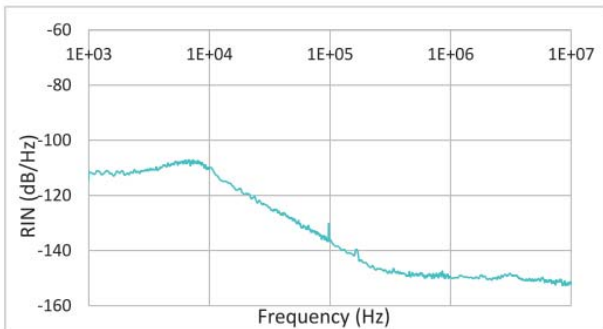


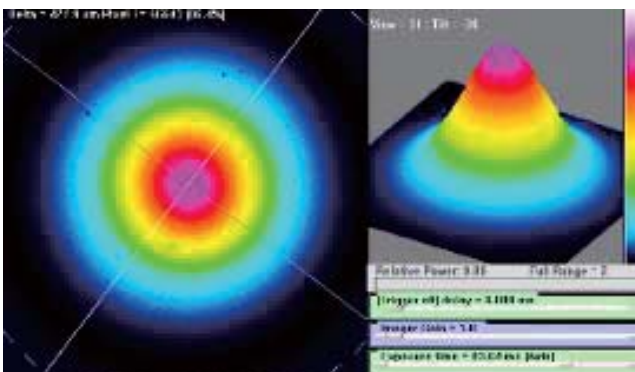


ALS 1030 CW Fiber Lasers 10W 20W 50W

All-fiber based MOPA Technology



Below is a typical RIN data of an ALS IR fiber laser with internal laser seed <50kHz (typical 25 kHz). This spectrum is representative of the RIN level of the entire ALS IR range of lasers set up in constant power mode.

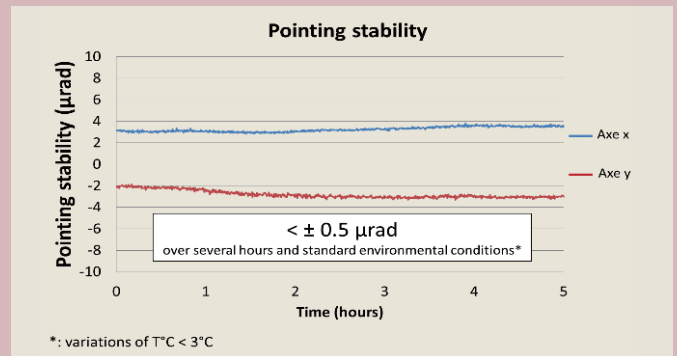


ALS lasers are based on only single mode fibers architecture and so offer an ultra-stable high quality single spatial mode. Typical value: $M^2 < 1.1$

- High power Laser pumping
- Nonlinear frequency conversion
- Control - measurement
- Quantum Physics
- Atom trapping
- Atom cooling
- Bose-Einstein Condensate
- Optical Tweezers

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 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

| 1030 High Power Fiber Lasers with internal seeder | | Unit |
|---|--|---------------------------|
| Wavelengths ⁽¹⁾ | 1030± 0,5 | nm |
| Output power | 10W, 20W, 50W* | W |
| 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 | mrad (@1/e ²) |
| Spatial mode | TEM00 | - |
| Spectral width - single frequency ⁽²⁾ | < 50 | kHz |
| Power stability | < ± 0.3 (short term) < ± 0.5 (over 8 hours) | % % |
| Noise [100Hz - 10MHz]: - single frequency | < 0.05 | % rms |
| Frequency stability ⁽³⁾ | < 0.1 | pm |
| Output polarisation | Vertically polarized > 200:1 | - |
| 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<...<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 <30 kHz for single frequency version, linewidth reduction down to 3kHz available as an option with an external seeder rack.

(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

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

| 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

PNEUM Co., Ltd.

5-15-3 Minamikoshigaya, Koshigaya-shi,
Saitama-ken, 343-0845, Japan

TEL: 81-48-985-2720

FAX: 81-48-985-2721

info@pneum.co.jp 1709

Contact and enquiries

www.azurlight-systems.com