliver affordable, portable instrument-quality performance for a broad range of instrumentation applications.

All SureLock™ Series lasers are stabilized using the Ondax PowerLocker® Volume Holographic Grating (VHG), ensuring precise, ultra-stable center wavelengths, low temperature dependence, and consistent optical performance over the locked region.

## Features:

- Compact 9mm TO can footprint
- Single Spatial Mode
- Narrow spectral linewidth - 150MHz Typical, 0.06nm maximum
- Wavelength stability across operating range <0.01nm/°C
- Collimated output beam
- NoiseBlock™ narrow-band ASE suppression filters and beamsplitters available in matching wavelengths to further reduce linewidth and ASE noise

## Applications:

- HeNe Replacement
- Raman Spectroscopy
- Metrology
- Holography
- Interferometry
- Bio-instrumentation
- Particle Counting
- Fluorescence
- Sensing
- Analytical Instrumentation

## Specifications:

### Specification Summary

Parameter	Symbol	Min	Typ	Max	Unit
Output Power	$P_o$		40 / 70		mW
Center Wavelength (vacuum)	$L_p$	632.75	633	633.25	nm
Linewidth	$\Delta\lambda$		150 MHz	0.06 nm	
Central Stabilized Temperature	$T_c$	15	25	35	°C
Stabilized Temperature Range	$T_r$	10			°C

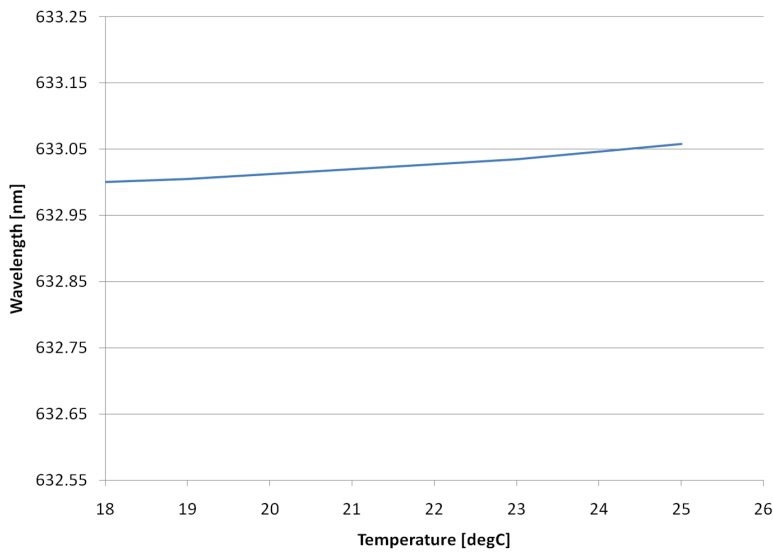
### Operating Specifications

Parameter	Symbol	Min	Typ	Max	Unit
Threshold Current	$I_{th}$		64	80	mA
Operating Current	$I_{op}$		160	210	mA
Operating Voltage	$V_{op}$		2.8	3.0	V
Beam Divergence, Perpendicular (FWHM)	$Q_v$		<2		mrاد
Beam Divergence, Parallel (FWHM)	$Q_v$		<2		mrاد
Beam Size			0.6 x 0.9		mm
Differential Efficiency	DE (dP/dI)		0.7		mW/mA
Operating Temperature <sup>2</sup>	$T_{op}$			35	°C
Storage Temperature <sup>2</sup>	$T_s$	-10		60	°C
Polarization			100:1		
Polarization Orientation			TE		

