ROC Autocorrelator

ROC stands for Row Optical Correlator. The ROCs autocorrelators are ultra compact and robust single shot autocorrelators. As the name implies, they are designed specifically to be ultra easy to use and to align onto the laser beam. They cannot be misaligned, there is no need for calibration or tweaking and are easily transportable. And yes, they are rock-solid!
Besides those advantages, the ROCs autocorrelators provide excellent technical performances and highly accurate measurements. The ROCs autocorrelators are available for different wavelengths and several pulse durations.

- Extreme ease of use
- Only 2 minutes to install and start measuring!
- Single shot up to 200 kHz[1]
- Spatially resolved measurements
- High level of accuracy
- No calibration necessary
- Down to 5 femtoseconds
- Broad available spectral range
- Ultra compact and transportable

Models	FC 700	FC 400	FS 700	FS 400	PS$^{\tau}$ 700	PS$^{\tau}$ 400
Pulse duration range (fs)	5 - 150 fs	5 - 150 fs	20 - 500 fs	20 - 500 fs	50 - 1000 fs 250 - 3500 fs	50 - 1000 fs 250 - 3500 fs
Wavelength range (nm)	700 - 2100*	450 - 2100**	700 - 2100*	450 - 2100**	700 - 2100*	450 - 2100**
Input pulse repetition rate	From Hz to GHz					
Input pulse energy (nJ)[2] single shot: 1 MHz: 100 MHz:	> 1000 > 10 > 0.5					
Input polarization	Any linear					
Detection	CMOS 12 bit	CCD 10 bit	CMOS 12 bit	CCD 10 bit	CMOS 12 bit	CCD 10 bit
PC interface	USB 3	USB 2	USB 3	USB 2	USB 3	USB 2
Beam height (mm)	30 - no limit					
Dimensions (mm)	55x55x250	55x55x280	55x55x250	55x55x280	55x55x180	55x55x200

$^{\tau}$ 2 pulse duration ranges available :
- PS1 : 50 – 1000 fs
- PS3 : 250 – 3500 fs

* 4 wavelength options for ROC 700:
- 700 - 1200 nm (R)
- 1000 - 1600 nm (IR1)
- 1400 - 2100 nm (IR2)
- 700 - 2100 nm (BB)

** 6 wavelength options for ROC 400:
- same 3 than ROC 700 (R, IR1, IR2)
- 450 - 640 nm (B)
- 500 - 800 nm (G)
- 450 - 2100 nm (BB)

[1] Multi-shot measurements for higher rep rate. It means than the Femto Easy ROCs are suitable for any rep rate but they can measure a pulse to pulse fluctuation accurately only under 200 kHz.

[2] The minimum average input power is 10 mW at 1 MHz. The maximum average input power is 2.5 W, it means that most of the cases the beam can be injected into the ROC directly.

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