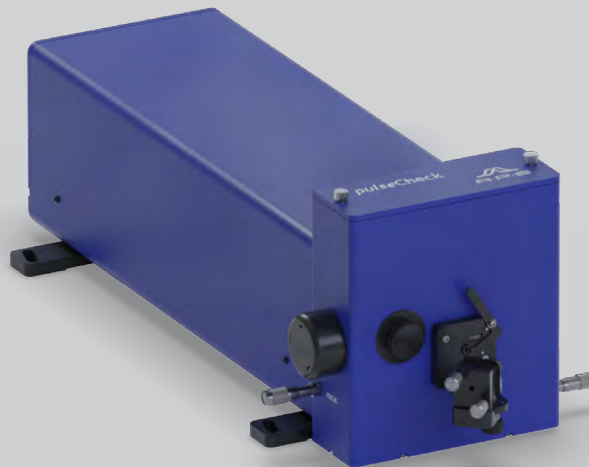


pulseCheck SM 2000 Long-Range Autocorrelator

Pulse Width Measurement
up to 500 ps

With the revised version of the long-range delay technology in pulseCheck SM, the new autocorrelator offers a scanning range up to three times larger and a measuring speed up to five times faster than the previous long-range models. The pulseCheck SM includes a high performance controller that is integrated into the device.

The pulseCheck SM is suitable for particularly long pulse durations of up to 500 ps. At the other end, short pulses down to 20 fs can be measured. A resolution of 1 fs and a sampling rate of 1 MHz is available over the entire measurement range.



- Pulse widths from 20 fs up to 500 ps
- Optics Sets from 200 nm to 12 μm
- Measurement speed of 120 ps/sec
- Automatic phase matching
- Integrated high performance controller
- Toggle between interferometric and intensity autocorrelation
- Wide range of sensitivity levels covered with PMT, PD, and TPA
- USB & Ethernet connectivity and TCP/IP remote control
- Gaussian, Sech^2 , and Lorentzian fitting routines
- NIST traceable calibration

pulseCheck SM 2000 Specifications

Specifications

Measurable Pulse Width*	20 fs ... 500 ps (20 fs - 150 ps directly measured, 150 ps - 500ps half ACF measured)
Wavelength Range	200 nm - 12 µm, depends on Optics Set
Optics Sets	Exchangeable; Detector-Types: PMT, PD, or TPA
Delay Resolution	1 fs
Delay Linearity	< 1 %
Scan Speed	120 ps/s
Sampling Rate	1 MHz
Sensitivity**	Typically $1 \dots 10^{-6} W^2$ depending on Optics Set
Recommended Repetition Rate	PD, TPA: 1 Hz ... GHz; PMT: 250 kHz ... GHz
Type of Measurement Mode	PMT, PD : non-collinear intensity, collinear interferometric; TPA: hybrid collinear intensity
Trigger Mode	TTL, repetition rate 1 Hz - 10 kHz
Input Polarization	Linear horizontal, vertical available as option
Input Beam Coupling	Free-space (6 mm aperture); Option: fiber coupling FC/PC, FC/APC, SMA
Max Input Power	0.5 W (e.g. oscillator with a rep. rate of approx. 70 MHz) or 5 µJ (e.g. amplified system with rep. rates in the kHz range), whichever results in lower value
Software	Included; Real-time display of data and pulse parameters
Fitting Routines	Gaussian, $Sech^2$, Lorentz
Connection	USB, Ethernet
Remote Control	Possible via TCP/IP (SCPI command set)
Calibration	NIST traceable calibration certificate included

Dimensions and Power

Dimensions	253 x 190 x 572 mm (W/H/L) See appendix for technical drawings
Power	95 ... 240 V, 50 ... 60 Hz, Power 60 W

* 13 fs² internal dispersion at 800 nm for short-pulse option to be considered

** Measured sensitivity including Optics Set, defined as average power times peak power of the incident pulses $P_{AV} * P_{peak}$

