# HIGH POWER SINGLE FREQUENCY 1064 NM FIBER LASER

Continuous，High Power，Ultra Low Rin，Narrow Linewidth,Tunable

PreciLasers offers a high-power (up to 130 W), low intensity noise, narrow linewidth highly-reliable fiber laser for the optical lattice application. It is a combination of an all-fiber Ytterbium amplifier and an ultra-narrow linewidth ECDL laser at 1064 nm . The intensity noise of the laser is < -140 dBc/Hz from 10 kHz to 10 MHz. The full protection system of the laser ensures long-term free of maintainence and long life time. The laser occupies only a The laser is compact and robust, which only occupies an area of 300*240 $mm^2$.

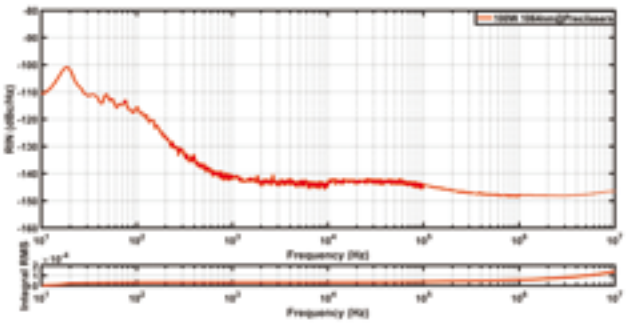
## Key Features:

- Low Intensity Noise(-140 dBc/Hz @100 kHz)
- Narrow Linewidth(<10 kHz)
- Good Beam quality ($M^2$ <1.2)
- High Power (up to 130 W)
- Operation in harsh conditions
- Compact Size

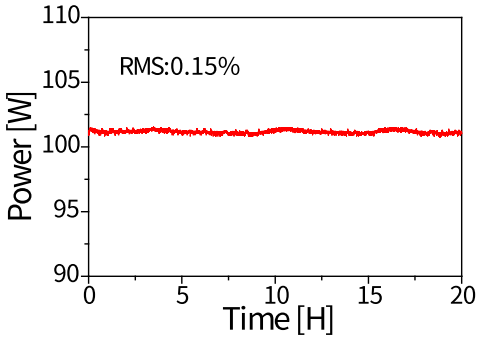
## Applications:

- Pump laser for OPO
- Optical Lattice
- Optical Traps
- Optical Tweezers
- Fundamental laser for 532 nm laser
- Holography & Interferometry
- High Resolution Spectroscopy

**Product: YFA-SF-1064-100-CW**



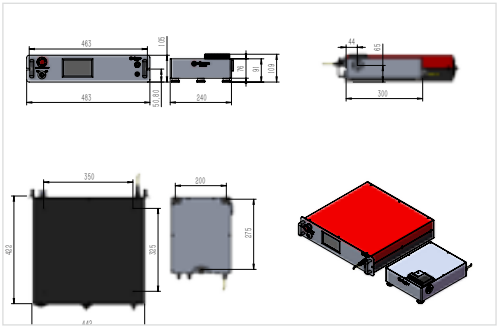
Intensity noise test of 100W single-frequency polarization fiber laser at 1064 nm



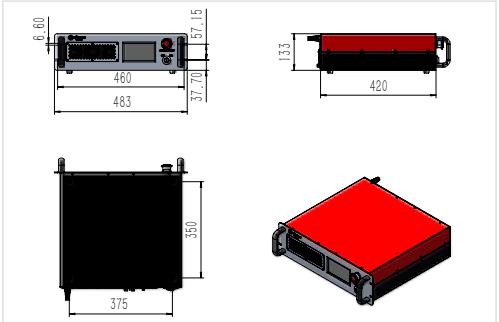

Power stability test of 100W single-frequency polarization fiber laser at 1064 nm

| Model | YFA-SF-XX-YY-ZZ[1] | | | | |
|---|---|---|---|---|---|
| Central Wavelength , nm | 1064±10 | | | | |
| Output Power , W | 10 | 30 | 50 | 100 | 130 |
| Seed Laser Power , mW | >10 | | | | |
| Linewidth FWHM , kHz | Down to 5 kHz(With Precilaser' DL-SF-1XXX-S) | | | | |
| Operation Mode | CW | | | | |
| RIN , dBc/Hz | RMS integration: <0.03% (10Hz-10 MHz) | | | | |
| Beam Quality | $TEM_{00}$, $M^2$<1.15 | | | | |
| PER , dB | >23 | | | | |
| RMS Power Stability | <0.5 %@3hrs | | | | |
| Output | Collimated Fiber output | | | | |
| Cooling | Air Cooling | | | Water Cooling | |
| Power Supply | 50-60Hz , 100-240VAC | | | | |

1: XX: Central Wavelength；YY: Output Power；ZZ: Operation Mode；



Size for Water-Cooling Version



Size for Air-cooling Version