

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



Single Frequency
Collimated Output Beam

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

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	Тур	Max	Unit
Output Power	P _o	12/25/40			mW
Center Wavelength (vacuum) ¹	L_p	404	405	406	nm
	Lp	405	406	407	nm
Linewidth (MHz)	Δλ		160		MHz
Central Stabilized Temperature	Tc	15	25	35	°C
Stabilized Temperature Range	Tr	10	14		°C

Operating Specifications

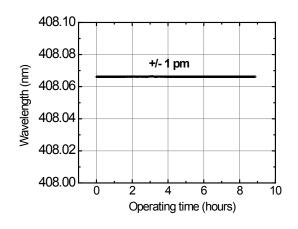
Parameter	Symbol	Min	Тур	Max	Unit
Threshold Current	I_{th}		30	35	mA
Operating Current	lop		45/55/75	65/75/100	mA
Operating Voltage	V_{op}		5.4	6.5	V
Laser Reverse Voltage	V_{rl}			2	V
Collimated Beam Size (FWHM)	Qv		0.8 x 0.4		mm
Differential Efficiency	DE (dP/dI)		1		mW/mA
Operating Temperature ²	Top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

Please specify wavelength at time of ordering 'Non-condensing' All specifications are at rated power with a case temperature of 25°C unless otherwise noted

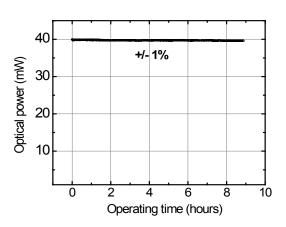
SureLock™

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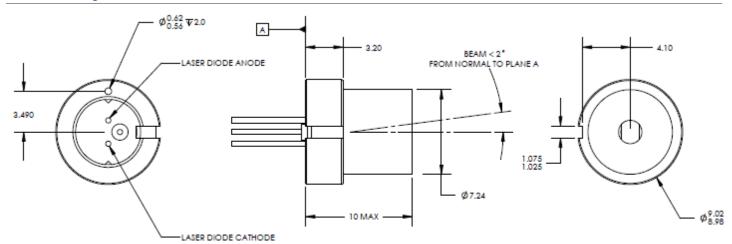
Wavelength Stability



Optical Power Stability



Outline Drawing (mm)

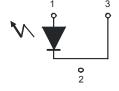


Pinout

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

Model Numbers

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





CAUTION-VISIBLE AND/OR INVISIBLE LASER RADIATION. AVOID EXPOSURE TO BEAM. CLASS 3B LASER PRODUCT.



850 E. Duarte Rd. Monrovia, CA 91016 626-357-9600 (Tel) 626-513-7494 (Sales Fax) For more information about Ondax products and the name of a local representative or distributor, visit www.ondax.com, email 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.

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