



Tm-Doped Single-Pass SHG Narrow Linewidth Laser

Based on high-power, low-noise Tm-doped fiber lasers amplifier and frequency doubling technology, Precilasers can provide high-power, narrow linewidth laser output from 880 to 1012 nm.

Features

- Narrow Linewidth
- Low RIN
- High Power
- Power Stability: $<0.75\%$ rms, 3hrs
- Excellent Beam Quality ($M^2 < 1.1$)
- Mode-Hopping Free
- High Temperature And Vibration Resistance

Applications

- Laser Cooling, Trapping, Optical Lattice
- Biomedical
- Solar Cell Processing



| Specification | | | |
|--------------------------------------|---|--------------|------------------|
| Partnumber | FL-SF-XXXX-YY-CW ⁽¹⁾ | | |
| Wavelength Range | 880-920nm | 920-950nm | 951-1012nm |
| Typical Wavelength | 886nm,895nm | 935nm | 975nm |
| Seed Laser Type | Fiber DFB Seed Laser (1760-2024nm) | | |
| Output Power | > 0.1W/1W/2W/3W | > 0.2W/2W/5W | > 0.2W/2W/5W/10W |
| Thermal Tuning Range | > 0.5nm, Never Mode-hop | | |
| Output Mode | PM Fiber Output, FC/APC (Output Power $\leq 2W$) OR Free Space Output (Compatible with all versions) | | |
| Beam Diameter ⁽²⁾ | 0.7-1.0mm | | |
| Power Tuning Range | 5-100% | | |
| Beam Pointing Stability | < 10 μ rad | | |
| Linewidth ⁽³⁾ (100us) | < 20kHz | | |
| PER | linear, > 20dB | | |
| Power Stability | < 0.75%@3hours, RMS | | |
| Beam Quality | TEM ₀₀ , M ² < 1.1 | | |
| Fast Frequency Tuning Range | > 3GHz | | |
| Fast Frequency Tuning Bandwidth | > 5kHz | | |
| AOM Tuning Range (Optional) | > ± 5 MHz | | |
| AOM Tuning Bandwidth (Optional) | > 500kHz | | |
| RIN | < 0.08% (RMS,10Hz-100MHz) | | |
| Cooling | Air Cooling/Water Cooling | | |
| Operating Environment & Power Supply | | | |
| Temperature | 15-30 °C (Air Cooling) or 15-35 °C (Water Cooling) | | |
| Power Supply | 100V-240V, AC, 50/60Hz | | |
| Communication | RS422 | | |

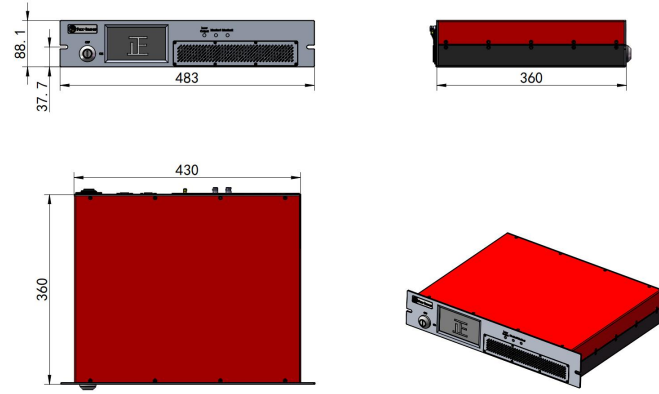
(1)XXXX is the laser center wavelength, YY is the laser power, for a 0.1W 886nm laser,the partnumberis FL-SF-886-0.1-CW

(2)If the laser output power $\leq 2W$, the PM fiber output version can be choosed

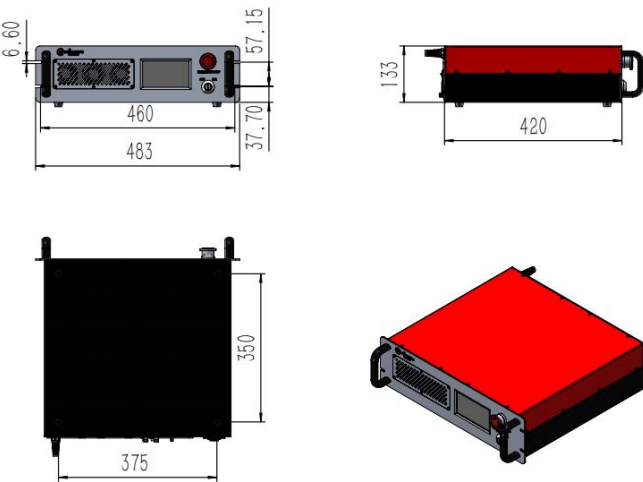
(3)Beam diameter is only applicable to free space output mode, For PM fiber output mode, the fiber without collimator

