

# 405nm, 12/25/40mW Wavelength Stabilized Lasers



Single Frequency  
Collimated Output Beam

Ondax's 405nm Wavelength Stabilized Lasers are single mode, collimated single frequency lasers packaged in an ultra-compact, TO-can footprint. The extremely narrow linewidth, broad temperature operating characteristics, and low power consumption 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:

### Specification Summary

Parameter	Symbol	Min	Typ	Max	Unit
Output Power	$P_o$			12/25/40	mW
Center Wavelength (vacuum) <sup>1</sup>	$L_p$	404.5	405	405.5	nm
	$L_p$	405.5	406	406.5	nm
Linewidth (MHz)	$\Delta\lambda$		160		MHz
Central Stabilized Temperature	$T_c$	15	25	35	°C
Stabilized Temperature Range	$T_r$	10	14		°C

## Features:

- Single frequency performance
- Narrow linewidth ~160 MHz
- Wavelength stability across operating range 0.015nm/°C
- Coherence length >1m
- Collimated output beam
- Custom wavelengths available

## Applications:

- Raman Spectroscopy
- Metrology
- Bio-instrumentation
- Confocal Microscopy
- Data Storage
- LIDAR
- Sensing
- Analytical Instrumentation

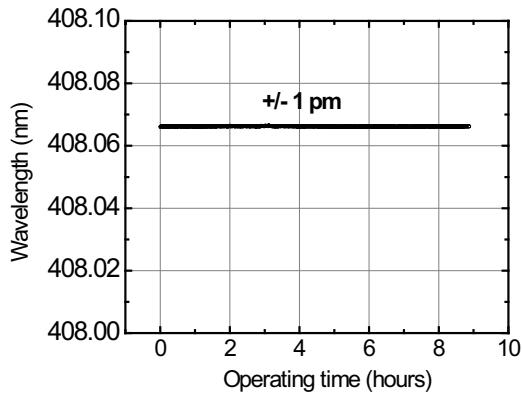
### Operating Specifications

Parameter	Symbol	Min	Typ	Max	Unit
Threshold Current	$I_{th}$		30	35	mA
Operating Current	$I_{op}$		45/55/75	65/75/100	mA
Operating Voltage	$V_{op}$		5.4	6.5	V
Laser Reverse Voltage	$V_{rl}$			2	V
Collimated Beam Size (FWHM)	$Q_v$		0.8 x 0.4		mm
Differential Efficiency	DE (dP/dI)		1		mW/mA
Operating Temperature <sup>2</sup>	$T_{op}$	0	25	60	°C
Storage Temperature <sup>2</sup>	$T_s$	-10		60	°C
Polarization			100:1		
Polarization Orientation			TE		

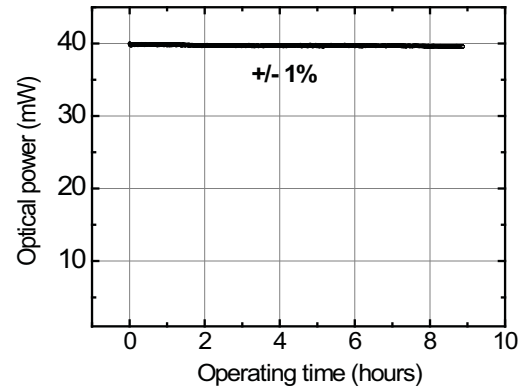
<sup>1</sup>Please specify wavelength at time of ordering <sup>2</sup>Non-condensing All specifications are at rated power with a case temperature of 25°C unless otherwise noted

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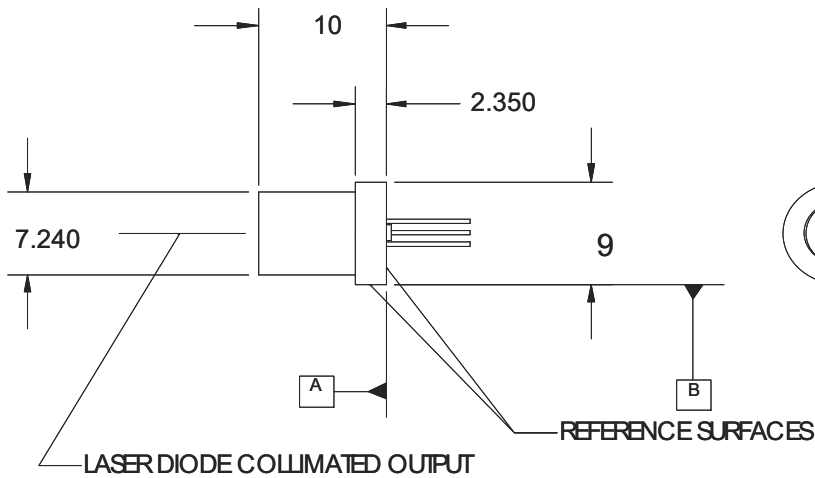
### Wavelength Stability



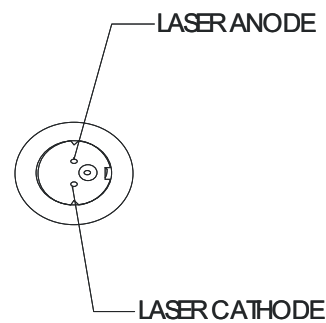
### Optical Power Stability



### Side View



### Bottom View

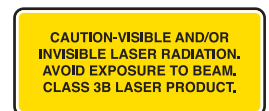
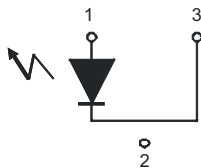


### Pinout

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

### Model Numbers

- CP-40X-PLR12
- CP-40X-PLR25
- CP-40X-PLR40



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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.