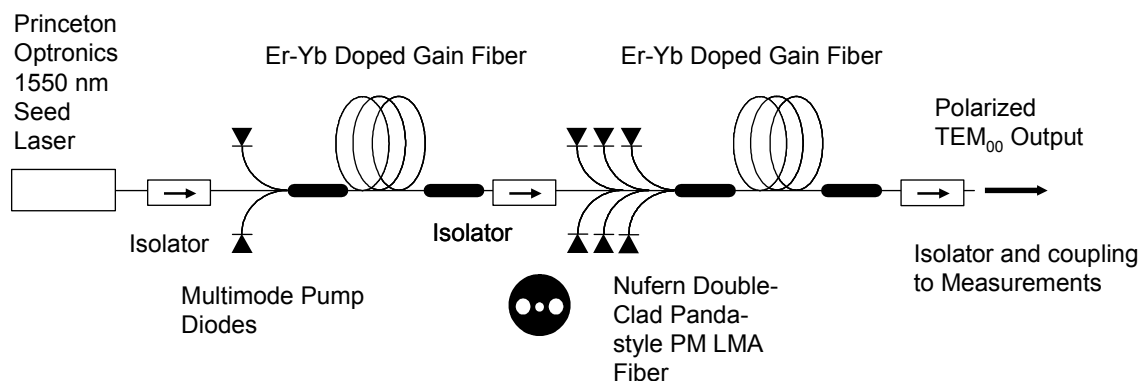


## 10W High Power Low Noise Laser – 1550nm

### Key Features

- Output power 10W
- Seed laser with 2 stage fiber amplifier
- Frequency modulation 5-10GHz with 1-10kHz modulation speed.
- Center wavelength in range 1530-1565 nm
- Low Frequency RIN peak eliminated with patented technology
- Noise @ 100kHz - 100MHz : <-130dBc/Hz, @ >100MHz : <-160dBc/Hz
- Narrow linewidth: <2kHz
- Good Wavelength stability (+/- 1GHz); with additional Princeton Optronics ultra stable wave locker, stability is +/- 125KHz over 8 hrs.



Schematic of the laser

### Applications

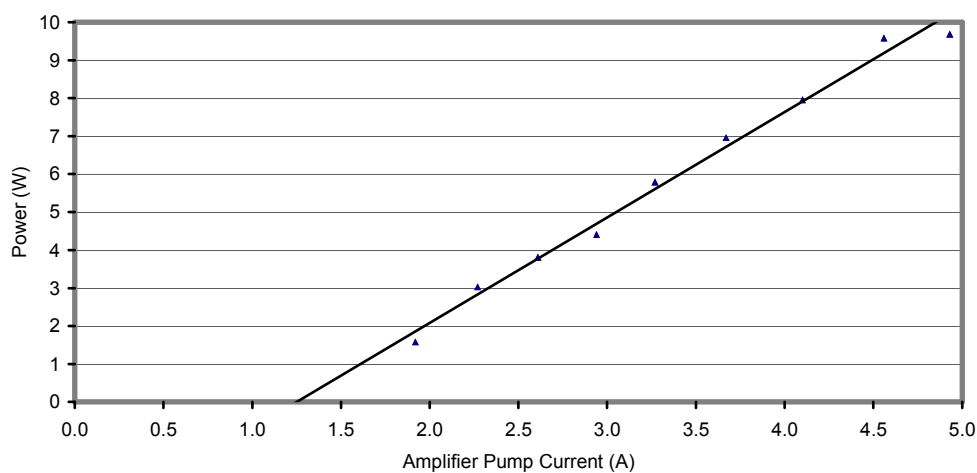
- LIDAR
- RF Links
- Sensing
- Coherent Communication
- Test & Measurement