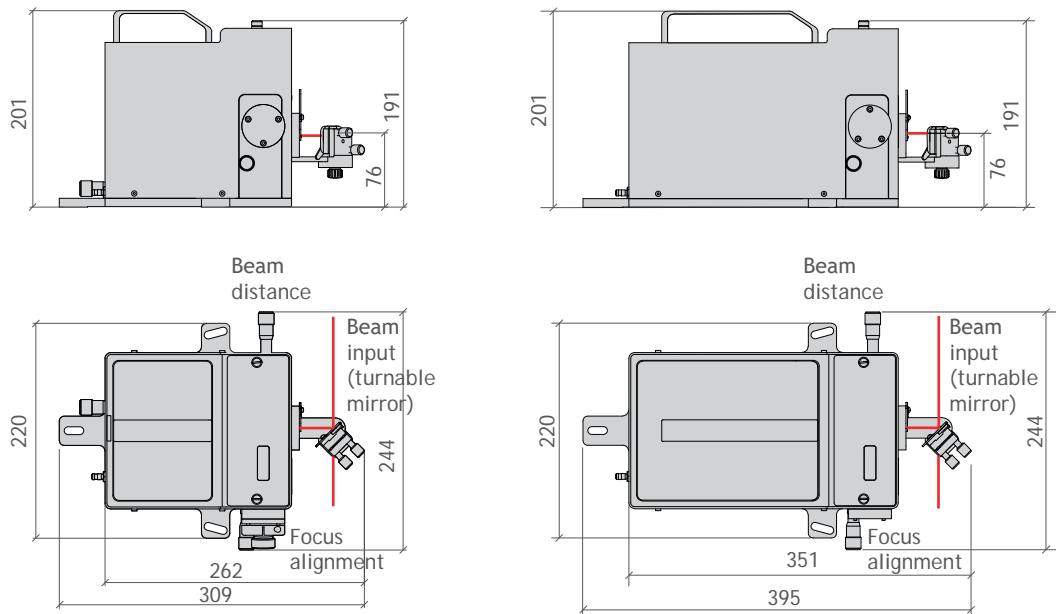
Appendix Technical Drawings

All Dimensions in mm

pulseCheck NX

- Multitalent for any task

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pulseCheck SM 2000

- Long-range autocorrelator

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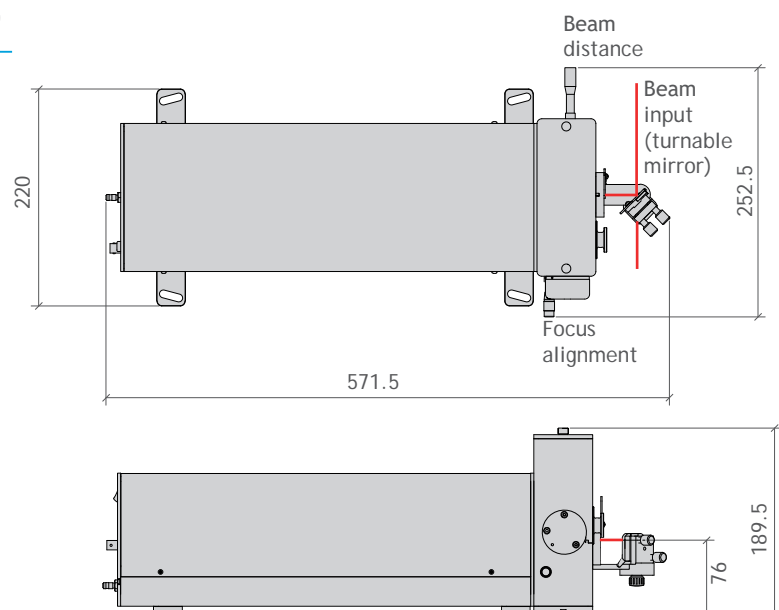


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