

1064nm ultra-stable picosecond fiber laser



● Product Description

The 1064 nm ultra-stable picosecond fiber laser developed by Idealphotonics is an excellent seed source solution for industrial ultrafast laser processing applications. The laser has the typical advantages of traditional fiber lasers, namely small size (outer dimensions: 235 × 120 × 40 mm), no need for thermal management, and high output beam quality (single-mode output). The spectral center wavelength of the output pulse of this ultrafast laser is 1064 nm, the repetition frequency is optional at 20-30 MHz, the pulse width can be less than 10 ps, and the spectral width is <0.5 nm, and the Max. pulse energy is 3 nJ. Due to the use of special nonlinear



technology to achieve the equivalent saturable absorber effect, the output pulse not only has high long-term stability, but also can withstand high and low temperature working environments of 0-45°.

● Product features

Customizable wavelength、 High peak power、 Linear polarization、 High diffraction-limited beam quality 、 Stability, high and low temperature resistance, no need for thermal management

● Part Number

MP-PLS-PS-1064-15-30

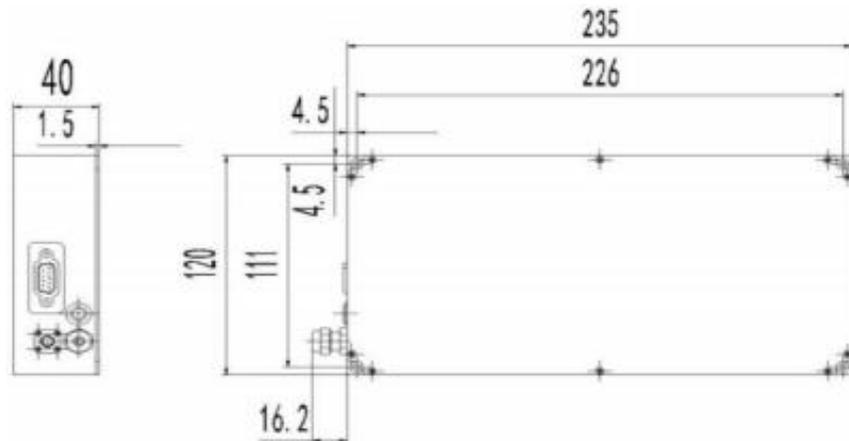
● Application area

Terahertz generation、 Two-photon polymerization、 Two-photon imaging、 Precision measurement

