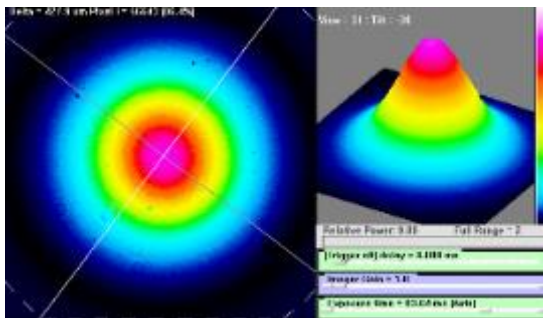




## ALS 515 CW Fiber Lasers 1W 2W 5W 10W

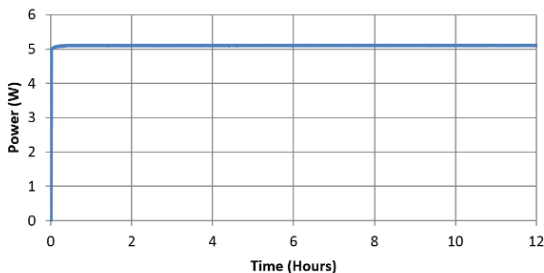
### All-fiber based MOPA Technology



ALS-GR-515 lasers are based on only single mode fibers architecture and so offer an ultra-stable high quality single spatial mode.

Typical value:  $M^2 < 1.1$

### Long term stability



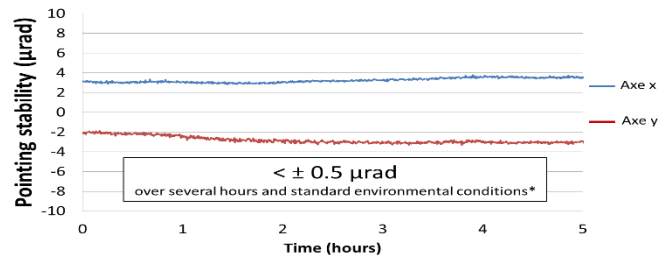
The graph below shows the power stability of the entire range of ALS-GR-515 lasers: short term fluctuations  $< \pm 0.2\%$  (limited by detector noise) and long term fluctuations  $< \pm 0.3\%$ .

- High power Oscillator
- Pulsed laser pumping
- Ar Laser replacement
- Laser Doppler velocimetry
- High resolution interferometry
- Super Resolution microscopy
- Holography

### key features :

- TEM<sub>00</sub> 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

### Pointing stability



\*: variations of  $T^{\circ}C < 3^{\circ}C$

The graph below shows the stability of pointing of a standard ALS-GR-515 lasers. Customers from industry validated our solution as the only one on the market to be able to replace and improve their performances performed with Argon lasers regarding the central frequency stability and the pointing stability.

# SPECIFICATIONS

515nm Fiber Lasers with internal seeder		Unit
Wavelengths <sup>(1)</sup>	515 ±0,25	nm
Output power	1      2             5      10	W
Output power Tunability	1 to 100 (10 to 100 recommended)	%
Beam quality	M <sup>2</sup> < 1.1	-
Beam diameter « free space »	1 ±0,,2 (other upon request)	mm
Beam divergence ½ Ang.	< 0.4	mrad (@1/e <sup>2</sup> )
Spatial mode	TEM <sub>00</sub>	-
Spectral width - single frequency <sup>(2)</sup>	< 200	kHz
Power stability	< ± 0.3 (short term) < ± 0.5 (over 8 hours)	%
Noise [100Hz - 10MHz]: - single frequency	< 0.05	% rms
Frequency stability <sup>(3)</sup>	< 0.1	pm
Output polarization	Linear > 300:1	-
Pointing stability	< ± 0.5	μrad/°C
Output <sup>(4)</sup>	Free space laser head	-
Laser control	Multi-turn potentiometer, Touch screen, Analog voltage	-
Supply requirements	90-240V/50-60Hz	-
Electrical power consumption	200<...<300	W
Cooling	Air cooled	-

(1): Other wavelengths available on request.

(2): With standard internal laser seed, linewidth reduction down to 12kHz available as an option with an external seeder rack.

(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

**Options:** external ALS seeder (FC/APC) or external tunable ( thermal & piezo) seeder (FC/APC)

Dimensions	
Laser Rack	480 x 460 x 130mm
Laser Heads	<5W: 275 x 120 x 50mm or 5+W: 325 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

Azur Light Systems

[www.azurlight-systems.com](http://www.azurlight-systems.com)