MISS Spectrometer

MISS stands for Mini Imaging Spatial Spectrometer. This innovative spectrometer gives access to the spatially resolved spectrum of your sources. Thanks to its unique compactness, the MISS allows vertical and horizontal spatial chirp measurements at any position of your beam path. It can easily be integrated at different stages of amplified laser systems. Use it in free space mode to take benefit of the spatial resolution, or with a fiber input, like a regular spectrometer.

MISS

Key features

- Compact design
- Horizontal and vertical spatial chirp measurement
- User-friendly and powerful software
- High spatial and spectral resolution
- Different models from 240 to 1100 nm. SWIR models up to 1700 nm also available
- Input beam diameter up to 12.7 mm
- Single shot capable up to 75 kHz

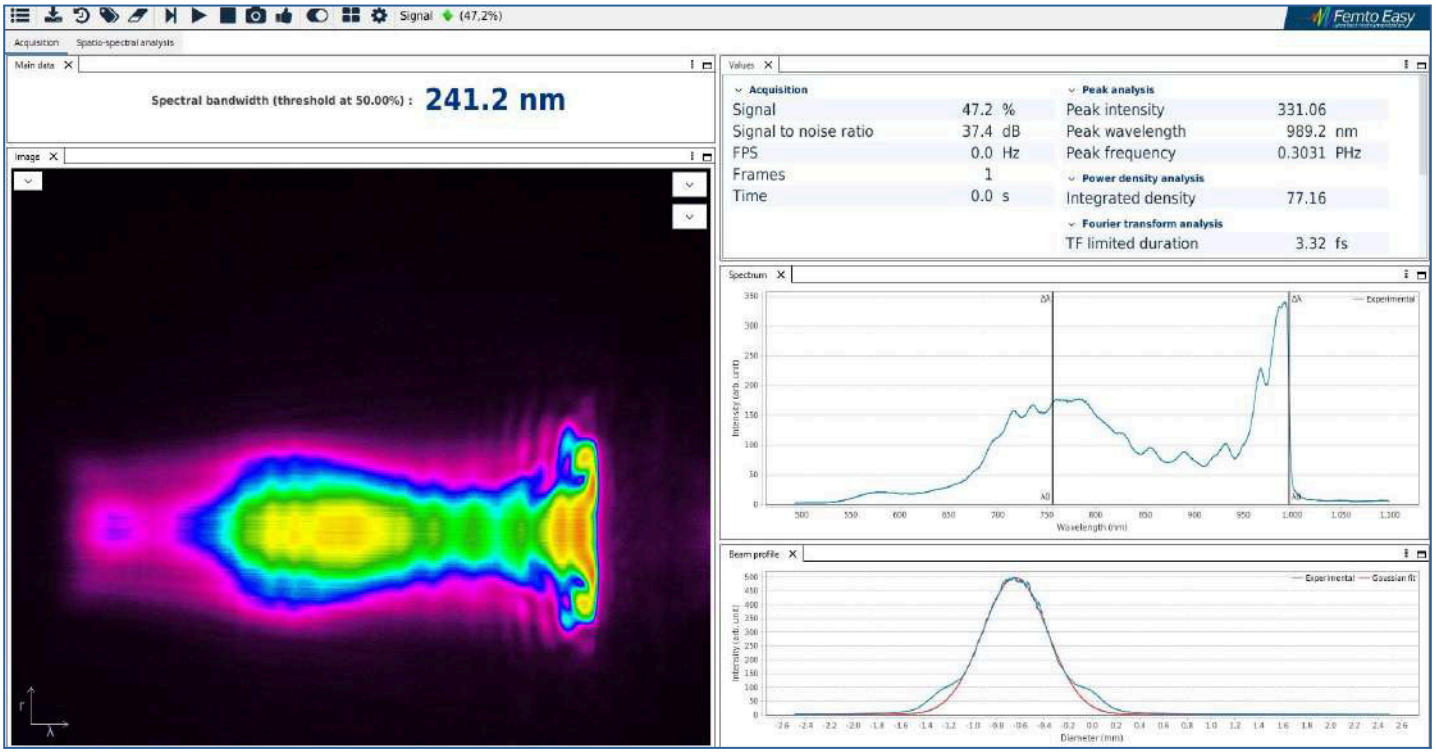
Options

- Fiber input connector
- Trigger
- High dynamic range

Specifications

Models	UV-VIS	IR	Yb	TiSa	UV-VIS-L	IR-L	TiSa-L	Broadband-L
Type	standard				large beam (L)			
Spectral range (nm)	240 – 800	545 – 1100	900 – 1090	725 - 875	250 – 700	650 – 1100	360 – 1040	280 – 1095
Camera resolution	2056 x 1542 3 Mpx				2448 x 2048 5 Mpx			5472 x 3478 20 Mpx
Spectral sampling (nm/px)	0.29	0.27	0.11	0.11	0.23	0.22	0.28	0.16
Optical spectral resolution (nm)[1]	< 1	< 0.8	< 0.35	< 0.45	1 - 1.5	1 - 1.3	1 - 1.5	0.6 - 1.1
Input beam size (mm)	> 6.3			> 8.6	> 12.5			
Max spatial resolution (µm)	< 4.5				5.2		6.5	3.6
Exposure time min – max (ms)	0.024 – 1 000				0.013 – 1 000			0.011[2] – 1 000
Shutter type	Global							Rolling
Detection	CMOS 12 Bits – 72 dB							
PC Interface	USB 3.1							