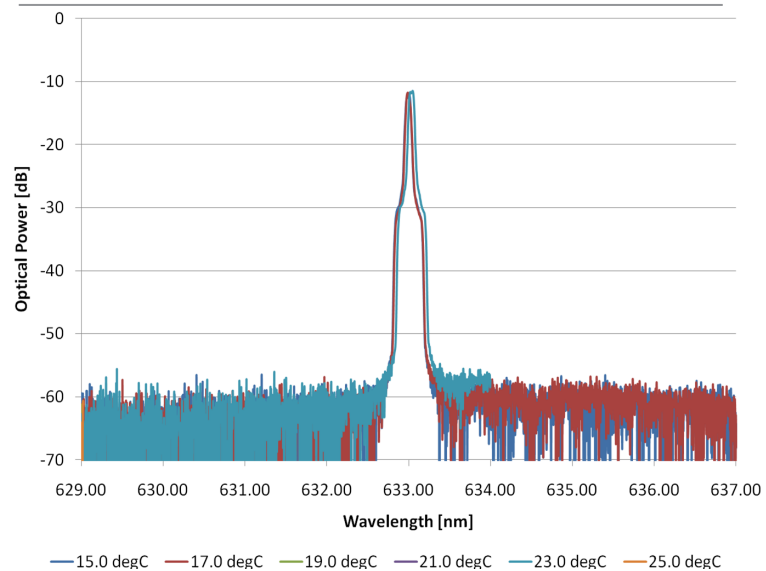
<sup>1</sup>All specifications are at rated power with a case temperature of 25°C unless otherwise noted <sup>2</sup>Non-condensing

# 633nm, 40/70mW High Power Wavelength Stabilized Lasers

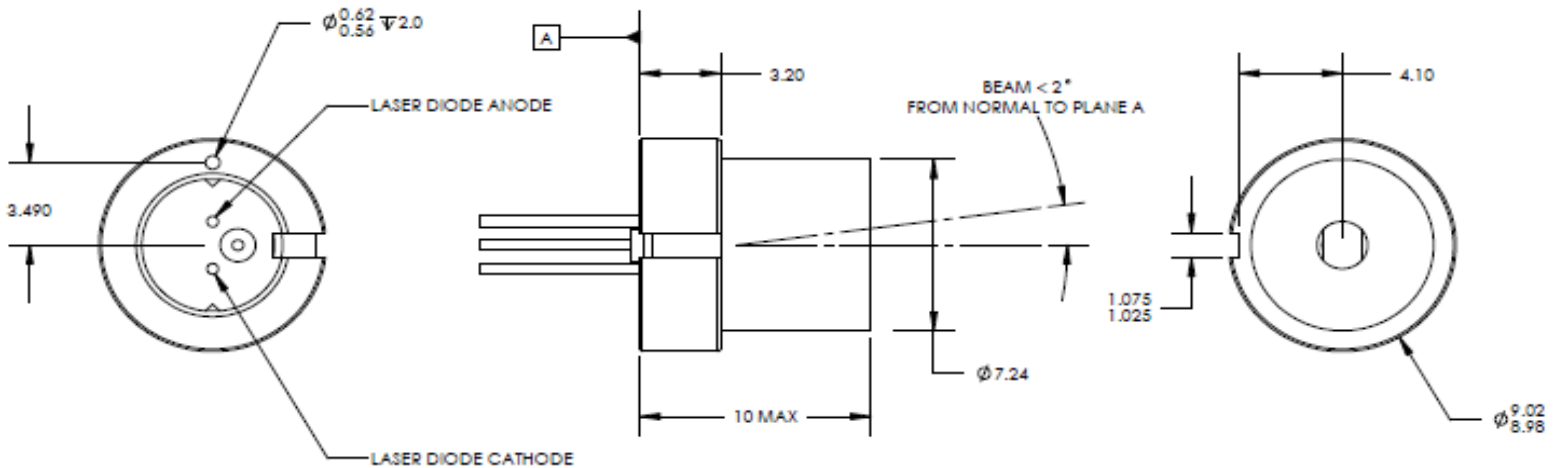
## Wavelength Stability



## Optical Spectrum (Sample)

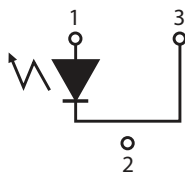


## Outline Drawing



## Pinout

Pin	Description
1	Laser Diode Anode
2	Case
3	Laser Diode Cathode



## Model Number

CP-633-PLR40  
CP-633-PLR70

