

PRODUCT DATASHEET

μ-FROG

The most compact FROG system ever designed.

A true technological breakthrough, the μ-FROG combines a unique monolithic optical architecture with Femto Easy's cutting-edge expertise to deliver uncompromising measurement precision in an unprecedented form factor.

μ-FROG



ULTRA
COMPACT



HIGH
ACCURACY

KEY FEATURES



Ultra-compact footprint

The smallest FROG on the market, designed to fit easily into any tight setup



Seamless Operation

Plug-and-play architecture for effortless setup and immediate measurements



Monolithic & Robust

A rock-solid optical design engineered for long-term stability and field reliability



Unmatched Flexibility

Fully compatible with any laser repetition rate, from single-shot to MHz regimes



Powerful STAR Software

Intuitive, fast, and accurate algorithms for real-time pulse retrieval and dynamic analysis

OPTIONS

• Trigger

• Enhanced Detection

APPLICATIONS



Field Service & On-Site Diagnostics



Daily Routine Lab Measurements



Constrained & Embedded Setups

SPECIFICATIONS

μ-FROG Models		Ti:Sa	Ti:Sa-S	Yb	Yb-S	Er	Tm
Pulse duration range (fs)	min	35 - 75 ¹	10 - 50 ¹	50 - 150 ¹	20 - 50 ¹	50 - 150 ¹	50 - 150 ¹
	max	1200	500	1500	1000	1500	1500
Accessible spectral range (nm)		780 - 820	760 - 850	1020 - 1080	960 - 1100	1400 - 1700	1815 - 2100
Input pulse repetition rate		any					
Single-pulse measurement		up to 80 kHz laser repetition rate (with Trigger option, 40 kHz without)					
Min input average power ²		20 mW	30 mW	5 mW		10 mW	
Min input pulse energy ²		1 nJ	3 nJ	1 nJ		3 nJ	
Min input pulse energy (single-shot) ²		25 μJ	25 μJ	1 μJ		3 μJ	
Input polarization		linear horizontal or vertical					
Detection		CMOS 12 bits					
PC Interface		USB 3.1					
Beam height (mm)		20					
Dimensions (mm)		102 x 101 x 52					

¹ The two minimum pulse duration values correspond to the Fourier limited pulse duration with and without GDD precompensation.

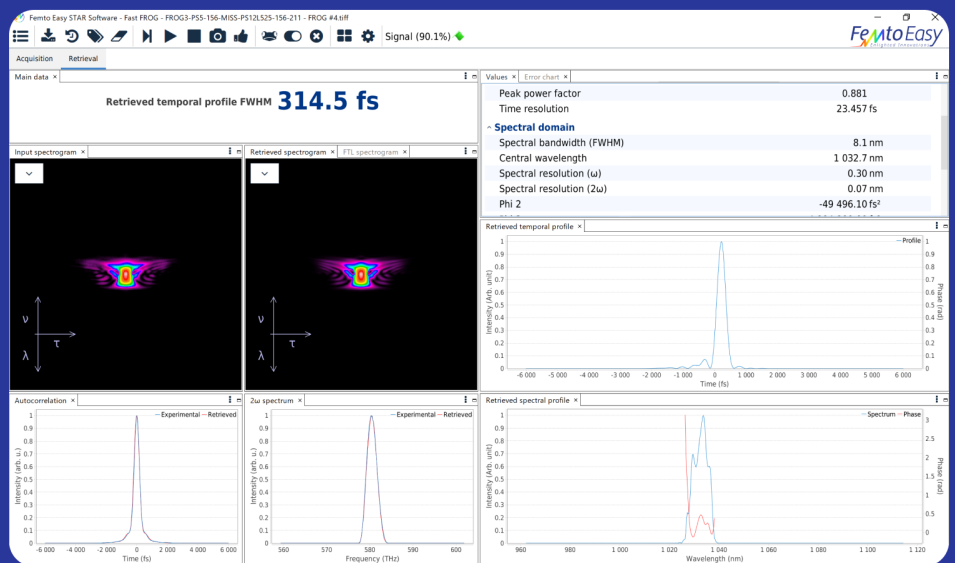
² Values give an order of magnitude, exact sensitivity depends on parameters such as pulse duration, repetition rate, beam diameter, wavelength...



STAR SOFTWARE

μ-FROG Software

Comes with an optimized retrieval algorithm, that allows you to retrieve time and spectral information in real time.



- Live extraction of shot-to-shot pulse properties temporal profile intensity and phase, fundamental spectrum and phase, Chirp, Third-order dispersion...
- Super-fast reconstruction speed and quality due to the combination of several algorithms (including the Ptychographic Iterative Engine)
- All data exportable into most common formats

- High dynamic and low signal-to-noise ratio secured by enhanced background & hot pixels treatment
- Remote control through network (Client / Server interface - native REST API)
- Fully compatible with all Femto Easy diagnostics (autocorrelators, beam profilers, spectrometers ...)



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