

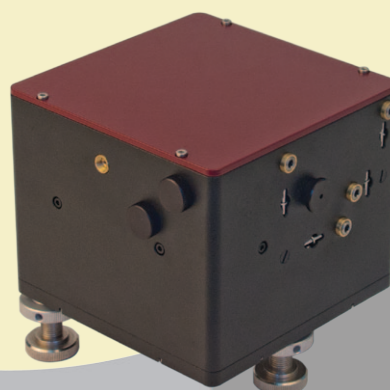


Diagnostics



AA-20DD Scanning Autocorrelator

- 20-30000 fs pulse duration range (10 fs optional)
- Scanning rate: 0.1-20 Hz
- Linear distortion: <1%
- USB connection and software
- All-reflective optics
- Position measurement
- Fringe-resolved autocorrelation function
- Frictionless movement
- Optional fiber input



AA-20DD

Product overview

The AA-20DD real-time autocorrelator offers smooth and fast measurement of femtosecond and picosecond pulse duration. The autocorrelator can cover several wavelength ranges by using up to 3 interchangeable photodetectors and optics. Input pulse duration varies from 10 fs to 30 ps for easy monitoring of different laser systems, especially femtosecond and picosecond oscillators (for amplifier monitoring please see our ASF-20 single-shot autocorrelator).

The device features USB interface and can be easily hooked up to a PC with Windows OS, as well as via the included LabView drivers. The software is supplied with the device and comprises several useful tools. The acquired pulse duration data can be visualized, stored or exported to a .txt or .dat file. Autocorrelation function and final FWHM pulse duration in femtoseconds are calculated and displayed in real-time. Moreover, Gaussian or sech² fitting options are enabled, intensity function may also be observed. The statistical viewer feature allows the comparison of data acquired from several separate pulse measurements.

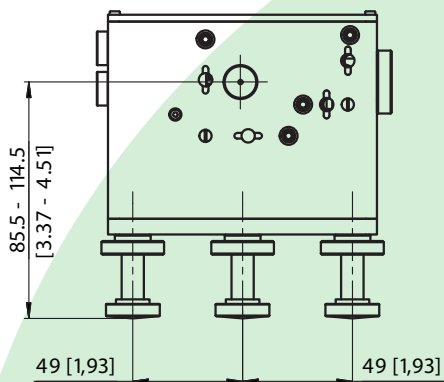
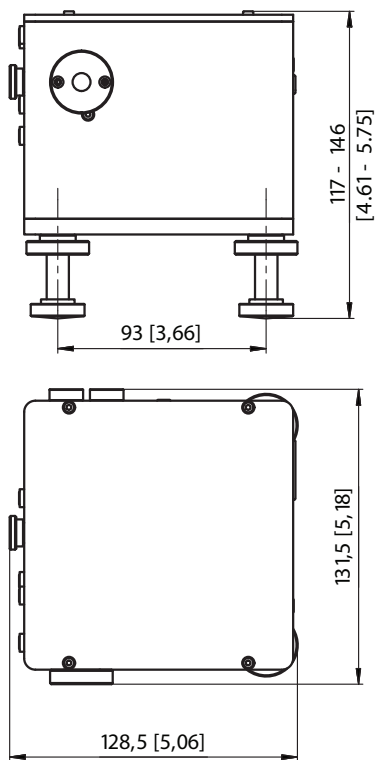
The tiny body of the AA-20DD flawlessly fits any experimental setup with strict space requirements. We also offer an optional fiber input for fast and reliable pulse duration measurement in various optical fibers. Moreover, the autocorrelator in this case still maintains the free-space measurement capability.