## Product Specifications

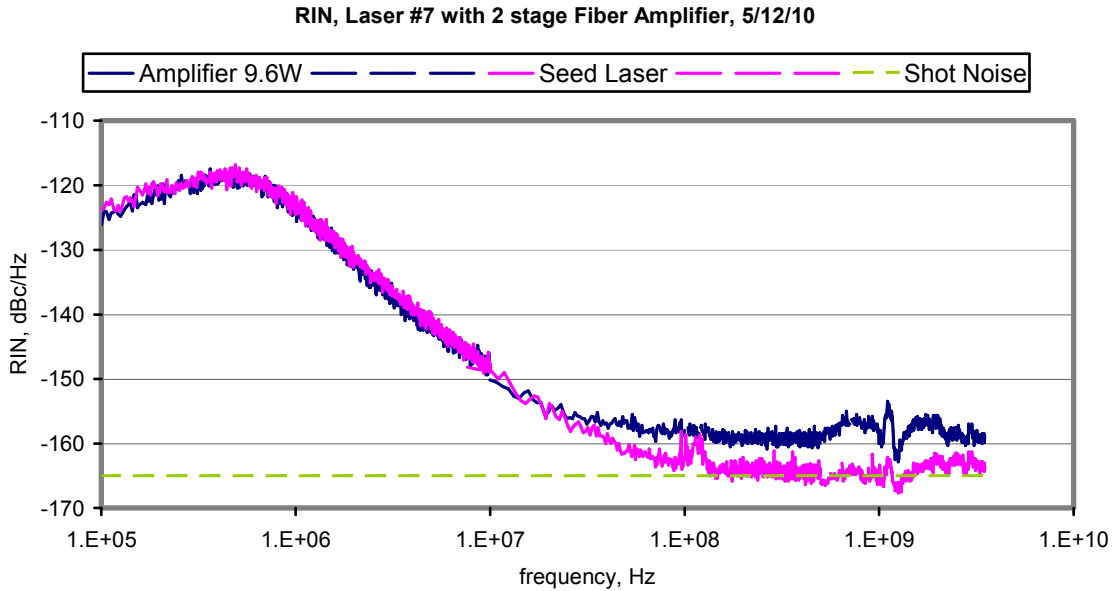
Temperature: 25°C

Parameter	Value
Wavelength range	1530 – 1560nm
Output Power	10W
Wavelength Stability	+/- 0.5GHz
Wavelength Accuracy	50MHz
Tuning Range (Piezo)	20GHz
RIN (100KHz to 100MHz)	< -130dB/Hz
RIN (>100MHz)	< -160dB/Hz
Line width	< 2kHz
Frequency Noise	<100Hz/rt·Hz 10 – 1kHz <10Hz/rt·Hz >1kHz
Frequency modulation	+/- 5GHz at a speed of 1-10kHz.
Side Mode Suppression Ratio (SMSR)	> 70dB
Power Stability	+/- 0.25dB
Connectors	FC/APC
Fiber pigtail	PM fiber, 1m long

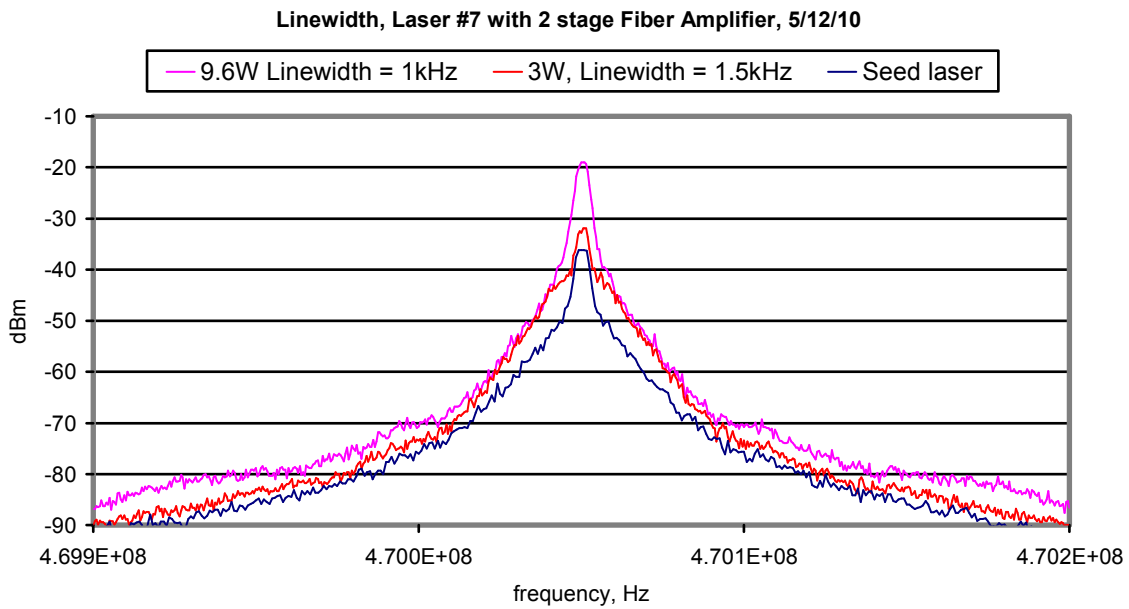
Output Power from Two Stage Fiber Amplifier with 9 mW Seed Power



