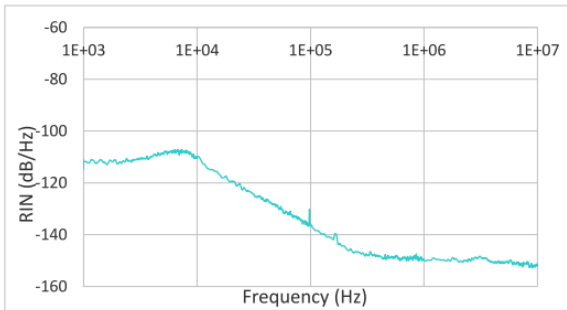


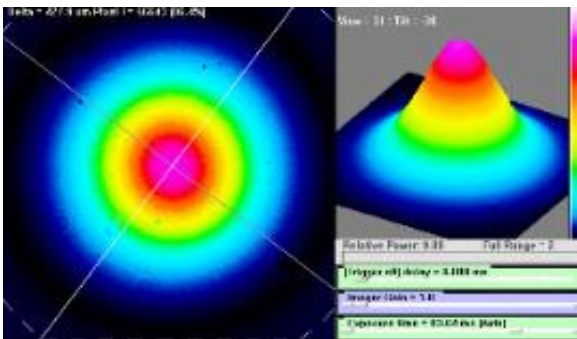


ALS IR 1040 CW optical Fiber Amps 10W 20W 50W

All-fiber based MOPA Technology



Below is a typical RIN data of an ALS IR fiber amp with external ALS laser seed <50kHz (typical 25 kHz) set in constant power mode. The ALS amplifiers are compatible with single wavelength laser from <1kHz to >200kHz without broadening effect. RIN profile are seeder dependent.

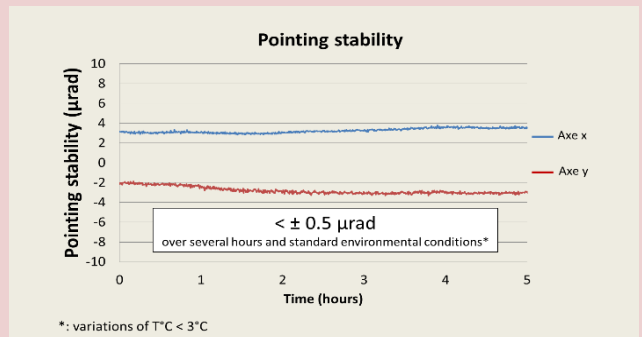


ALS lasers are based on only single mode fibers architecture and so offer an ultra-stable high quality single spatial mode. Typical value: $M^2 < 1.1$ (typ. 1,05)

- Quantum Physics
- Atom cooling
- Atom Trapping
- BEC
- Nonlinear frequency conversion
- Control - measurement
- High power Laser pumping

key features

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



The graph below shows the stability of pointing of a standard ALS-IR laser. With its all fiber integrated architecture and its cooler-less head, the ALS-IR lasers offer the best pointing stability on the market.

SPECIFICATIONS

		Unit
Wavelengths range ⁽¹⁾	1040 ± 4	nm
Output power	10W, 20W, 50W*	W
Seeder Input	FC/APC	-
Seeder Input power ⁽²⁾	From 15 to 100 (optional 1 to 50)	mW
Output power Tunability	1 to 100 (10 to 100 recommended)	%
Beam quality	M2 < 1.1	-
Beam diameter « free space »	1 ± 0,1 (other upon request)	mm
Beam divergence ½ ang.	< 0.8	mrاد (@1/e ²)
Spatial mode	TEM00	-
Spectral width - single frequency	From 1 to >200	kHz
Power stability	< ± 0.2 (short term) in constant power mode < ± 0.3 (over 8 hours) in constant power mode < ± 2 (over 8 hours) in constant current mode	% % %
Noise [100Hz - 10MHz]: - single frequency	Seeder dependent	% rms
Frequency stability ⁽³⁾	Seeder dependent	pm
Output polarisation	Vertically polarized > 200:1	-
Pointing stability	< ± 0.5	µrad/°C
Standard 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<...<300	W
Cooling	Air cooled Rack, coolerless Head	-

* >45W after the high power isolator located in the laser head

(1): Other wavelengths available on request.

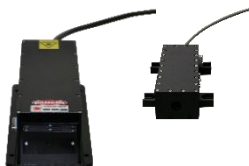
(2): Typically 15 mW to maximum 100mW. Input coupling efficiency monitoring with analog voltage on BNC output connector. Version available for higher seeder power.

(3): Measured over 8 hours and temperature variation < 3°C.

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

Dimensions

Laser Rack	480 x 460 x 130mm
Laser Heads	>10W 330 x 116 x 80mm or up to 10W 150 x 95 x 40mm



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



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

Contact and enquiries