(4)Measured by self-hetrodyne method

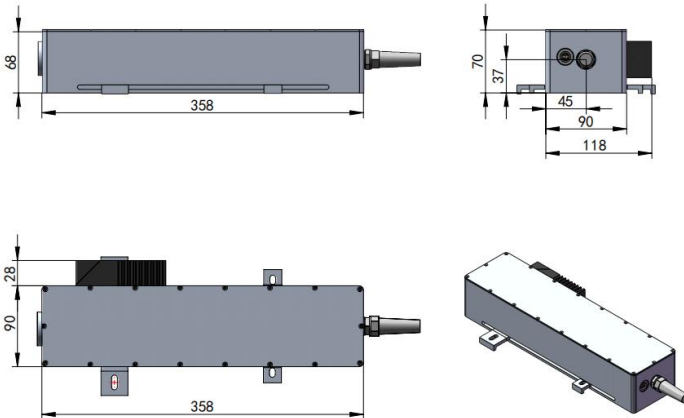
Tm-Doped Fiber DFB Seed Laser (Air Cooling)



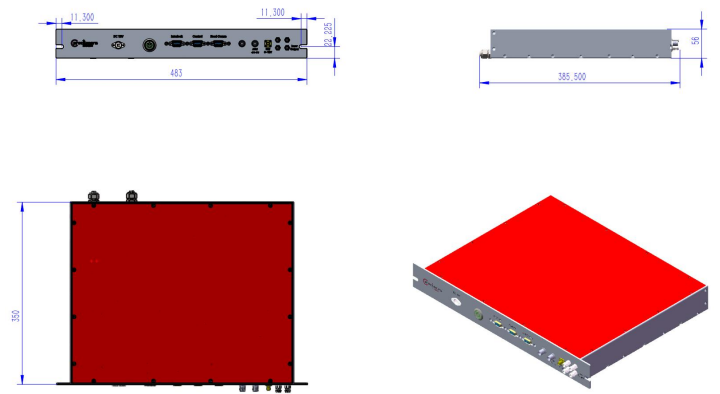
Air Cooling Control Unit Dimension



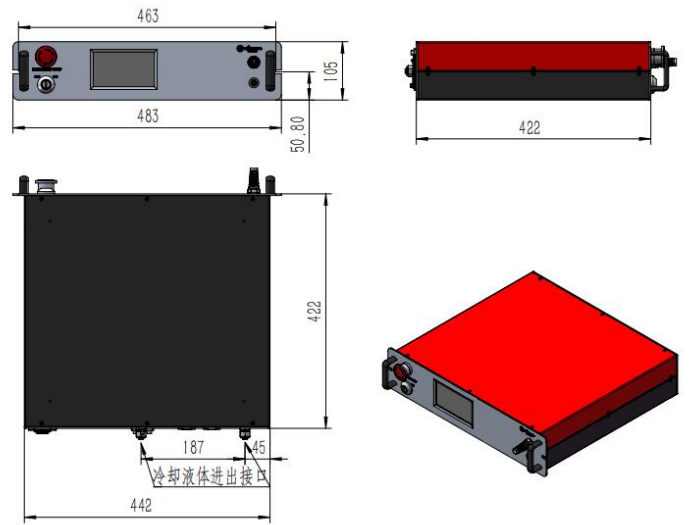
**Laser Head Output Dimension
(Output Power < 5W)**



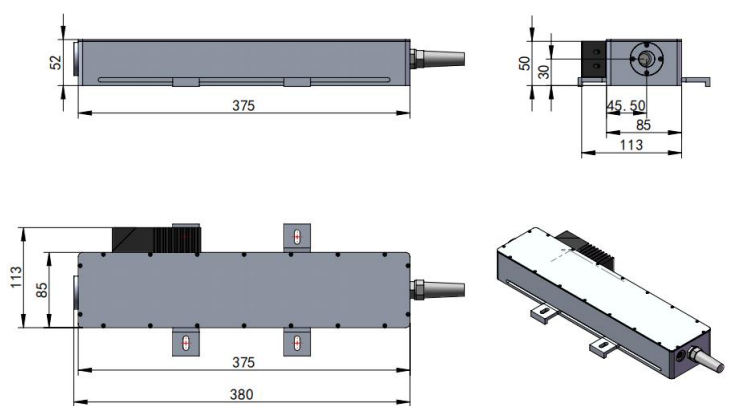
Tm-Doped Fiber DFB Seed Laser (Water Cooling)



Water Cooling Control Unit Dimension



**Laser Head Output Dimension
(Output Power ≥ 5W)**



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