

High Dynamic-Range Time Intensity Measurement of Intense Femtosecond Laser Pulses

Ultrafast lasers are now broadly used in many research fields such as high intensity laser-matter interaction, femtochemistry, THz generation or time-resolved spectroscopy.

Characterization of femtosecond laser pulses has always been a difficult task, but with a new technique called Self-Referenced Spectral Interferometry, invented and patented by Fastlite (Paris, France), researchers can perform single-shot, calibration-free measurements with a simple and compact setup.

The Wizzler system, which includes an AvaSpec-2048L spectrometer, provides spectral intensity, spectral phase and coherent contrast measurements with an unprecedented dynamic range over 40dB, and is now becoming the reference tool in the field of femtosecond pulse measurements.

The included spectrometer covers a bandwidth ranging from 650 to 1080 nm and matches the full spectral bandwidth covered by the widely used Ti:Sapphire lasers. The hardware trigger allows single-shot acquisition up to 1kHz.