AA-20DD technical specifications

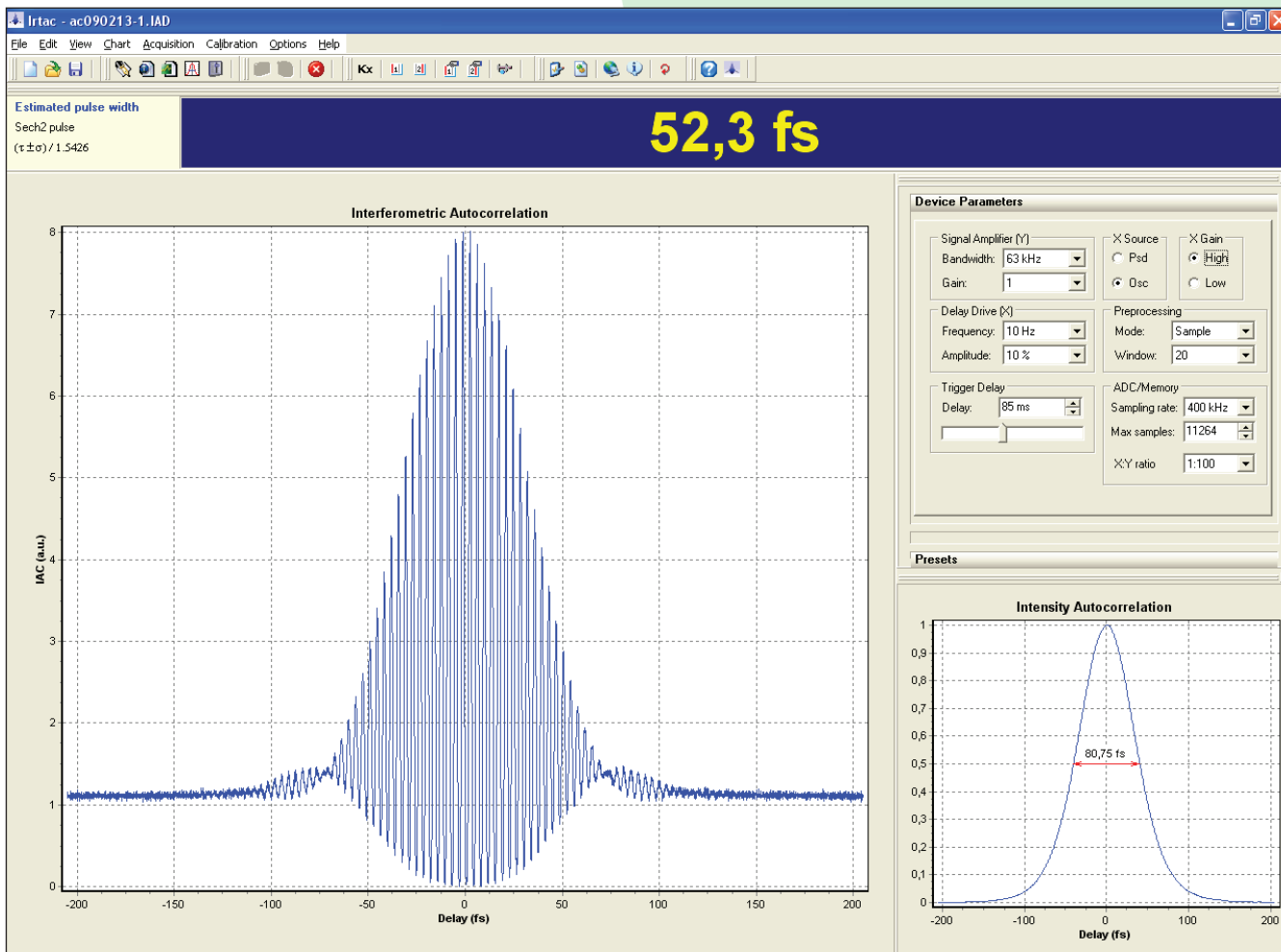
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|---|---|
| Wavelength range, nm | 450-700 (AA-20DDV) 700-1300 (AA-20DD) 1300-2000 (AA-20DDR) 450-2000* (AA-20DD+R+V) |
| Pulse duration range, fs | 20-6000** (default); 20-30000** (-30PS option) |
| Input repetition rate | >10 kHz (default); >10 Hz (-S option) |
| Sensitivity | 100 mW ² |
| Input polarization, linear | horizontal (vertical upon request) |
| Scanning rate, Hz | 0.1-20 |
| Linear distortion, % | <1% |
| Collinear (interferometric and intensity) autocorrelation | yes |
| PC connection | USB |
| Necessary equipment | PC with Windows OS or oscilloscope |
| Fiber input (optional) | FC/PC or FC/APC (other types available upon request) |
| Signal source and detector | two-photon conductivity in semiconductor |
| Dimensions, mm | 132x129x117 (optical unit) 225x190x45 (electronic unit) |

* - the AA-20DD unit may cover either one range of customer's choice, two separate ranges (i.e. 450-1300 or 700-2000) or all three ranges (450-2000 nm) with interchangeable optics and photodetectors (1, 2 or 3 sets included respectively). Please request for more information.

** - pulse duration range from 10 fs is available upon request.



AA-20DD (mm [inches])



AA-20DD acquisition software Irtac