L-I Plot for the laser

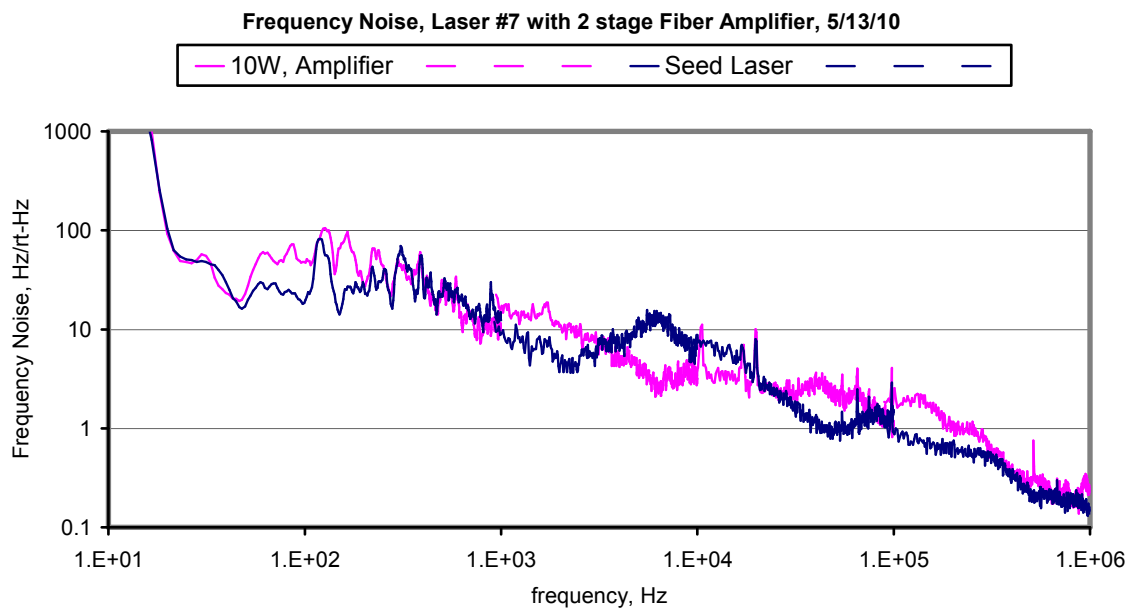


**RIN Plot for the laser and the seed laser**

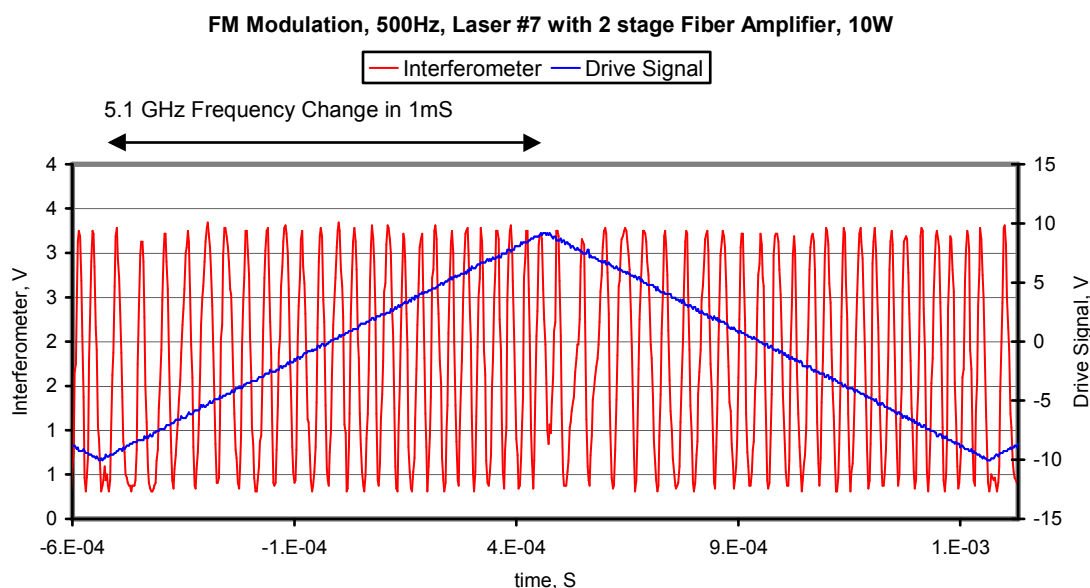


**Linewidth measurement data for the laser at 3W and 9.6W output.**





**Frequency noise measurement plot**



**Frequency Modulation Measurement Plot**

**Notes.**

1. Laser polarization aligned to slow axis of the fiber.
2. Performance dependent on the module electronics
3. Wavelength stability at constant temperature after acquisition.

**Fiber Type:** Fujikura Panda PMF with 900 micron Hytel jacket

**Fiber Length:** 1.0 – 1.1 m; **Termination:** FC/APC (angled) connector



株式会社 エム スクエア <http://www.mxmco.com> [info@mxmco.com](mailto:info@mxmco.com)

〒101-0051 東京都千代田区神田神保町1-34-2F TEL(03)3294-0560 FAX(03)3294-0563

〒815-0041 福岡市南区野間1-10-18 TEL(092)554-6800 FAX(092)554-6802