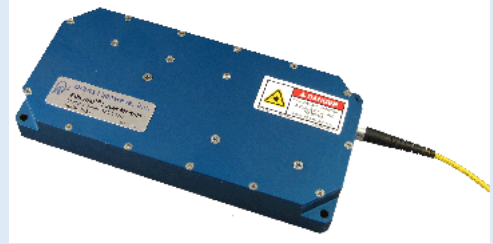




# 低噪声单频光纤激光器

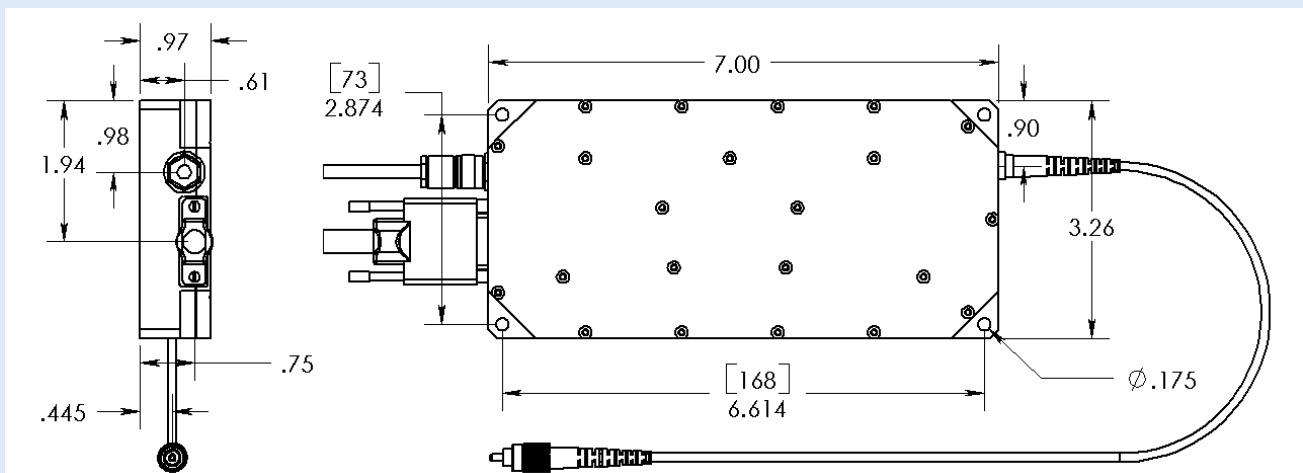
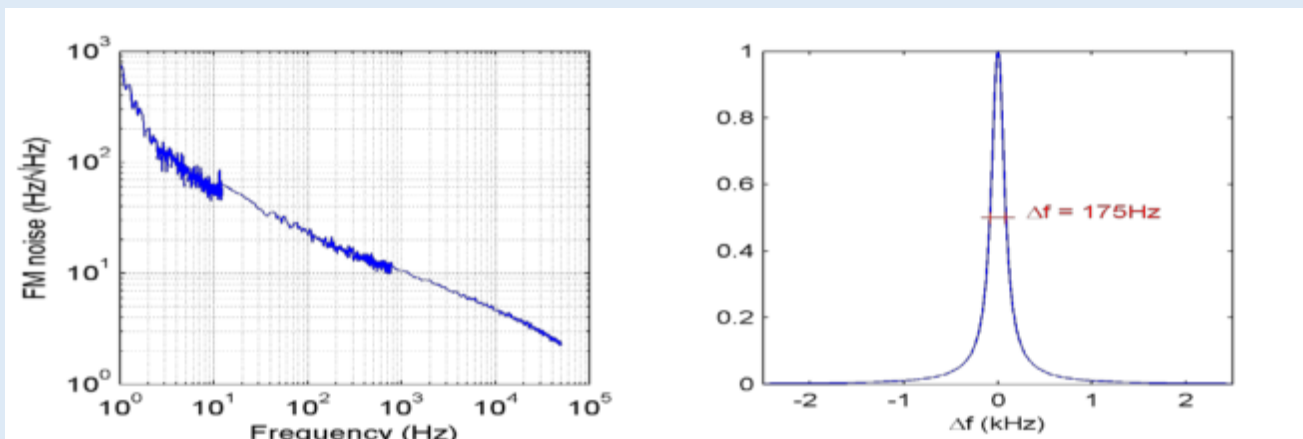


