

# 830nm, 500mW Wavelength Stabilized Lasers



High Power, Narrow Linewidth  
Output Beam

Ondax's 830nm Wavelength Stabilized Laser is a high-power, multimode, single-axis 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.

## Specifications:

### Features:

- Compact 9mm TO can footprint
- Narrow spectral linewidth - 0.15nm
- Wavelength stability across operating range 0.01nm/°C
- Fast-axis collimated output beam
- NoiseBlock™ narrow-band ASE suppression filters and beamsplitters available in matching wavelengths to further reduce linewidth and ASE noise

### Applications:

- Raman Spectroscopy
- Metrology
- Bio-instrumentation
- Sensing
- Analytical Instrumentation

### Specification Summary

Parameter	Symbol	Min	Typ	Max	Unit
Output Power	$P_o$			500	mW
Center Wavelength (vacuum)	$L_p$	829.5	830	830.5	nm
Linewidth	$\Delta\lambda$		0.15		nm
Central Stabilized Temperature	$T_c$	20		40	°C
Stabilized Temperature Range	$T_r$	14			°C

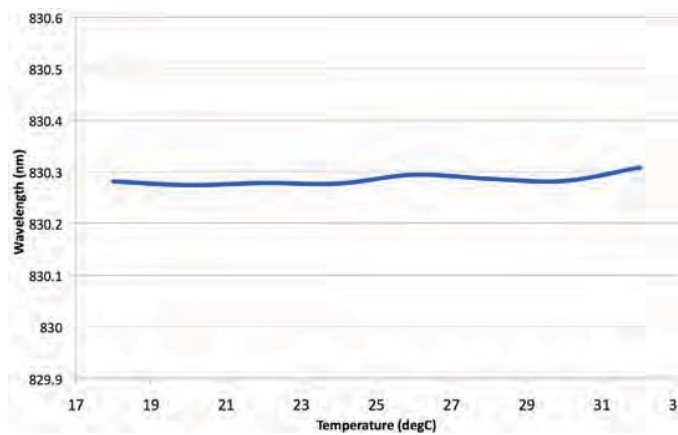
### Operating Specifications

Parameter	Symbol	Min	Typ	Max	Unit
Threshold Current	$I_{th}$		280		mA
Operating Current	$I_{op}$		900	1100	mA
Operating Voltage	$V_{op}$		1.9	2.2	V
Laser Reverse Voltage	$V_{ri}$			2	V
Beam Size at Exit (FWHM)			1.0 x 0.5		mm
Emitter Size			1 x 100		μm
Beam Divergence	$Q_v$		0.25 x 3.5		Degrees
Differential Efficiency	DE (dP/dI)		0.7		mW/mA
Operating Temperature <sup>2</sup>	$T_{op}$	0		50	°C
Storage Temperature <sup>2</sup>	$T_s$	-20		80	°C
Polarization			100:1		
Polarization Orientation			TE		

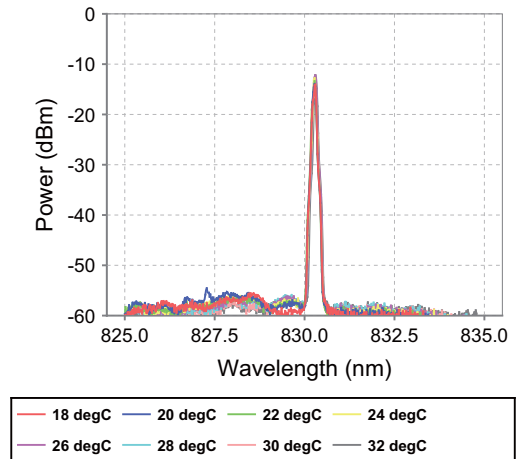
<sup>1</sup>All specifications are at rated power with a case temperature of 25°C unless otherwise noted <sup>2</sup>Non-condensing

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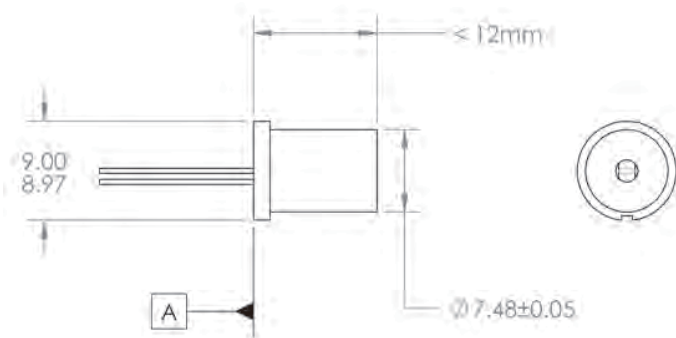
### Wavelength Stability



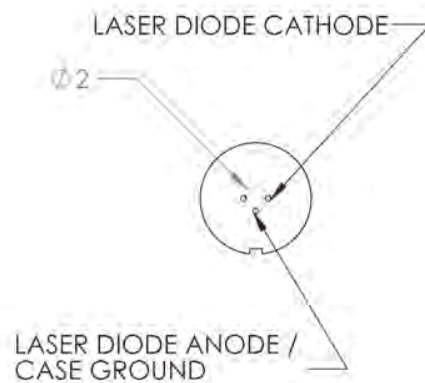
### Optical Spectrum (Sample)



### Side View

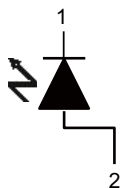


### Bottom View



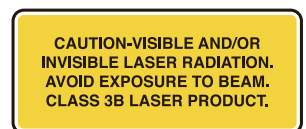
### Pinout

Pin	Description
1	Laser Diode Cathode
2	Case/Laser Diode Anode
3	Not Connected



### Model Number

CP-830-PLR500



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For more information about Ondax products and the name of a local representative or distributor, visit [www.ondax.com](http://www.ondax.com), email [sales@ondax.com](mailto:sales@ondax.com), or call (626) 357-9600. Specifications subject to change without notice. Each purchased laser is provided with test data. Please refer to this data before using the laser.