Dimensions (mm)	102 x 101 x 52				117 x 102 x 52			

[1] resolution achieved on the highest resolved part of the spectral range
[2] due to rolling shutter, the actual minimum exposure time to capture the whole beam will be limited by the beam size. The larger the beam, the longer the required minimum exposure time.
Custom versions available on request.



STAR Software

- Live extraction of spatially resolved spectra, spatial chirp, spatially resolved Fourier limited pulse duration analysis...
- Enhanced background & hot pixels treatment, for optimum dynamic and signal to noise ratio
- Client / Server interface, allowing remote control through network
- All data exportable into most common formats

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MISS SWIR Spectrometer

MISS stands for Mini Imaging Spatial Spectrometer. This innovative spectrometer gives access to the spatially resolved spectrum of your sources. Thanks to its unique compactness, the MISS allows vertical and horizontal spatial chirp measurements at any position of your beam path. It can easily be integrated at different stages of amplified laser systems. Originally available with Si-based cameras, **the MISS now offers a unique solution to measure 2D spectrum of laser sources covering SWIR and VSWIR wavelength ranges, thanks to InGaAs-based detectors**.

Key features

- Compact design
- Horizontal and vertical spatial chirp measurement
- User-friendly and powerful software
- High spatial and spectral resolution (sampling down to 6 µm and 0.4 nm)
- Different models from 400 to 1700 nm
- Input beam diameter up to 12.5 mm
- Single shot capable up to 200 kHz

