



NEW

## Mini USB

The Mini USB is a compact, interferometer based autocorrelator for measuring the pulse width of fs and ps laser systems with any repetition rate  $> 300$  Hz. It is available for different wavelength ranges.

The wavelength range is chosen at the time of order and then fixed for the individual device. When more than one wavelength range on one autocorrelator is needed, please see the *pulseCheck* autocorrelator, which offers exchangeable Optics Sets, also at customer site.

The Mini USB with *miniLink* controller combines the standard Mini optical head with the new *miniLink* controller replacing the control unit of its predecessor. The *miniLink* controls the measuring process, while being connected via USB to the Control Software running on the customer's computer. In combination with a high resolution digitization and fast processing, the *miniLink* provides the measured autocorrelation function and pulse width data at a high refresh rate and with a very high precision.

- Femtosecond resolution
- Measurement of background free and interferometric autocorrelation functions
- High resolution data acquisition - 16 bit
- Very compact and robust design
- USB 2.0 full speed interface to PC



Scan ranges	150 fs ... 15 ps (150 fs   500 fs   1.5 ps   5 ps   15 ps)		
Measurable pulse width	50 fs ... 3.5 ps (version for < 20 fs optional)		
Scan rate	approx. 10 Hz		
Linearity of position Signal	better than 1 % of actual scan range		
Sensitivity <sup>1)</sup>	photomultiplier tube (PMT): $10^{-4} \text{ W}^2$ photodiode (PD): $1 \text{ W}^2$		
Wavelength ranges	VIS 1	420 ... 550 nm	
	VIS 2	540 ... 750 nm	
	NIR	700 ... 1100 nm	
	IR	1000 ... 1600 nm	
Input polarization	linear / horizontal (polarization rotator optionally for vertical input)		
Diameter input aperture	6 mm (open) or 3 mm (in adjustment position)		
Max. input power	up to 1 W (oscillator with a rep. rate of approx. 70 MHz) up to 10 $\mu\text{J}$ (amplified system with rep. rates in the kHz range)		
Laser repetition rate	depending on Optics Set PMT > 250 kHz                      PD > 300 Hz		
Interaction	collinear / non-collinear (fringe resolved and intensity ACF)		
Power supply	95 ... 240 V, 50 ... 60 Hz, 60 W		
Computer interface	USB		
Input	trigger:	level	0.1 ... 5 V <sub>rms</sub> @ 50 $\Omega$ 0.1 ... 8 V <sub>pp</sub> @ 1 k $\Omega$
		impedance	50 $\Omega$ / 1 k $\Omega$
		repetition rate	300 Hz ... 50 kHz
		width	> 50 ns

1) Sensitivity is defined as average power times peak power of the incident pulses  $P_{AV} * P_{Peak}$

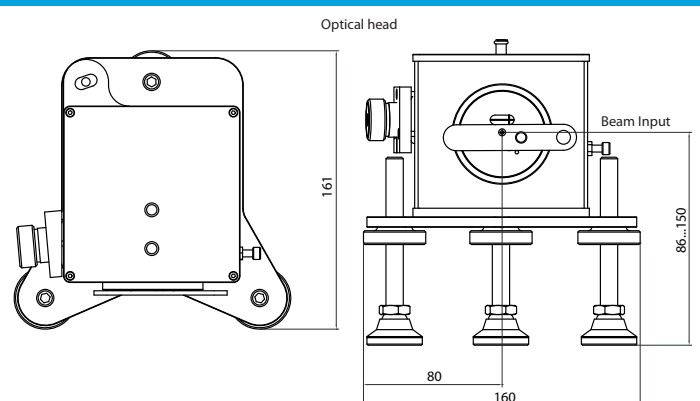
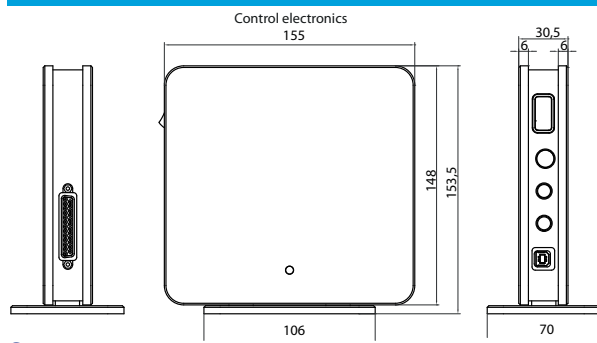
## Options

- Fiber input
- ShortPulse option
- Input polarization rotator

## Dimensions (in mm)

Control electronics:

Optical head:



Contact:

A·P·E Angewandte Physik & Elektronik GmbH  
Plauener Str. 163-165 | Haus N | 13053 Berlin | Germany  
T: +49 30 986 011-30 | E: sales@ape-berlin.de | www.ape-berlin.com  
or

A·P·E America (for the Americas)  
45401 Research Avenue | Suite 141 | Fremont, CA 94539 | USA  
T: +1 (888) 690 3250 | E: sales@ape-america.com | www.ape-america.com

A·P·E follows a policy of continued product improvement.  
Therefore, specifications are subject to change without notice.

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## 脉动科技有限公司

中国代理商

北京总部 地址: 海淀区中关村东路89号 恒兴大厦9C, 100190 电话: 010-62565117 010-84413925 传真: 010-62565117-11 邮箱: info@pulsepower.cn 官网: www.pulsepower.cn

上海办事处 021-32070812 西安办事处 029-87307077 深圳办事处 0755-27528760