Ultra-low noise laser

NARROW-LINEWIDTH CW LASERS

Ultra-low noise laser Precilasers' 1.5 μm low phase noise erbium-doped fiber DFB laser adopts active feedback control technology, which can significantly suppress the phase noise in the key frequency band of 1 Hz–1 kHz. It features a hertz-level ultra-narrow linewidth and ultra-low phase noise, and can stably output an optical power of >10 mW within the wide tunable wavelength range of 1530–1570 nm, providing a high-performance light source for high-precision coherent sensing, quantum communication and other scenarios.

- Ultra
- Ultra
- Wide wavelength tunability Stable
- Excellent beam quality
- Quantum computing Coherent sensing
- Wind lidar Coherent optical

Specifications

Parameter	Specification
Model Number	ULN-15
Optional Central Wavelength Range	1530-1570nm
Output Power	>10mW
Output Mode	Single-mode PM fiber output
Lorentzian linewidth	<100Hz
Linewidth (100 μs integration time)	<1kHz
Polarization Extinction Ratio	Linear,>20dB
Relative Intensity Noise	<0.08% (RMS,integrated over 10Hz-10MHz)
Frequency Noise	<50Hz/sqrt(Hz)@1Hz, <20Hz/sqrt(Hz)@10Hz, <10Hz/sqrt(Hz)@100Hz,<20Hz/sqrt(Hz)@1kHz
Relative Intensity Noise Relaxation Oscillation Peak	<-110dBc/Hz
Optical Signal-to-Noise Ratio	> 50 dB
Power Stability	<0.75%@3hours, RMS
Beam Quality	TEM00, M 2 <1.1

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