The HighFinesse WF Series features ultra high measurement rates – for monitoring ultrafast wavelength dynamics. Readout rates can be up to 24 kHz in the 380 – 1064 nm and even up to 76 kHz in the 980 – 1650 nm wavelength range. Fast swept laser sources can be precisely characterized with these wavelength meters.

The fastest commercially available wavelength meters.

Product Overview WF6 Series

	WF6-600 VIS	WF6-200 VIS	WF6-200 IR-I	WF6-600 IR-II
Measurement range (QE > 60%)	380 – 1064 nm	530 – 1064 nm	980 – 1650 nm	1400 – 2600 nm
Absolute accuracy	600 MHz	200 MHz	200 MHz	600 MHz
Quick coupling accuracy	600 MHz	600 MHz	600 MHz	Singlemode fibers only
Wavelength deviation sensitivity	20 MHz	8 MHz	4 MHz	40 MHz
Exposure Times [1]	3 – 3300 µs	3 – 3300 µs	6 – 9500 µs	12 – 90 µs
Measurement Rate	300 – 24000 Hz	300 – 24000 Hz	100 – 76000 Hz	100 – 32000 Hz
Live Calculation Speed [2]	24000 Hz	24000 Hz	28000 Hz	20000 Hz
Live Calculation Latency [2]	≥ 33.6 – 0.7 ms	≥ 33.6 – 0.7 ms	≥ 100.3 – 0.4 ms	10 ms – 150 µs
Minimum required input energy and power	100 µW @ 3 µs / 0.29 nJ @ 532 nm	100 µW @ 3 µs / 0.29 nJ @ 532 nm	1 mW @ 6 µs / 6 nJ @ 1532 nm	100 µW @ 24µs / 2.4 nJ @ 1532nm and 100 µW @ 24 µs / 2.4 nJ @ 2327 nm
Fizeau interferometers (FSR)	16 GHz / 100 GHz	16 GHz	16 GHz	16 GHz
Calibration	Stabilized HeNe laser or any other well known laser source		A well known laser source (e.g. LFR-1532)	
	Δν < 150 MHz	Δν < 40 MHz	Δν < 40 MHz	Δν < 40 MHz
Recommended calibration period	1 month			
Warm-up time	30 min			
Dimensions	432 × 144 × 144 mm			436 × 342 × 133 mm
Weight	3.5 kg			3.5 kg
Interface	USB 2.0 and GbE	USB 2.0 and GbE	USB 2.0 and Camera Link	GbE
Power supply	External 12 V	External 12 V	External 12 V	100 – 240 V, 50 – 60 Hz

1) Depends on gain mode. 2) Depends on PC and measurement rate.

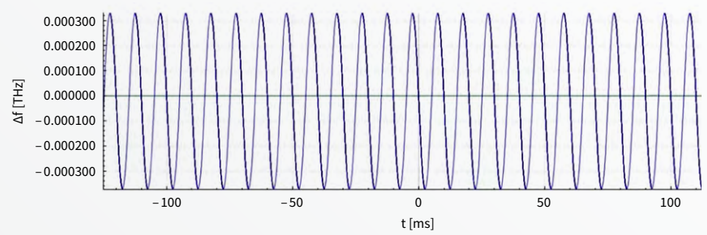
The »FAST wavelength meter« can be externally triggered for synchronizing the wavelength measurements with other processes. As a special software feature an oscilloscope mode is included facilitating the analysis of fast wavelength dynamics.

Oscilloscope mode

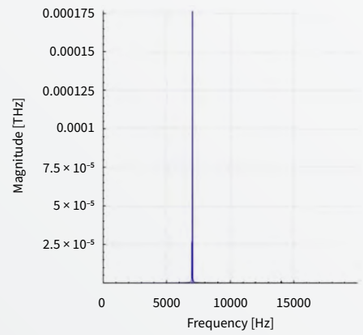
The Oscilloscope Mode displays frequency dynamics like an oscilloscope. The frequencies can be displayed relative to a reference or as an absolute value.

The Oscilloscope Mode includes various analysis features such as the automatic calculation of an amplitude spectrum and a histogram analysis of the frequency deviations.

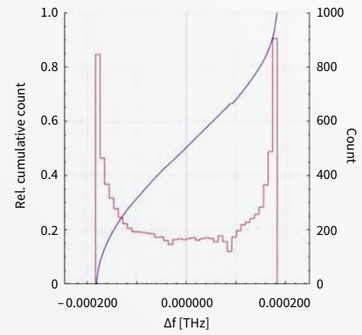
Frequency Deviations displayed in an oscilloscope style



Amplitude Spectrum



Histogram



NEW PRODUCT

The WF7 IR-II reaches the next accuracy level of wavelength characterization at ultra-high measurement rates. At the same time the carefully designed optics of the wavelength meter are very sensitive making it the ideal tool for studying fast wavelength dynamics, even of very weak light sources.

Product Overview WF7 IR-II

Though being an order of magnitude more accurate than the WF6 series the WF7 IR-II still offers ultra-high measurement rates such that all rapid wavelength changes can be detected.

Synchronisation of the wavelength measurement with additional measurement task can be done easily as the wavelength meter accepts standard TTL signals.

Technical Specification

Measurement range (QE > 60%)	1400 – 2600 nm
Absolute accuracy	60 MHz
Quick coupling accuracy	200MHz
Wavelength deviation sensitivity	10 MHz
Exposure Times [1]	26 – 20000 µs
Measurement Rate (continuous/short time)	up to 20000 Hz/up to 38 kHz
Live Calculation Speed [2]	5 kHz
Live Calculation Latency [2]	10 ms – 150 µs
Minimum required input energy and power	0.4 nJ corresponding to 15 µW @ 26 µs exposure time
Fizeau interferometers (FSR)	8 GHz /16 GHz
Calibration	A well known laser source (e.g. LFR-1532) Δv < 10 MHz
Recommended calibration period	1 day
Warm-up time	30 min
Dimensions	436 × 342 × 133 mm
Weight	3.5 kg
Interface	GbE
Power supply	100 – 240 V, 50 – 60 Hz

1) Depends on gain mode. 2) Depends on PC and measurement rate.