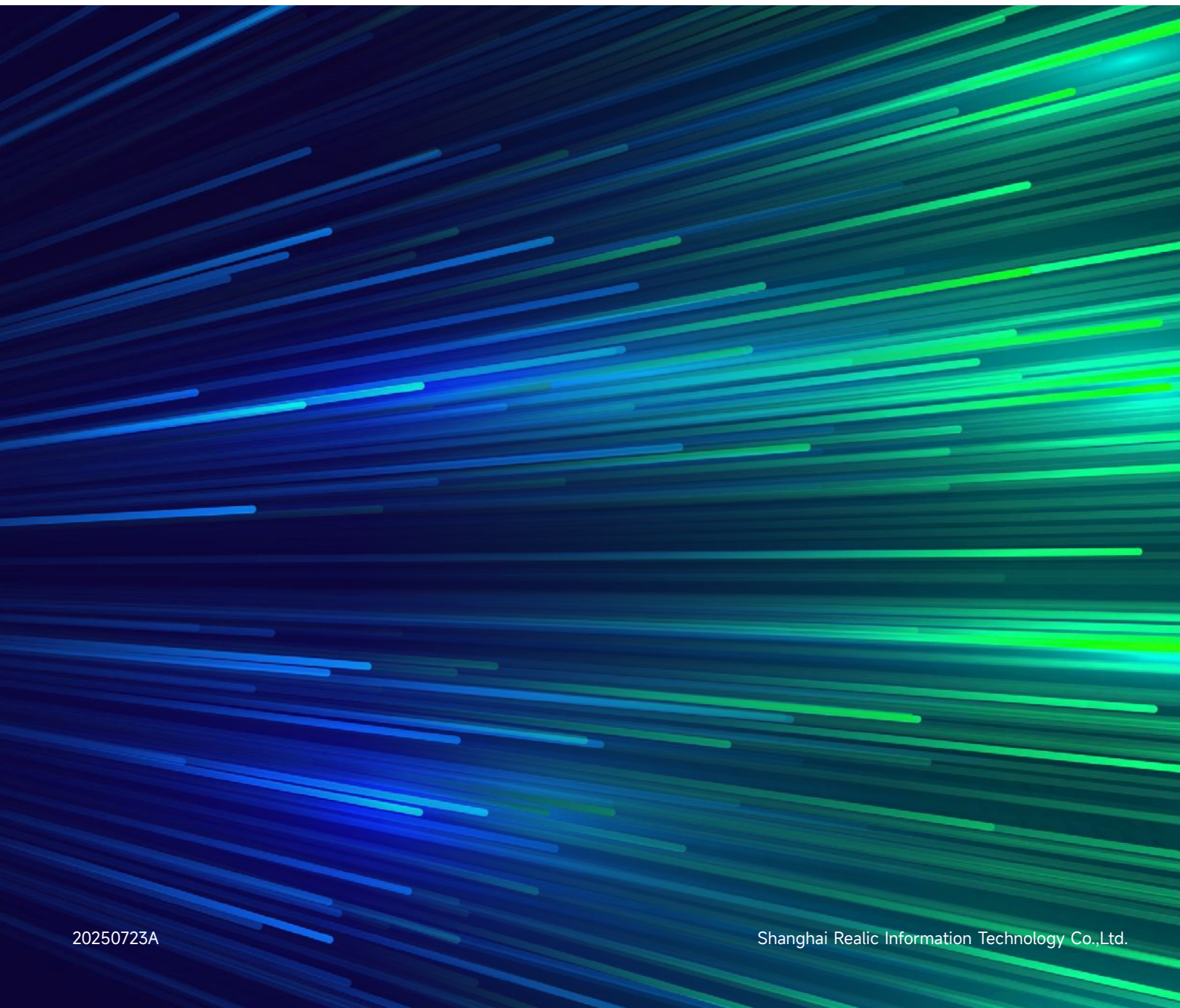


509nm

Tunable Single Frequency Laser

Type: PhaseOptics-0509-00800-L-PM



509nm Tunable Single Frequency Laser

PhaseOptics-0509-00800-L-PM

The 509nm Tunable Single Frequency Laser is extensively used in fields of Rydberg atom manipulation and others. Its cavity design capitalizes on fiber amplification and frequency conversion and provides high power output, narrow linewidth, high Polarization Extinction Ratio (PER) and outstanding power stabilization.

Characteristics and Application Fields

Characteristics

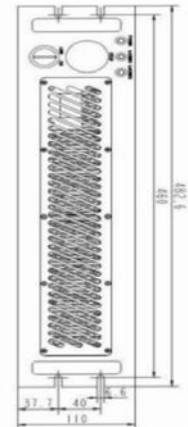
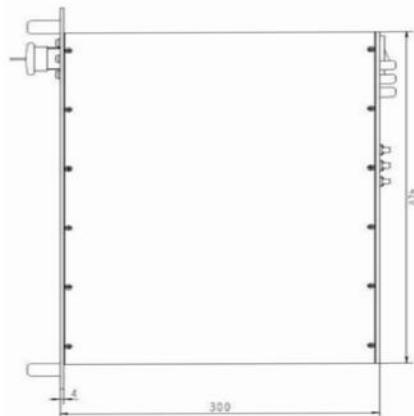
- Narrow Linewidth
- High Power
- Wide Temperature Operation
- Multi-channel Output (Customizable)
- Strong Vibration Resistance (GJB 150.16A-2009)