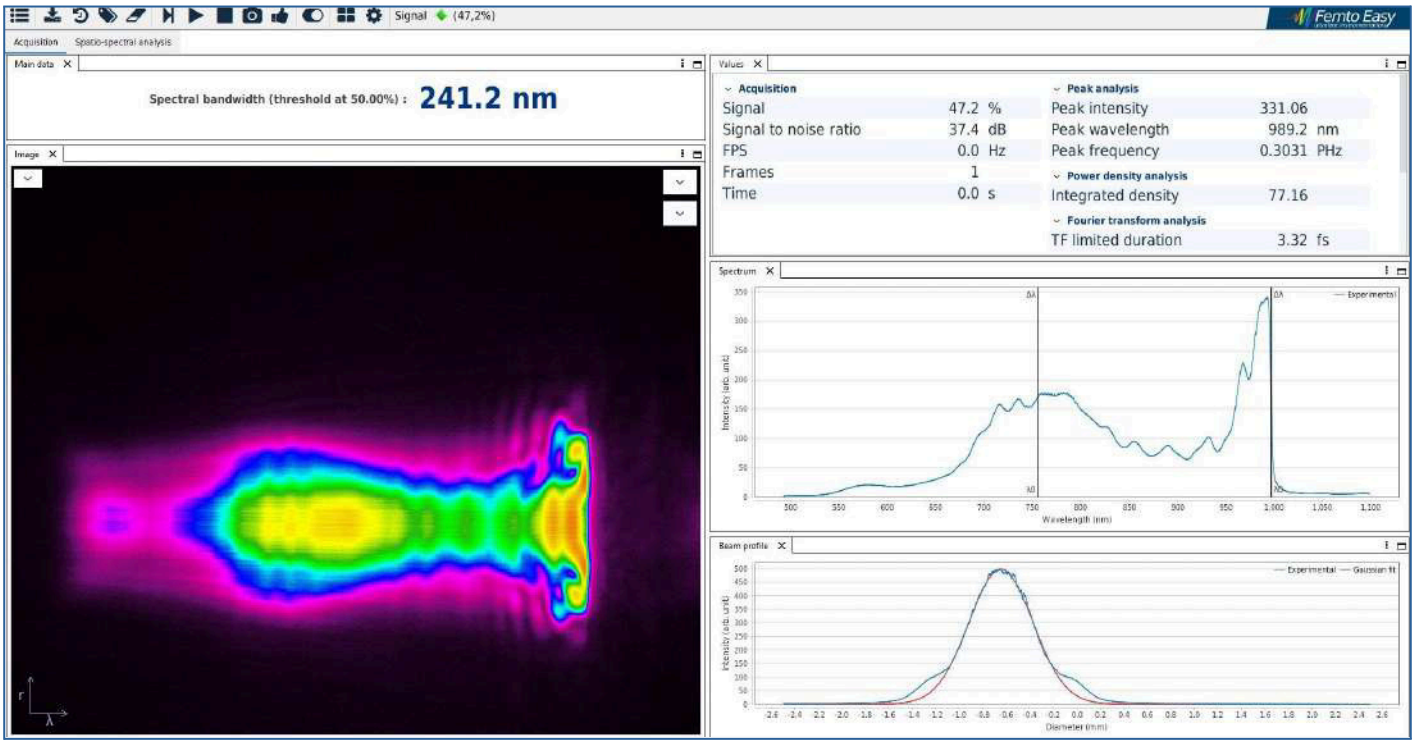
Options

- Fiber input connector
- Trigger

Specifications

Models	SWIR 320	SWIR 640	SWIR 1280	VSWIR 656 / L	VSWIR 1296 / L
Accessible spectral range (nm)	900 - 1700			400 - 1700	
Typical spectral window Δλ (nm)	500	775	800	250 / 350	500 / 700
Camera resolution	320 x 256 0.08 Mpx	640 x 512 0.3 Mpx	1280 x 1024 1.3 Mpx	656 x 520 0.3 Mpx	1296 x 1032 1.3 Mpx
Spectral sampling (nm/px)	1.7	1.2	0.7	0.4- 0.6	
Optical spectral resolution (nm)[1]	3.5	3.5	2	1 / 1.5	
Input beam size (mm)	6.4	9.6	10.2	3.3 / 6.5	6.5 / 12.5
Max spatial resolution (µm)	25.0	19.0	10.0	6.3 / 12.5	
Exposure time min – max (ms)	0.01 – 500				
Shutter type	Global				
Detection	InGaAs 12 Bits				
PC Interface	USB 3.1				
Dimensions (mm)	117 x 102 x 52			101 x 101 x 52 / 117 x 102 x 52	

[1] Resolution achieved on the highest resolved part of the spectral range
Custom versions available on request



STAR Software

- Live extraction of spatially resolved spectra, spatial chirp, spatially resolved Fourier limited pulse duration analysis, beam profile analysis...
- Enhanced background & hot pixels treatment, for optimum dynamic and signal to noise ratio
- Client / Server interface, allowing remote control through network
- All data exportable into most common formats

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