

# ZOOM UHR

## Ultra High-Resolution High-Rate Laser Spectrum Analyzer

ZOOM UHR is a Ultra High Resolution laser spectrum analyzer, which features an exceptional spectral resolution up to 1.6 GHz and enables to perform both spectra, wavelength and linewidth measurements in real-time!

### SPECIFICATIONS

Wavelength range	950 - 1080 nm
Optical Spectral Resolution <sup>(1)</sup>	Up to 1.6 GHz
Absolute accuracy <sup>(2)</sup>	650 MHz / 1- 3 pm
Measurement speed	10 frames / s
Integration time	6.2 μm to 200 ms (0.05 μs step)
Maximum linewidth of a mode <sup>(3)</sup>	100 GHz
Simultaneous wavelength bandwidth	5 - 6 nm
Input power range <sup>(4)</sup>	200 nW - 2 mW
Optical input	FC/APC PM singlemode fiber N.A. 0.12
Power consumption	10 W - 2 A @ 5 VDC
Dimensions	17.5 x 20 x 7.1 cm
Communication <sup>(5)</sup>	Gigabit Ethernet + USB 2.0

### FUNCTIONALITIES with SpectraResolver software

Compatibility	Windows 7 & 10
Recording	Continuous
Dark measurement	Manual mode
Multi-wavelength meter function	Automatic peak(s) detection
Standard graphical utilities	Zoom, markers and peak(s) detection over time
Unit change	nm / cm <sup>-1</sup> / THz
Software development kit	C/C++, DotNet, VIs libraries



### Key features

- Up to 1.6 GHz ultra high optical spectral resolution ( $R = \lambda / \Delta\lambda > 250,000$ )
- Excellent absolute accuracy: 650 MHz
- Simultaneous bandwidth of a few nm
- Compact size
- Robust life-long factory calibration
- User-friendly SpectraResolver software

### Applications

- Laser modulation (for high-power laser development, atomic clock)
- Continuous and pulsed laser (ns/ps lasers) control
- Mode-hop characterization

<sup>(1)</sup> Full Width Half Maximum (FWHM) of singlemode unresolved laser  
<sup>(2)</sup> At 23°C without USB 2.0 communication. On the 20-26°C range with USB 2.0 communication  
<sup>(3)</sup> For single and multimode lasers  
<sup>(4)</sup> At 1064 nm  
<sup>(5)</sup> USB2.0 communication for extended operating temperature range



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