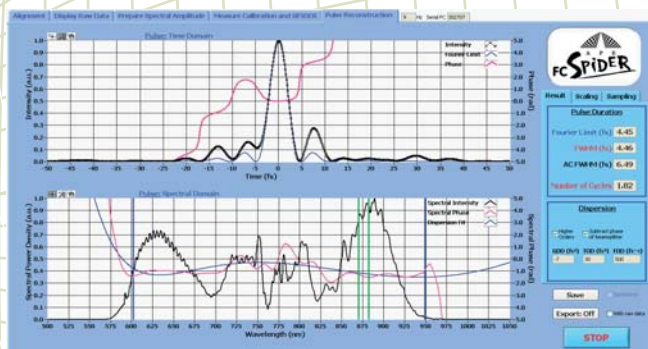


A P E

FC SPIDER

Phase Resolved Ultrafast Pulse Measurement



Screenshot of control software

With the **FC (Few Cycle) Spider** APE offers a precision tool for complete spectral and temporal characterization of ultra-short laser pulses with just a few electric field cycles - down to 5 fs pulse width.

Based on the proven and patented SPIDER (Spectral Phase interferometry for Direct Electric-field Reconstruction) technology using a non-drifting, etalon based interferometer and a material-dispersion stretcher, the **FC Spider** directly measures the spectral phase by analyzing a spectral interferogram. In combination with a simultaneously measured spectrum, the temporal amplitude and phase are calculated in real-time.

This enhanced design enables simultaneous single shot detection of the amplitude as well as the phase of pulses with spectral bandwidths of up to one octave. A high degree of automation for software assisted device calibration and alignment is implemented for user-friendly operation and to enable measurements with low input intensities.

The **FC Spider** is the ideal tool to align and monitor the performance of broadband Ti:Sapphire oscillators and amplifier chains with bandwidths larger than 35 nm. It supplements the APE Spider line towards shorter pulses.

Spectral intensity and phase, temporal intensity and phase measurements

Real time measurement

True single shot in intensity and phase

High degree of software controlled automation and internal camera assisted alignment

Ultrafast Pulse Diagnostics

Wavelength Conversion

Pulse Management

Acousto-optics

Your Partner in Ultrafast

SPECIFICATIONS

Wavelength range	550 nm ... 1050 nm (standard)
Spectral bandwidth	> 35 nm @ 800 nm ¹⁾
Pulse width (for transform limited pulses)	5 ... 30 fs ¹⁾
Pulse width (for non-transform limited pulses)	< 120 fs ¹⁾
Input polarization	Linear / horizontal
Input power	> 100 mW @ 80 MHz, 10 fs

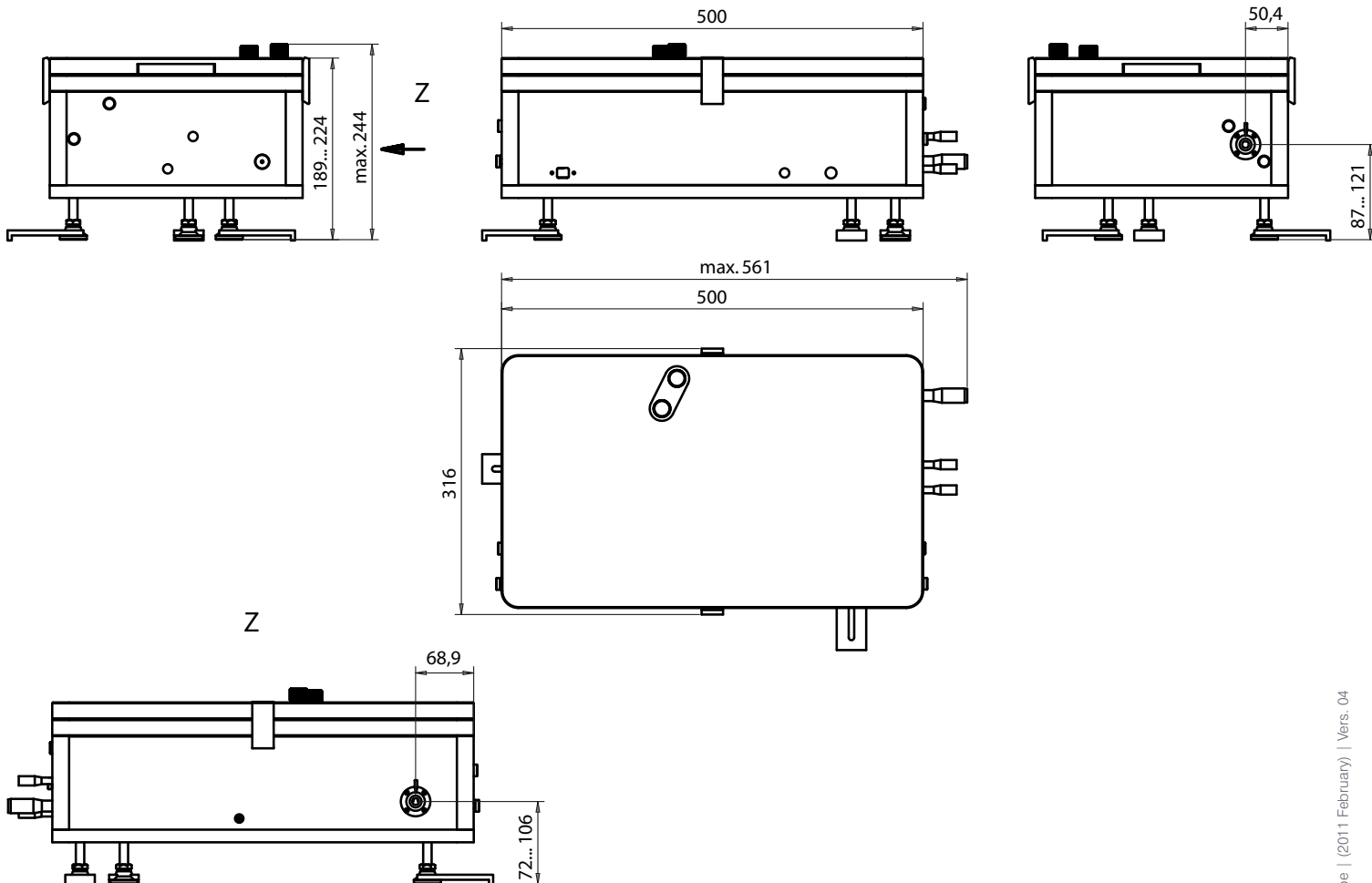
Options

Wavelength range 500 ... 1000 nm
Wavelength range 600 ... 1100 nm
Wavelength range 660 ... 1160 nm

1) The total measurement range is divided into two different sub-ranges which can be easily switched by the user:

	Measurement range with position 1:	Measurement range with position 2:
Spectral bandwidth	> 80 nm	35 ... 90 nm
Pulse width (for transform limited pulses)	5 ... 12 fs	10 ... 30 fs
Pulse width (for non-transform limited pulses)	< 60 fs	< 120 fs

DIMENSIONS (in mm):



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APE follows a policy of continued product improvement. Therefore, specifications are subject to change without notice.

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