# High-Power Nonplanner Ring Oscillator Laser for Gravitational Wave Detection and Coherent Optical Communications

## **Basic Information**

Place of Origin: CHINA
Brand Name: JINSP
Certification: CE ISO9001

Model Number: LN1000 LN1200 Minimum Order Quantity: 1

Price: Negotiable Packaging Details: 1PC/BOX

• Delivery Time: 90-120 Working days

Payment Terms: T/T

Supply Ability: 20PCS / 90-120Working days



# **Product Specification**

• Wave Length: 1064nm 532nm

• Power Stability: <1.5%

Beam Quality: M2<1.2 M2<1.3</li>
Beam Divergence: 0.2±0.05(mrad)
Warm-up Time (min): ~ 5 Or ~ 10

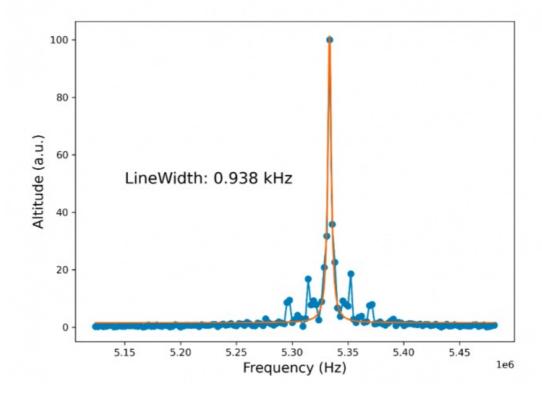
• Power Supply Voltage (V): 220

• Highlight: High Power Nonplanner Ring Oscillator Laser,

Gravitational Wave Detection NPRO Laser, Coherent Optical Communications NPRO Laser

### **Product Description:**

LN series of narrow linewidth lasers offer high spectral purity, long coherence length, and low phase noise. It can be used as a core light source for applications such as gravitational wave detection, cold atom physics, coherent optical communications, optical precision measurements, and microwave photonic signal processing.

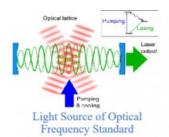


### **Product Selection Table & Parameters:**

Product code	LN1000	LN1200
Wavelength(nm)	1064	532 (Including iodine stabilizing system)
Average Power (W)	2	0.01 (Maximum to 0.05, Customization required)
Power Stability (measured by Standard Deviation)	0.1%	1%
Beam Divergence (mrad)	1.2 @ 3mm Beam Waist	2.3 @ 3mm Beam Waist
Beam Quality	M2 < 1.2	M2 < 1.3
Linewidth (kHz)	1	3
Polarization	Linear	
Power supply voltage (V)	220	
Warm-up Time (min)	~ 5	~ 10
Storage Temperature (°C)	-10 °C ~ 50°C	

### **Advantages of Narrow Linewidth Light Sources:**

- •The measurement accuracy of high-speed ultra-precision laser interferometers is limited by the wavelength stability of the probing laser and the coherence coefficient of the interferometer.
- •High-Power Output: 1064nm narrow linewidth light sources provide high-power output, enhancing the coherence coefficient of the interferometer.
- •High Wavelength Stability: This improves measurement accuracy significantly.
- By utilizing ultra-narrow linewidth solid-state lasers, the measurement accuracy of laser rangefinders can be elevated to achieve measurement precision below the atomic scale within a range of 300mm.





Coherent Light Source for Quantum Communication and Quantum Computers



Light Source for Space-based Gravitational Wave Detection (Michelson Interferometer)

## **Applications:**

- •Scientific Research Field (Scientific Research Institutes and Universities)
  - \*High-precision Laser Rangefinder (Michelson Interferometer)
  - \*Laser Frequency Standard Light Source (532 System) (Lead Time: 6 Months, Currently in Prototype Stage)
    \*Precision Spectral Measurement
- •Core Components for Other Instruments (Manufacturers of Laser Instruments)
  - \*Ultra-narrow Linewidth Laser Seed Source
- •Industrial Manufacturing Fields
  - \*Light Source for High-precision
  - \*Laser Rangefinder in Integrated
  - \*Circuits (532 System)

# **Company Profile**









# Certifications







### FAQ:

### Q1: This is the first time I use it, is it easy to operate?

A1:We will send you a manual and guide video in English, it can teach you how to operate the spectrometer. Also, our technicians will offer professional technical operation meetings.

### Q2: Can you offer an operation training?

A2: Your technicians can come to our factory for training. Jinsp engineers can go to your place for local support (installation, training, debugging, maintenance).

#### Q3: How to receive the best price in the shortest time?

A3: When you send us an inquiry, please kindly offer details with wavelength, detector, effective pixels, focal length, and so on. We will send you a quotation with details soon to your email.

### Q4:If the spectrometer has a problem in my place, what could I do?

A4: The spectrometer has a one-year warranty. If it breaks down, our technician will figure out what the problem may be, according to the client's feedback. We can repair for free within one year warranty.

### Q5: What about quality assurance?

A5:We have a quality inspection team. All goods will go through quality inspection before shipment. We can send you pictures for inspection.





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