

pulseCheck SM Type 2

High Dynamic Range Autocorrelator for High Contrast

Revealing Pre- & Post-pulses, Pedestals, Satellites

High contrast measurements with the autocorrelator pulseCheck Type 2 provide information about how far in time and intensity the main pulse is accompanied by pre-pulses, post-pulses and pedestals.

With a high dynamic range of 10^7 , pulseCheck SM Type 2 is ideally suited for the characterization of high intensity, high repetition rate laser pulses, such as those in material processing or in ultra-high intensity light-matter interaction experiments.

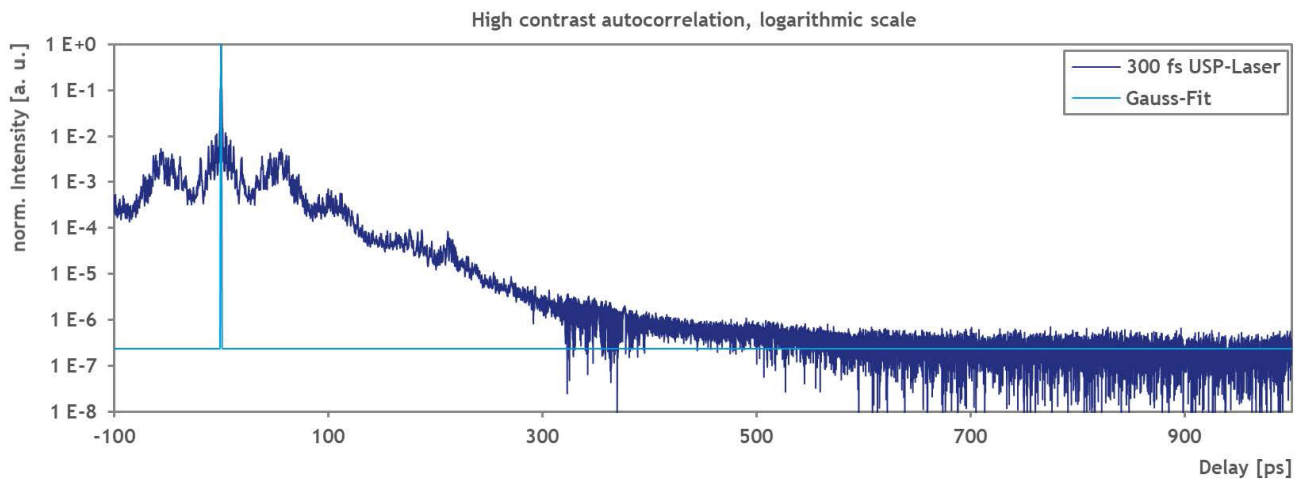
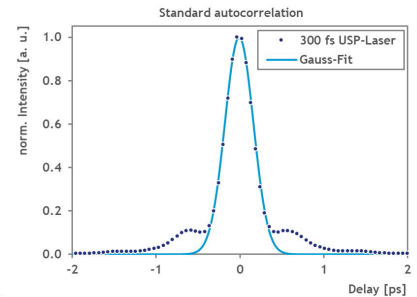


Figure: SM Type 2 high contrast autocorrelation measurement of an industrial femtosecond fiber laser with a nominal pulse width of ~ 280 fs (please note the ps scale of the measurement).
Measurement conditions: -1030 nm, 35 mW, 1 MHz

- Measuring intense pulses and their pre-pulses, post-pulses, pedestals
- High dynamic range measurements
- Ultra-precise delay resolution
- Automatic phase matching
- NIST traceable calibration
- Ready to use software and USB interface
- TCP/IP remote control with standardized command set for easy programming

pulseCheck SM Type 2 High Contrast Specification

pulseCheck	SM Type 2
Pulse width	<100 fs ... 400 ps
Wavelength range	700 nm ... 1100 nm
Recommended repetition rate	>10 Hz
Max. input power, pulse energy	0.5 W for quasi-cw laser 5 μ J for kHz laser
Input beam polarization	Linear, any
Input beam coupling	Free-space with 6 mm aperture
Input beam height	76 mm
Measurement refresh rate	120 ps/sec depending on scan range
Delay resolution	1 fs normal operation 25 fs high contrast operation
Contrast	Depending on laser repetition rate: 10^{-7} for >100 kHz, 10^{-6} for >10 Hz
Type of measurement mode	Non-collinear intensity and collinear interferometric - switchable
Available detector types	Photodiode (PD) with fixed wavelength range
Calibration	NIST traceable calibration certificate included
Trigger mode	TTL <100 kHz
Phase matching	Software-supported
Intensity resolution	18 bit
Connectivity	Ethernet, USB, TCP/IP (SCPI command set)
Remote control	Programmable via API

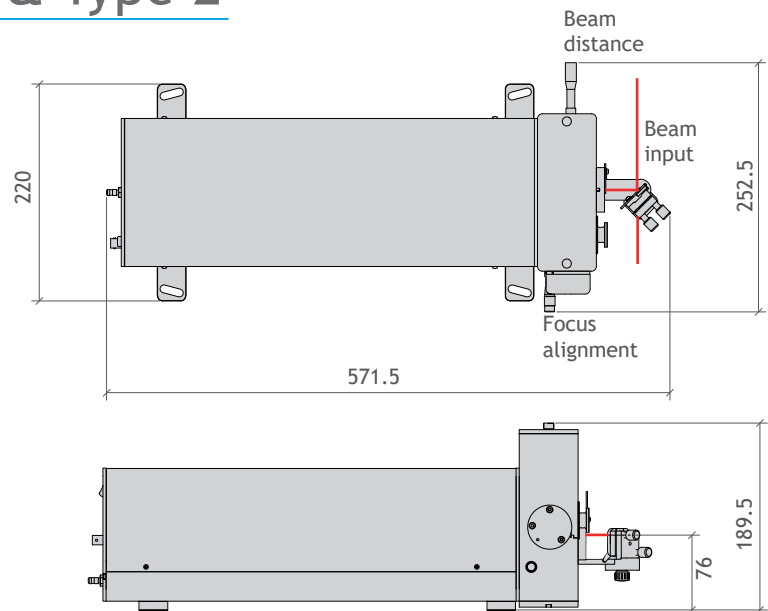
Appendix Technical Drawings

All dimensions in mm

pulseCheck SM 2000 & Type 2

■ Long-range autocorrelator
SM 2000

■ Type 2



Contact

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Therefore, specifications are subject to change without notice.