

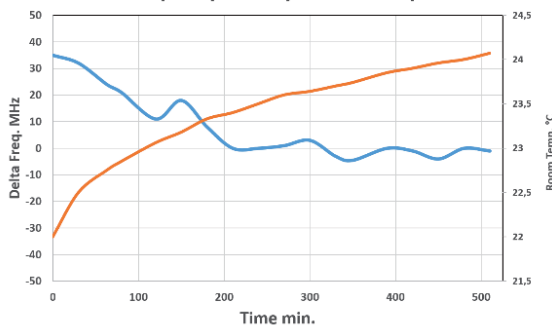


ALS 488 CW Fiber Lasers 0,5W 1W 2W

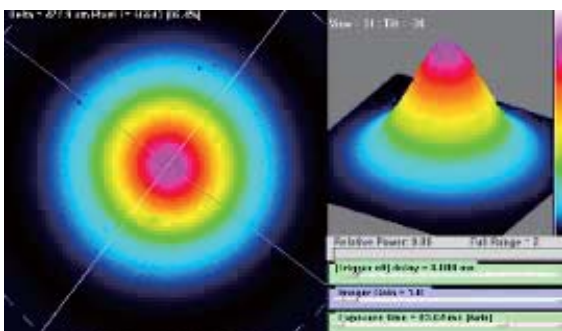
All-fiber based MOPA Technology



Frequency stability vs room temp.



Frequency stability of the ALS-BI laser in MHz over time (frequency in blue, room T°C in red). Industrial holography customers validated our solution as the only one on the market to be able to replace and improve their performances made with Argon lasers regarding the central frequency stability and the pointing stability.

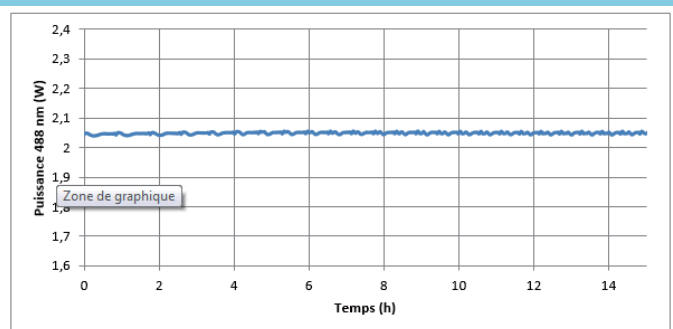


ALS lasers are based on only single mode fibers architecture and so offer an ultra-stable high quality single spatial mode. Typical value: $M^2 < 1.1$

Control - measurement
Ar Laser replacement
Laser Doppler velocimetry
High resolution interferometry
Super Resolution microscopy
Advanced spectroscopy
Holography

key features:

- TEM₀₀ mode
- Long coherence length
- $M^2 < 1.1$
- Single frequency
- Ultra-low noise
- Excellent pointing stability
- Ultra stable power output
- High polarization ratio and stability
- Coolerless laser head
- Compact design
- Maintenance free - long life
- Low power consumption
- OEM versions available
- RoHS Compliant



The graph shows the power stability of the entire range of ALS-BI lasers: short term fluctuations $< \pm 0.2\%$ (limited by detector noise) and long term fluctuations $< \pm 0.3\%$.

SPECIFICATIONS

	488nm Fiber Lasers with internal seeder	Unit
Wavelengths ⁽¹⁾	488 ± 0,25	nm
Output power	0,5 1 1,5 2	W
Output power Tunability	1 to 100 (10 to 100 recommended)	%
Beam quality	M ² < 1.1	-
Beam diameter « free space »	1 ± 0.2 (other upon request)	mm
Beam divergence ½ Ang.	< 0.4	mrاد (@1/e^2)
Spatial mode	TEM00	-
Spectral width		
- single frequency ⁽²⁾	< 200	kHz
- narrow bandwidth	< 50	pm
Power stability	< ± 0.2 (short term) < ± 0.3 (over 8 hours)	% %
Noise [100Hz - 10MHz]:		
- single frequency	< 0.3	
- narrow bandwidth	< 0.5	% rms
Frequency stability ⁽³⁾	< 0.1	pm
Output polarization	Linear > 300:1	-
Pointing stability	< ± 0.5	μrad/°C
Output ⁽⁴⁾	Free space laser head	-
Laser control	Multi-turn potentiometer, Touch screen, Analog voltage	-
Supply requirements	90-240V/50-60Hz	-
Electrical power consumption	200<...<500	W
Cooling	Air cooled	-

(1): Other wavelengths available on request.

(2): With standard internal laser seed

(3): For single frequency version only. Measured over 8 hours and temperature variation < 3°C.

(4): Optional output depending on the laser power: PM980 / HI1060 / LMA / Collimated fiber / Multiple output beam splitting

Dimensions	
Laser Rack	480 x 460 x 130mm
Laser Head	275 x 120 x 50mm



About 1,5 meters cable length between rack and the beam output from the laser head
Coolerless laser head
19" 3U air cooled power unit
Passive or active fibered 1,5m IR beam dumper for output power >1W



Customized optical output option available according to the Fiber Laser power :
beam splitting: 1:3 or more, free space or fibered
Beam shaping
Advanced optical setup

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