Application Fields

- Rydberg Atom
- Underwater Communication



Structural Dimensions



Parameter	
Type	PhaseOptics-0509-00800-L-PM
Center Wavelength (nm)	509, fine tuning scan
Wavelength Tuning Range (nm)	> 0.3
Linewidth (kHz@100μs)	< 20
Mode-hop-free Range (GHz)	> 10
Output Power (mW)	≥800 (Single-mode polarization-maintaining output)
Power Stability (RMS@12h)	≤1%
Polarization Extinction Ratio (dB)	> 25
Supply Voltage (V)	AC 220
Power Consumption (W)	< 120
Communication Interface	RS485/RS422
Dimensions (W) x (D) x (H) (mm)	483 × 300 × 110
Output Fiber (Type)	Single-mode Polarization-maintaining Fiber
Cooled Method	Air Cooled
Operating Temperature (°C)	0~40

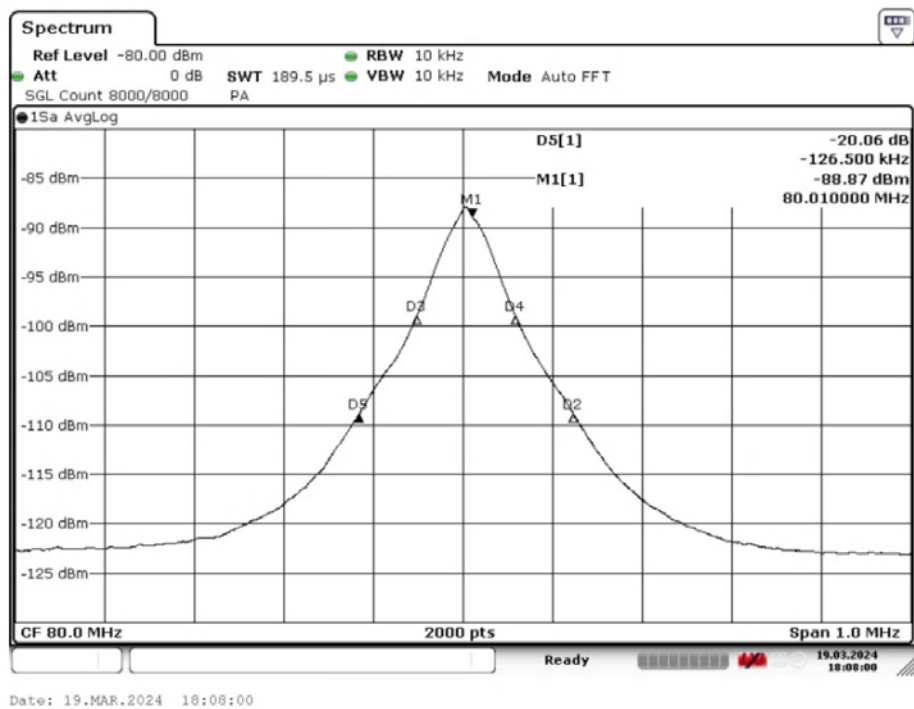


Photo 1-1 Linewidth

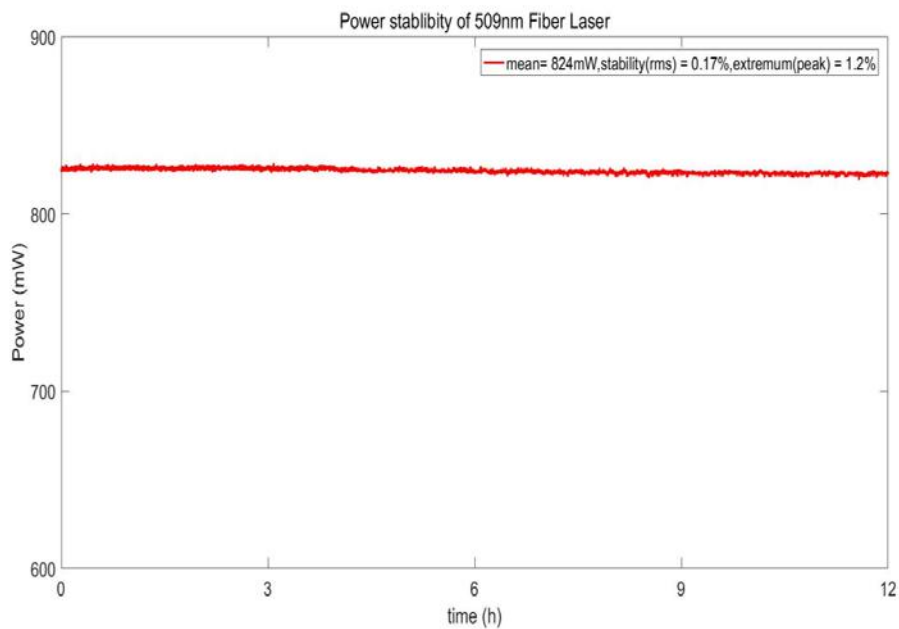


Photo 1-2 Output Power and Stability