## Features:

- Compact all-fiber “virtual-Ring” SlowLight™ architecture
- Robust StableLase™ packaging
- > 350mW pure oscillators
- > 50W with amplification
- < 1Hz Lorentzian linewidth
- < 200 Hz linewidth over 1ms
- < 0.25 MHz/°C frequency stability
- > 80dB Optical Signal to Noise Ratio
- > 75dB Side-mode Suppression Ratio
- < -175dBc/Hz Shot noise limited RIN

## Applications:

- Acoustic sensing, marine and perimeter security
- LIDAR
- Injection seed lasers
- Coherent Communications
- RF and microwave photonics
- Spectroscopy, gas absorption testing
- Pipeline monitoring, leak detection
- Oil and gas exploration systems
- Metrology
- Space Communications





### Laser Specifications:

|   |  |                |
|---|--|----------------|
| Wavelength selectable range (nm)  | 1530 to 1565   | 1047 to 1080   |
| Optional Fast <sup>1</sup> PZT tuning range (GHz)   | 1,10   | 1, 10, 20      |
| Optional Temperature tuning (GHz)   | 0, 20, 60  | 0, 20, 80, 160 |
| Absolute wavelength accuracy (nm)   | ± 0.05, ± 0.02   | ± 0.05, ± 0.02 |
| Output power (mW) (pure oscillator) <sup>2</sup>  | 10, 20, 40, 80, 100, 120, 180  |                |
| Power stability (%RMS)  | ± 0.1  |                |
| Beam Quality  | M <sup>2</sup> < 1.05  |                |
| OSNR (dBc) (50pm RBW)   | > 80   |                |
| SMSR (dBc) (3MHz RBW)   | > 75   |                |
| RIN (dBc/Hz)  | -138@ 1kHz, -120@1MHz, -148@10MHz<br>(SL130) 3 : -130@1MHz, -160@10MHz |                |
| RIN (dBc/Hz) (@100MHz)  | <-165, (- 175 @100mW)  |                |
| White Noise (Lorentzian Linewidth) (Hz)   | <10 , 1 <sup>3</sup>   |                |
| Linewidth over 1ms measurement time (Hz)  | < 200  | < 1000         |
| Frequency noise (Hz/ √ Hz) <sup>4</sup>   | < 30 @ .1kHz, 20 @1kHz, 1 @100kHz                                      |                |
| Frequency stability (MHz/°C)  | ± 10, ± 0.25 <sup>5</sup>  |                |
| Polarization extinction ratio (dB)  | > 23   |                |
| Fiber pigtail (PM FC/APC as standard w)   | 1m Panda PM  |                |
| Operating temp (°C)   | 10 to 55   |                |
| Power consumption (W) (10-180mW Output Power)   | 5 to 30  |                |
| 1. >10kHz modulation bandwidth, >100kHz current modulation option available (-I)  |  |                |
| 2. 350mw pure oscillator available in instrument chassis (optional 0.5-50W MOPA available)                                |  |                |
| 3. With –SL130 slow light option and 40mW output power  |  |                |
| 4. 1.06 micron laser have typically 3 dB higher FM noise, low frequency FM noise power maybe increase for >80mw by 1 -2dB |  |                |
| 5. After initial warm-up at room temperature ±1°C with –T option  |  |                |

**Ordering Information:**

**ETH - 40 - 1550.12 - 2 - PZ10B - SL130 - TT - PM**

|   |  |
|---|--|
| <b>Product Name:</b> <input type="checkbox"/> ETH                                   | <b>Optional O/P Fiber Type:</b><br>PM, SMF           |
| <b>Power (mW):</b> <input type="checkbox"/> 10, 20, 40, 80, 100, 120, 180           | <b>Optional Freq Tuning</b><br>TT                    |
| <b>Wavelength (nm):</b> <input type="checkbox"/> 1530 - 1565 • 1047 - 1080 (In Vac) | <b>Optional Low RIN</b><br>SL130                     |
| <b>Abs. wavelength Accuracy:</b> <input type="checkbox"/> 5 (±0.05nm), 2 (±0.02nm)  | <b>Optional PZT Range (GHz)</b><br>PZ1, PZ10B, PZ20B |