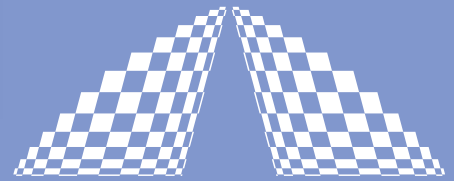


SPIDER



A P E

Phase Resolved Ultrafast Pulse Measurement

The **Spider** is an instrument for phase sensitive pulse measurements. Based on the patented technology of Spectral Phase Interferometry for Direct Electric Field Reconstruction (SPIDER) it provides information not only about spectral and time resolved intensity but also about the phase of ultrafast laser pulses. The advantage over similar systems is the noniterative algorithm that allows for real-time measurement. Accordingly, the **Spider** is an ideal adjustment tool for complex laser systems and a highly sensitive measurement device at the same time.

The **Spider** is delivered as a calibrated instrument with software matched to the hardware.



Real-time measurement of phase and amplitude of fs pulses

Ideal for the characterization of laser oscillators and amplifier systems

PC controlled

Single shot capability

Ultrafast Pulse Diagnostics

Wavelength Conversion

Pulse Management

Acousto-optics

Your Partner in Ultrafast

SPIDER

The **Spider** is based on a patented technology - the Spectral Phase Interferometry for Direct Electric Field Reconstruction. The input pulse is split into two replicas which have a temporal delay with respect to each other. A third part of the pulse passes through a grating stretcher and overlaps with the other two parts in a frequency-converting non-linear crystal. Since the two replicas are mixed with different spectral components of the stretched pulse they experience a spectral shear. The spectrally sheared pulses are allowed to interfere with each other in a spectrometer. From the resulting spectrogram it is possible to directly calculate the spectral phase profile of the input pulse.

The **Spider** comes as a complete, calibrated system consisting of optics unit, computer and analysis software. The user is able to get all relevant information for characterizing the laser pulse without the need for in-depth knowledge of the theoretical background.

SPECIFICATIONS

Wavelength range	750 ... 900 nm ¹⁾
Spectrometer measuring range	700 ... 940 nm
Pulse width of Spider with optics set A ²⁾	40 ... 150 fs
Pulse width of Spider with optics set B ²⁾	20 ... 80 fs
Pulse width of Spider with optics set C ²⁾	10 ... 40 fs
Input polarisation	Linear / horizontal
Required input power	> 100 mW @ 80 MHz

DIMENSIONS

750 mm x 300 mm x 165 ... 185 mm

1) Central wavelength of transform-limited pulses; the actual range depends on pulse width and actual spectrum.

2) The optics sets are exchangeable.