● Core parameters

Wavelength	Pulse Width	Repetition Rate
1064nm	15ps	20-30MHz

● Dimension Drawing



● General Parameters

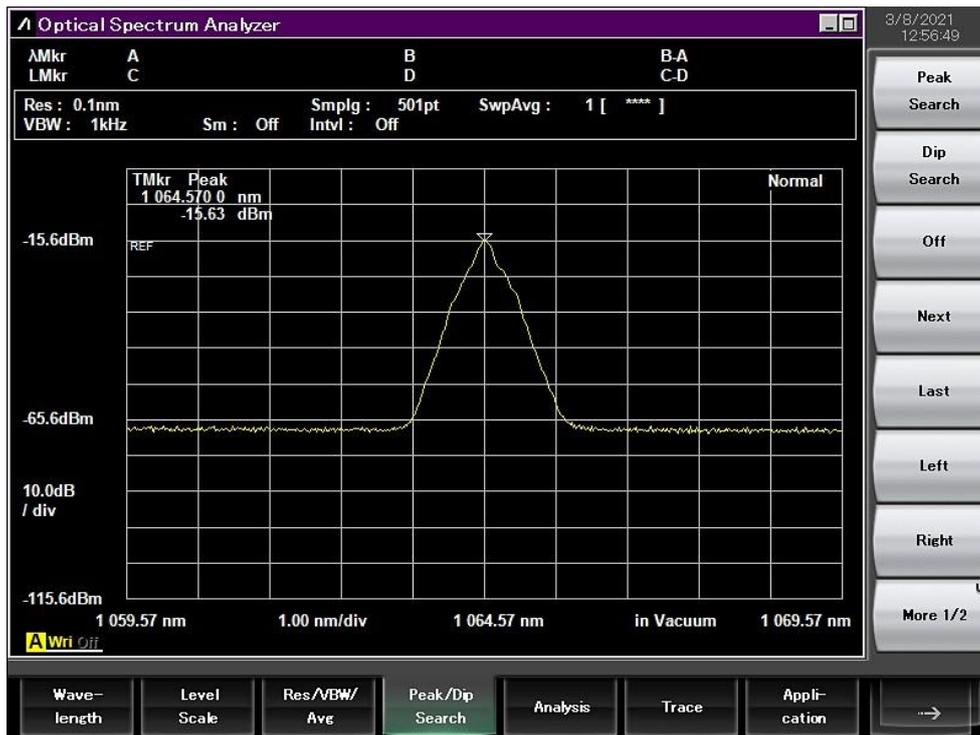
Parameter

PN#	MP-PLS-PS-1064-8-PA	MP-PLS-PS-1064-12-PA
Central wavelength	1064nm	1064nm
Pulse width	~8ps	~12ps
Pulse energy	0.3-3nJ	0.3-3nJ
Spectral width	<0.5nm	<0.5nm
Repetition rate	20-30MHz	20-30MHz
Beam quality	$M^2 < 1.1$, TEM ₀₀	$M^2 < 1.1$, TEM ₀₀
Polarization	Linear polarization, > 100:1	Linear polarization, > 100:1
Power stability	<1% RMS@15h	<1% RMS@15h

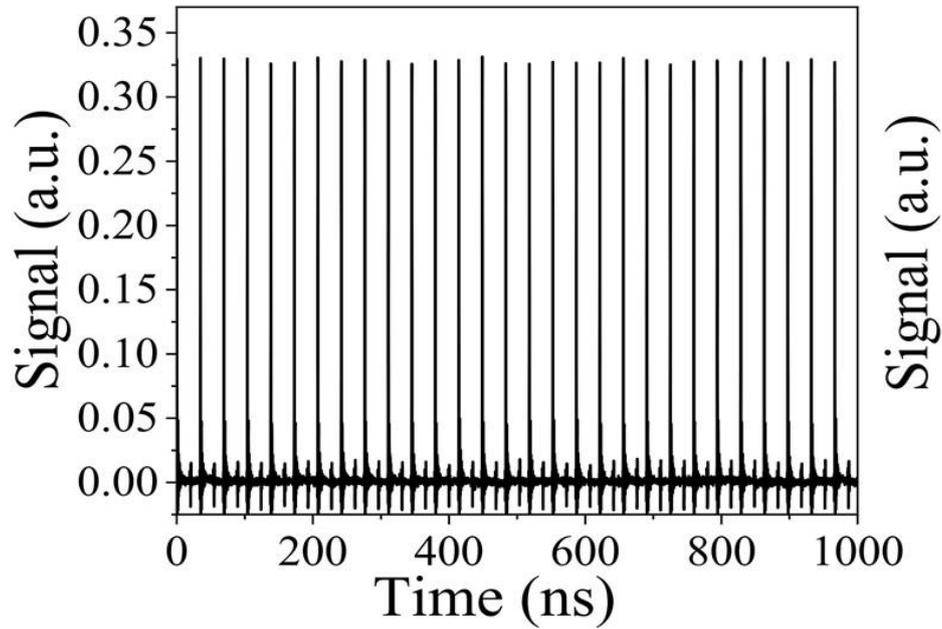


Pulse start time	<5s	<5s
Power consumption	5W	5W
Operating temperature	0-45°C	0-45°C
Dimensions	235 × 120 × 40mm³	235 × 120 × 40mm³
Weight	1kg	1kg

