pulseCheck Single The Single-Shot Autocorrelator

Perfect Tool to Characterize Single Pulses and Low Repetition Rate Lasers

The pulseCheck Single completes APE's portfolio of autocorrelators by featuring single-shot measurements of ultra-short, low repetition rate amplifiers, as well as the capability to measure high repetition rate lasers.

The single-shot operation and fast refresh rate allow recording pulse duration changes in the fastest possible way. Due to its built-in camera system, the pulseCheck Single can capture the pulse duration as well as the spatial properties of the laser beam in one direction simultaneously.

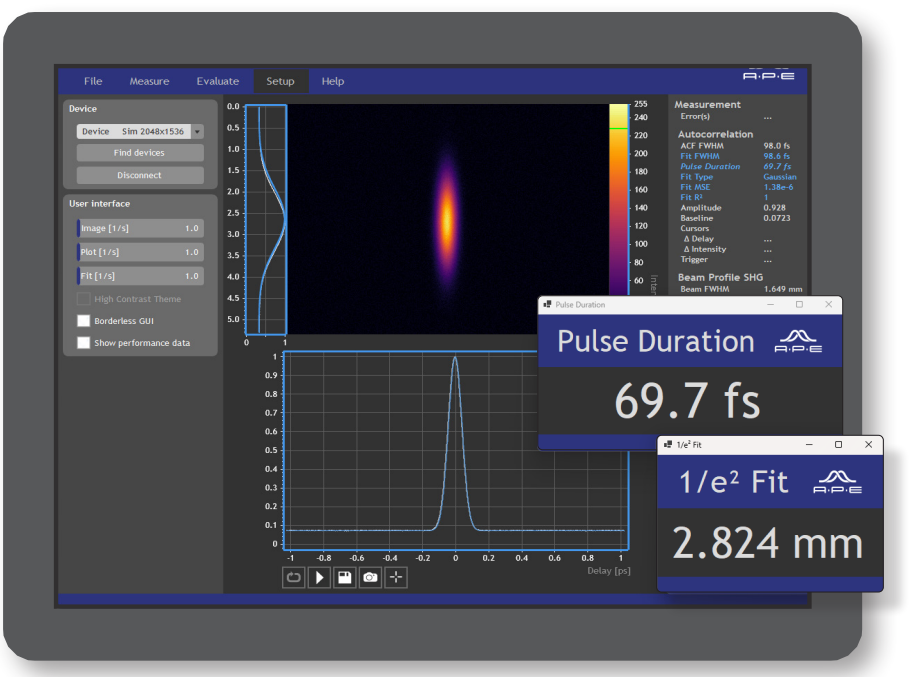
With its compact size and robust design, pulseCheck Single fits into every laser laboratory and can be transported easily between different setups. Its advanced software enables the user to evaluate the full measurement information and track the pulse duration over time.

- From single pulse to GHz measurements
- Cost-effective
- Effortless setup, no tweaking
- Robust design with no moving parts
- Pulse-to-pulse statistics
- Extensive pulse duration and beam data
- Intuitive software
- USB 3.0 data and power transfer (single cable)

pulseCheck Single Overview

Specifications:

Pulse width	20 fs … 500 fs (others on request)
Center wavelength range	720 nm … 1060 nm center wavelength (others on request)
Laser repetition rate	Single-shot to GHz
Single pulse measurement	Up to 30 kHz
Min. input energy	<1 µJ
Max. input power, pulse energy	3 W for MHz laser or 10 µJ for kHz laser
Input polarization	Linear, horizontal or vertical
Min. input beam diameter	2 mm (1/e²)
Input beam height	50 mm … 160 mm
Software	Full software suite included, Windows OS compatible
Interface	USB 3.0 and Windows PC
Power supply	USB 3.0
Camera	CMOS 12 bit, 3 Mpx, 72 dB



pulseCheck Single software GUI

Appendix Technical Drawings

All dimensions in mm

pulseCheck Single

- Single-Shot Autocorrelator