REAL TIME MEASUREMENT AND CONTROL OF YOUR ULTRAFAST LASER AMPLIFIER

d·scan
SINGLE SHOT

sphere
ULTRAFAST PHOTONICS

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d-scan SINGLE SHOT

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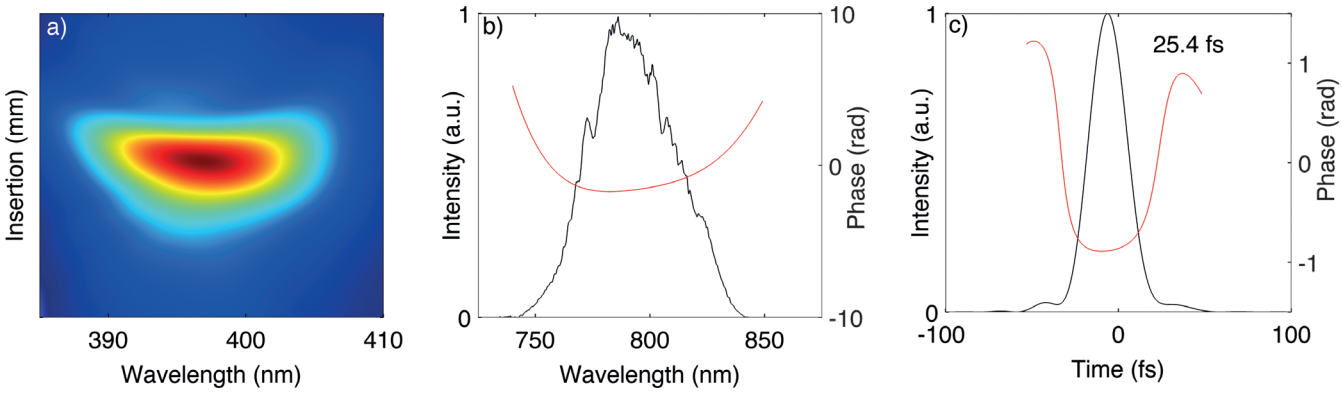
The d-scan single shot is a compact system for measuring ultrafast laser pulses with spectrum supporting 10-70 fs and at repetition rates ranging from sub-Hz to hundreds of kHz or MHz.
Coupling the laser beam into the d-scan single shot is easily achieved in a couple of minutes, and a full measurement (including retrieval) usually takes less than 10 seconds.

The intuitiveness of the d-scan trace provides instant visual feedback for the optimisation of your source. This single shot system is a practical tool for real-time alignment and optimisation of your compressor or pulse shaper, or for measuring the pulse duration after your spectral broadening stage. A proprietary algorithm provides fast and accurate retrieval of the full electric field of the pulses.



(a) Single-shot d-scan trace of an output pulse generated by a Ti:Sapphire femtosecond amplifier.
(b) Spectral intensity (black) and retrieved phase (red) of the pulse.
(c) Temporal intensity (black) and phase (red) of the pulse, with an intensity FWHM of 25.4 fs.

The d-scan single-shot is a compact and robust device enabling single-shot and real-time visualization of your femtosecond laser pulses.

TECHNICAL SPECIFICATIONS	SINGLE SHOT
Wavelength range	650-1050 nm
Pulse duration (transform limited)	10 fs to 70 fs
Chirp range (equiv. to 80 mm of fused silica)	± 1500 fs^2 (a)
Repetition rate	single shot - MHz (b)
Input polarization	Horizontal
Input aperture diameter	2 mm
Input energy	>10 µJ
Dimensions (WxLxH)	195 x 302 x 112 mm

(a) Other chirp ranges on request
(b) Single pulse measurements for repetition rates < 1 kHz

Customized d-scan systems available upon request.

Patent pending (No. WO 2013/054292)