

MOSAIC™ PRO

Dispersion Management Module

| up to -10000 fs^2 |

| < 15 fs pulse delivery |

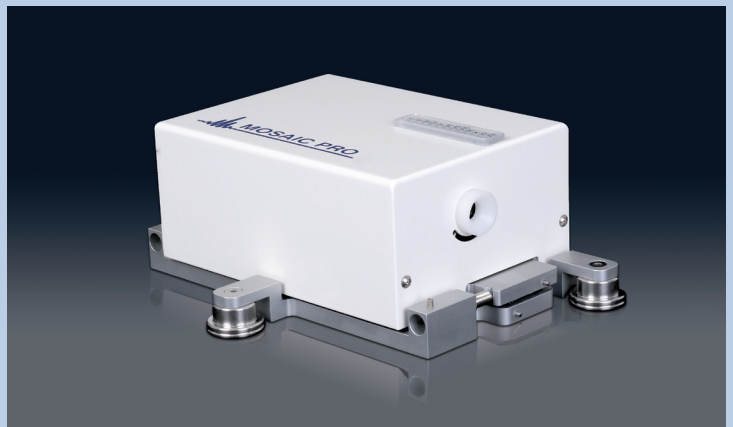
| 700 - 1040 nm |

Applications

Dispersion management

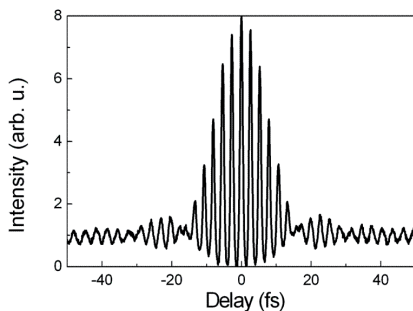
Nonlinear microscopy

Ultrashort pulse delivery



MOSAIC™ PRO is a dispersion compensation module that maintains ultrafast pulses undistorted at the target, even when they propagate through complex optical systems such as microscopes. The MOSAIC™ module is based on dispersive mirror (DM) technology and thus extremely compact and easy to use. The inline design guarantees minimum beam displacement upon module insertion. Integration into an existing setup is straightforward, with no additional optical elements being required.

When employing the MOSAIC™ module for dispersion precompensation pulses shorter than 15 fs can be delivered at the focus of complex scanning laser microscopes.



Autocorrelation of an 11.7 fs pulse measured directly at the focus of a scanning laser microscope equipped with a 40x NA1.2 objective. The dispersion of the setup amounting to 4400 fs^2 has been compensated with dispersive mirrors.

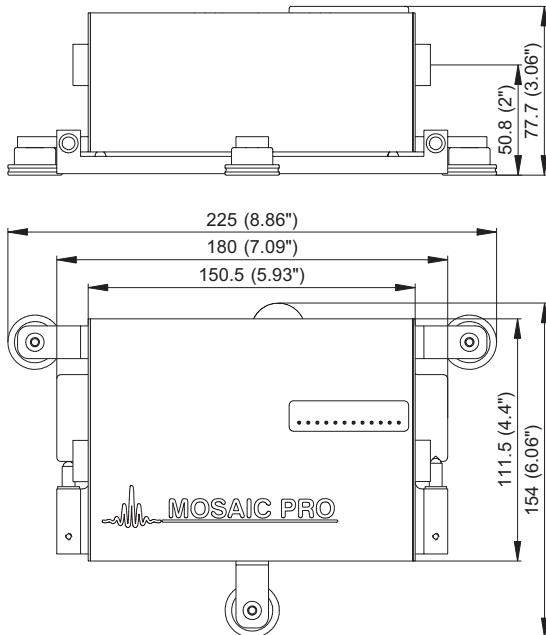
MOSAIC™

PRO

Extraordinary Features

- Compact housing
- In-line input/output apertures
- High throughput
- Tunable GDD
- Solid mechanical design

MOSAIC™ PRO - FRONT VIEW, Dimensions in [mm] ([in])

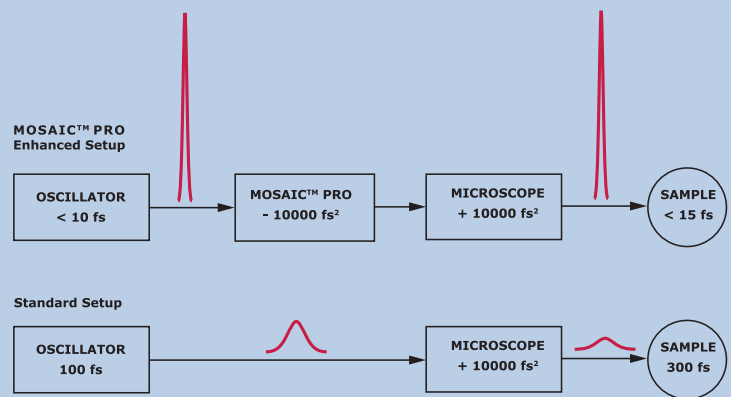


MOSAIC™ PRO - TOP VIEW, Dimensions in [mm] ([in])

Dispersion management module for ultrafast microscopy

Latest generations of Dispersive Mirrors (DM) exhibit significantly higher dispersion, resulting in compact and efficient dispersion compensation modules. Only by employing DMs can dispersion properties be tailored for precise compensation of complex optical setups (such as microscopes) without unwanted side effects such as the introduction of high order dispersion. This is a prerequisite for the undistorted delivery of pulses having a duration of only a few tens of femtoseconds.

The MOSAIC™ in-line design guarantees minimum beam displacement when inserting or exchanging the modules. It allows easy integration into an existing setup, without the need for additional optical elements.



SPECIFICATIONS

	MOSAIC™ PRO X	MOSAIC™ PRO V
Footprint	154 x 225 mm	154 x 225 mm
Beam height	50.8 mm	50.8 mm
Clear aperture	2.5 mm	2.5 mm
Total GDD	up to -10000 fs^2	up to -5000 fs^2
GDD tuning range	-5000 to -10000 fs^2	-1000 to -5000 fs^2
GDD tuning step ¹⁾	$< 700\text{ fs}^2$	$< 700\text{ fs}^2$
Central wavelength	$\approx 800\text{ nm}$	$\approx 800\text{ nm}$
Bandwidth	$> 170\text{ nm}$	$> 170\text{ nm}$
Throughput ²⁾	$> 65\%$	$> 75\%$
Polarization (input)	horizontal	horizontal

1) Fine tuning possible using glass wedges (available separately)
2) At max. GDD

All specifications are subject to change without notice



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FEMTOLASERS' laser products are certified to comply with the Federal Regulations (21 CFR Subchapter J) as administered by Center of Devices and Radiological Health on all systems ordered for shipment after October 1, 2003.