Spider

Pulse Characterization for NIR or IR Wavelength

The Spider is a precision tool optimized for the complete spectral and temporal characterization of laser pulses in the near infrared or infrared. Based on the patented Spider* technology, it extends the existing range of APE Spider models to cover longer pulses, between 15 fs and 500 fs, at a central wavelength of around 0.8 µm or 1 µm.

It also supports detection of the chirp sign for stretched pulses greater than 2 ps width, making it a smart choice for the alignment of pulse compressors.

Furthermore, the Spider control software supports real-time calculation of the temporal amplitude and phase. The user-friendly design features highly automated software to guide the operator through calibration and alignment procedures and enable measurements to be executed with a minimum of data input.

- Best choice for pulses between 15 fs and 500 fs at 0.8 µm or 1 µm central wavelength
- Spectral intensity and phase measurement as well as temporal intensity and phase reconstruction
- Real-time and true single-shot measurement of intensity and phase
- High level of automated software support and internal camera-assisted alignment
- Full software suite included

*Spectral Phase Interferometry for Direct Electric-field Reconstruction; International Patent No.: EP 1000315, WO 1999/006794

Spider Specifications

Specifications	Spider NIR	Spider IR
Center wavelength	750 nm … 900 nm	970 nm … 1070 nm
Spectral bandwidth	15 nm … 60 nm	7 nm … 50 nm
Transform limited pulse width	15 fs … 60 fs	30 fs … 200 fs
Maximum pulse width (chirped)	200 fs	500 fs
Laser repetition rate	Any; Single shot (< 20 Hz)	Any; Single shot (< 20 Hz)
Trigger for Single shot measurements	TTL, for laser repetition rate < 20 Hz	TTL, for laser repetition rate < 20 Hz

Input requirements

Laser pulse energies	0.2 nJ … 8 nJ for MHz repetition rates < 10 µJ for kHz repetition rates ~ 10 µJ for Hz repetition rates / Single shot
Polarization	Linear / horizontal
Beam diameter	< 5 mm
Beam height	72 mm … 106 mm (spectral phase and intensity) 87 mm … 121 mm (spectral intensity)
Interface	USB 2.0
Notebook	with pre-installed software included

Options

Wavelength	others on request, please ask
External beam splitter and beam routing kit	on request, please ask

Dimensions

561 mm x 289 mm x 320 mm (W/H/D); (See appendix for details)

All dimensions in mm

FC Spider

- Precise Characterization of Few-Cycle Pulses Down to < 5 fs

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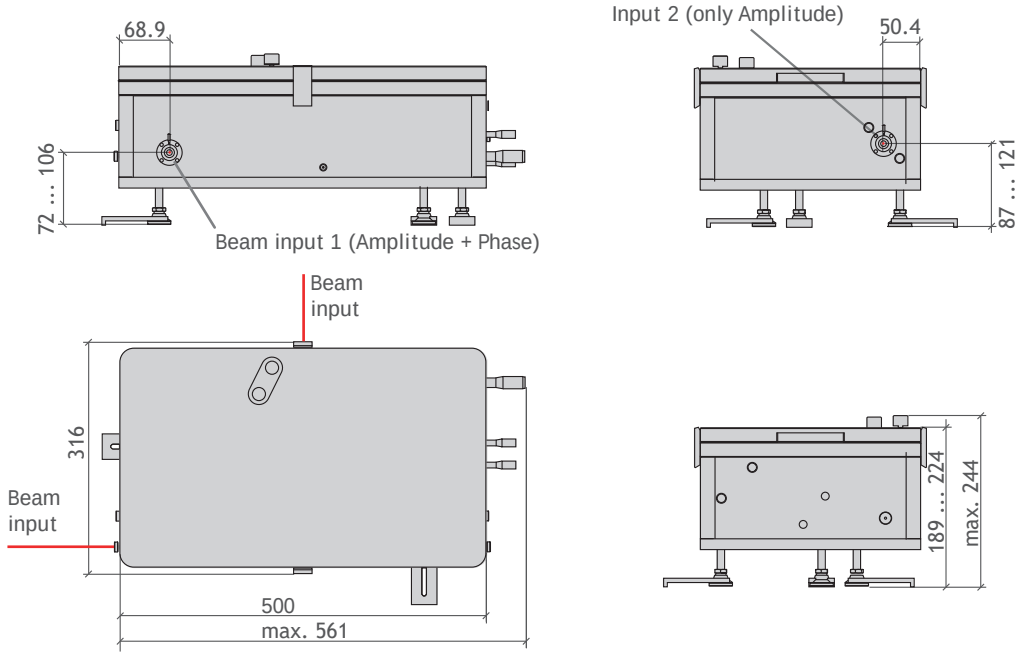

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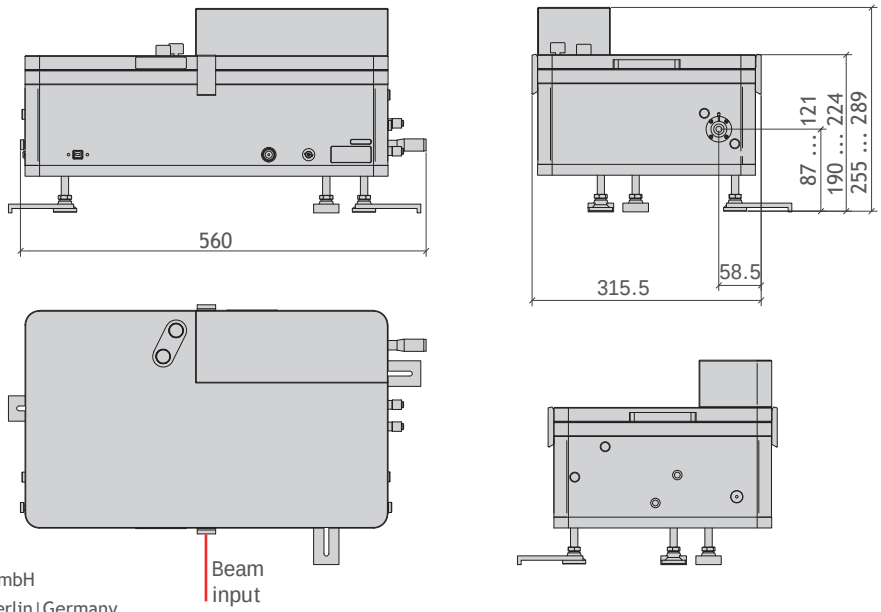

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