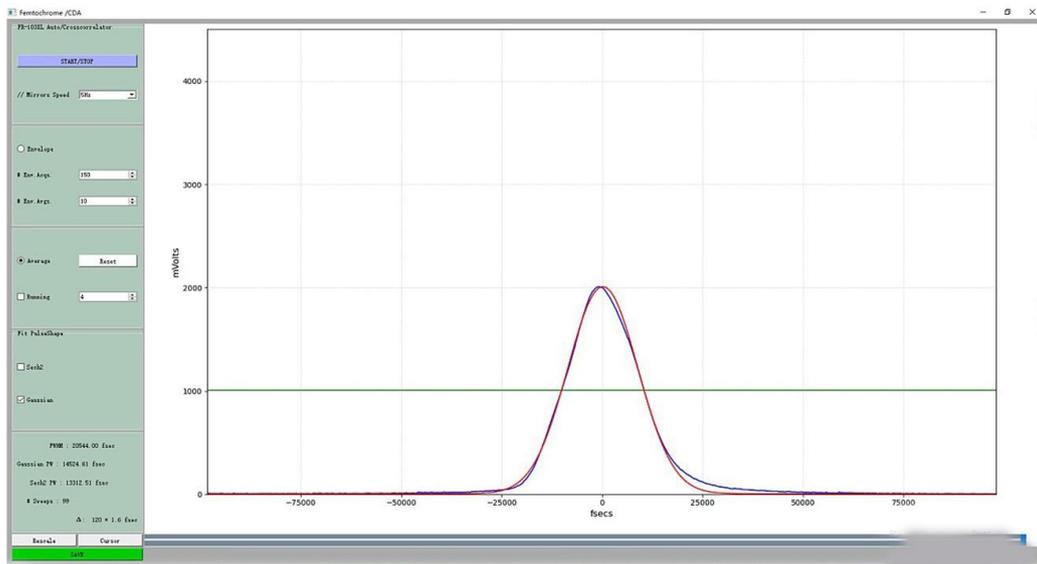
Spectrum



Typical output pulse timing sequence

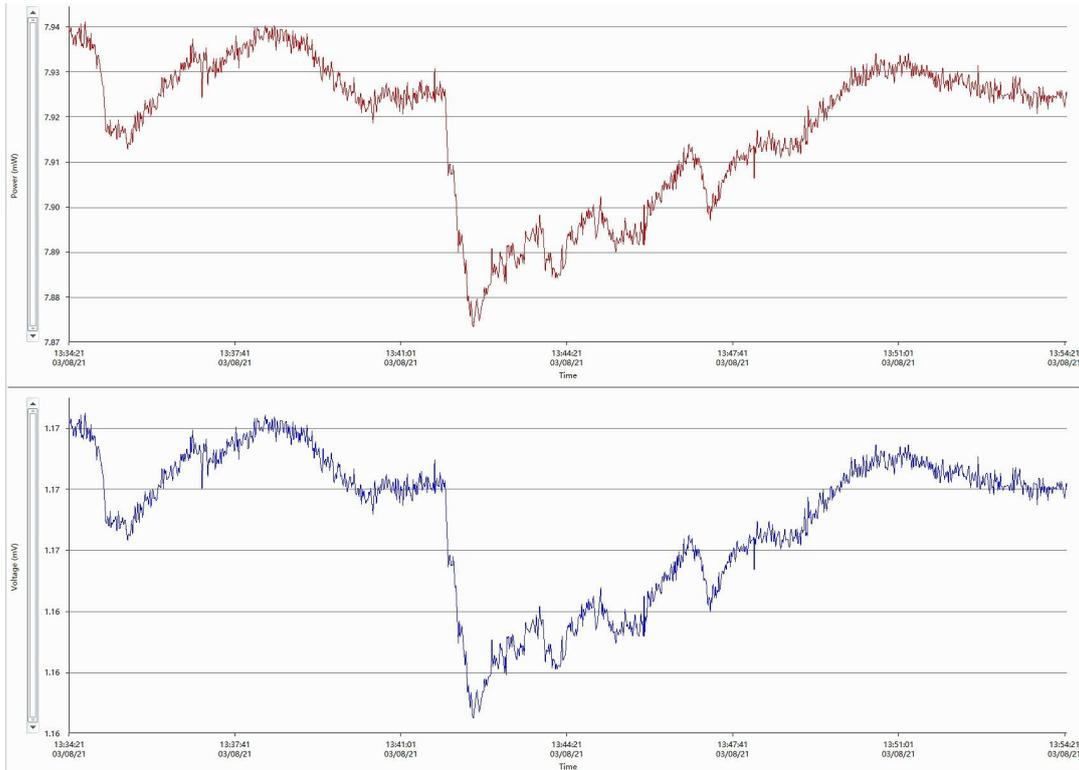


Pulse width Autocorrelation test





Power stability



Ordering Information

MP-PLS-PS-□□□□-P△-C▽

□□□□: Average Power

10:10mw

P△: Pulse Width

10:10ps

100:100ps

1000-1ns

C▽: Pigtail and Connector

SA=HI1060+FC/APC

PP=PM980+FC/PC

MP-PLS-PS-10-10-PA Name: 1064nm picosecond ultrafast laser

Description:

**Center wavelength: 1064nm, average power: 10mw, single pulse energy: 1nJ,
pulse width:<15ps, PM980 pigtail, FC/APC connector, repetition rate: 25MHZ**

Testing and usage requirements

1. Heat dissipation requirements

This light source consumes a lot of power and must be well cooled, otherwise the light source cannot work well, affecting the stability of the equipment or causing damage.

2. Repetition frequency and output power requirements

This product needs to be used at a continuous repetition frequency with uninterrupted trigger pulses.

3. Power supply use

Please make sure that the input power is within the voltage and current range required by the product indicators, and the power must not be directly cut off when it is not turned off during use. If there is an accidental power outage, be sure to turn off the power of the product.

4. Electrostatic protection

The laser and some chips inside this pulse light source are electrostatic sensitive devices, which are prone to irreversible damage when there is high static



electricity outside. The equipment needs to be well grounded and the operator should take electrostatic protection measures.

5. Fiber end face protection

Before use, clean the end face of the output fiber with a wipe paper dipped in alcohol to ensure that the output end face is clean, otherwise the output power or stability will decrease easily, and even the fiber end face will burn.

6. Personal safety

The pulse light source belongs to Class IV light source. When working, you cannot look directly at the output end of the optical fiber with your naked eyes, and you cannot expose your skin directly to strong light, otherwise it will cause damage.