

Ultra-stable laser system Preci-USL-mini

FREQUENCY-STABILIZED & ULTRA-STABLE LASERS



Ultra-stable laser system Preci-USL-mini Based on a 2cm high-finesse F-P cavity with an all-fiber optical path, Precilasers offers a narrow-linewidth ultra-stable laser system with stability approaching the thermal noise limit. It covers a wavelength range of 400nm-2000nm, with a typical linewidth of <10Hz.

- All
- Fiber Structure Small volume
- Portable Optional sideband frequency
- Atomic Ion Laser Cooling
- Quantum Simulation Quantum Computing
- Micro
- Nano Optical Testing

Specifications

Parameter	Preci-USL-mini
Optional Wavelengths	400-2000nm
Typical Wavelength	480nm / 580nm / 780nm / 852nm / 1080nm / 1560nm, 1762nm
Features & Advantages	All-fiber, small volume
Linewidth*	<10Hz
Stability**	<1×10 ⁻¹⁴ @1s
Active Vibration Isolation Table	Optional
Cavity Length	2cm
Free Spectral Range	7.5GHz
Finesse	1000, 10000, 200000
Drift	<0.2Hz/s (<20kHz/day)
Vacuum Degree	<1×10 ⁻⁷ mbar
Cavity Mirror Parameters	ULE material, plane-concave cavity; concave mirror curvature radius optional (500mm/1000mm/2000mm)
Operating Temperature	20±7°C
Ambient Temperature Sensitivity	<3mK/°C
Power Supply	100V-240V, AC, 50/60Hz
Weight	20kg
Dimensions	42cm×13cm×45cm
Seed Integration	Seed can be built-in, with output power >20mW
Active Vibration Isolation	Optional active vibration isolation table
Sideband Locking Option	Integratable sideband frequency shifting EOM (bandwidth >1.5GHz)

Source: WaveQuanta product database. For ordering, customization (wavelength, power, package) and quotation, contact sales@wavequanta.com.