

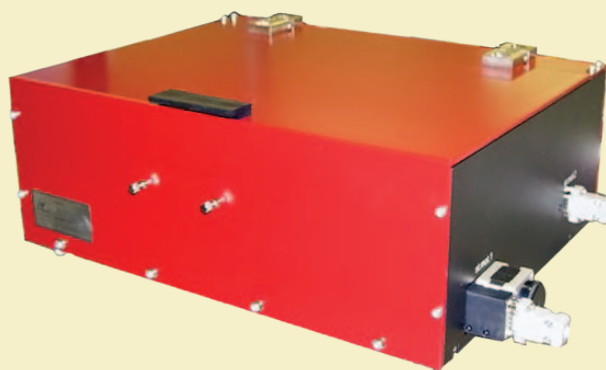


Diagnostics



# IRA-0.45-3 Scanning Autocorrelator

- Pulse duration range 50 fs - 250 ps
- Wavelength range 450-3000 nm
- USB connection



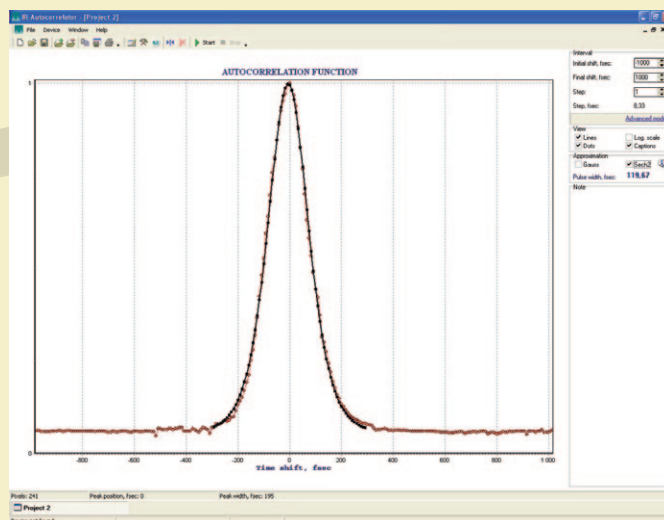
IRA-0.45-3 Scanning Autocorrelator

## Product overview

The IRA-0.45-3 autocorrelator is specifically developed for measurement of pulse duration and near contrast ratio of ultrafast radiation generated by ultrafast amplifiers and oscillators.

The IRA includes opto-mechanical assembly and electronics with USB interface. The system is easy to operate and includes a full set of user friendly software tools for data collection and analysis. Approximation with Gauss and Sech<sup>2</sup> profile is also available. The unit implements a robust scanning mechanism.

The acquisition and analysis software is fully compatible with Windows, USB drivers are included.



|  | IRA-0.45-3   |
|--|--|
| Input wavelength ranges*                             | 450-700 nm<br>700-1300 nm<br>1300-2100 nm<br>2100-3000 nm  |
| Input pulse duration vs. required input pulse energy | Full: 50 fs - 250 ps<br>1) 50 fs - 300 fs (E>50 nJ, thin crystal only)<br>2) 300 fs - 1 ps (E>1 uJ, thin crystal or E>50 nJ, thick crystal)<br>3) 1 ps - 250 ps (E>1 uJ, thick crystal only) |
| Input beam polarization                              | linear, horizontal   |
| Input pulse repetition rate                          | 10 Hz - 80 MHz   |
| Temporal resolution                                  | 8.3 fs (at input duration 50-100 fs)<br>>16.6 fs (at input duration >100 fs)   |
| Full scan range                                      | 850 ps   |
| Power requirements                                   | 220/110 V AC; 50/60 Hz   |
| Necessary equipment                                  | PC with USB, Windows OS  |
| Dimensions, mm                                       | optical unit: 450x250x210<br>control unit: 250x180x90  |

\* - each range is covered by an exchangeable set of crystals, beam splitter and filters; one set for one range of customer's choice is supplied by default, other ranges are optional. Just let us know the desired full wavelength range and our sales team will quote the required setup.