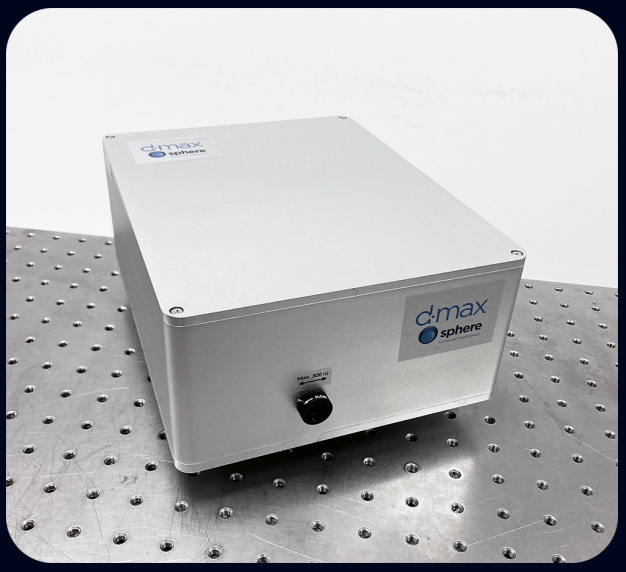


THE HIGH-PERFORMANCE TOOL FOR MASTERING
YOUR HOLLOW-FIBER OR MULTIPASS CELL POST-COMPRESSOR
DOWN TO FEW-CYCLE PULSES

d·max

sphere
ULTRAFAST PHOTONICS

Sphere Ultrafast Photonics
Rua do Campo Alegre, 1021 - Edifício FC6
4169-007 Porto - Portugal
sales@sphere-photonics.com

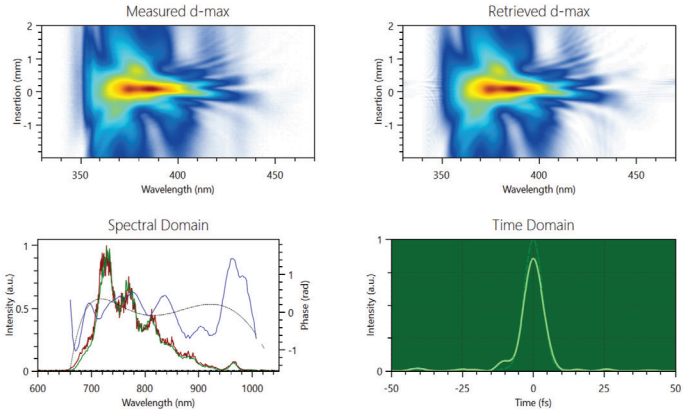
www.sphere-photonics.com

d-max

sphere ULTRAFAST PHOTONICS

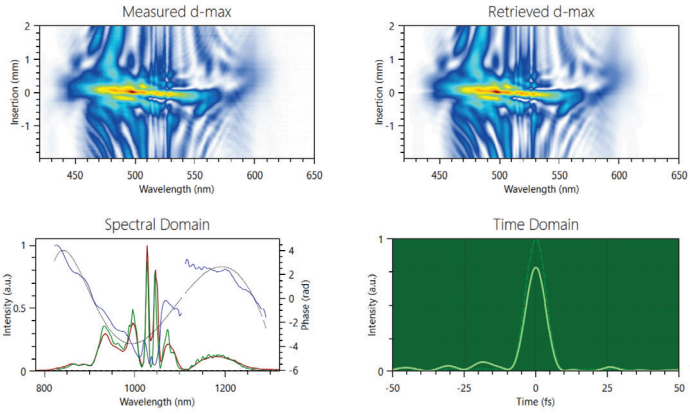
The d-max is the system of choice for fast and accurate measurement of even the most demanding ultrafast pulses, down to ultra-broadband spectra and few-cycle durations. Its compact, standalone design supports a wide range of ultrashort pulses sources, including broadband laser oscillators, amplifiers, OPAs and hollow-core fiber and multipass cell post-compressors. The d-max's compact footprint packs a dispersion-calibrated system that measures your pulses exactly as they are, without ambiguity. Beam coupling takes less than a minute, and a full measurement completes in under 10 seconds. The intuitive d-max trace gives instant visual feedback via the unique Virtual Logbook™ interface, while its proprietary algorithm ensures fast, accurate pulse reconstruction.

Ti:Sa Oscillator (800 nm)



(top) Measured and retrieved d-max traces, (bottom left) Measured spectrum (red), retrieved spectrum (green), retrieved spectral phase (blue), 4th order polynomial fit of the spectral phase (black), (bottom right) Retrieved temporal intensity profile (light green), FTL (Dashed green) (8 fs @FWHM).

Two Stage MPC output (1 µm)

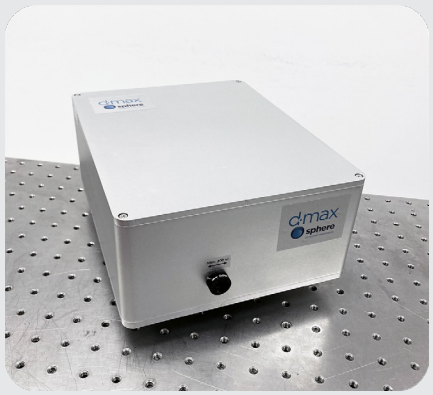


(top) Measured and retrieved d-max traces, (bottom left) Measured spectrum (red), retrieved spectrum (green), retrieved spectral phase (blue), 4th order polynomial fit of the spectral phase (black), (bottom right) Retrieved temporal intensity profile (light green), FTL (Dashed green) (8 fs @FWHM).

The d-max is a compact and robust device for fast and accurate measurement of even the most demanding laser pulses.

TECHNICAL SPECIFICATIONS

	d-max B [a]	d-max R [b]	d-max SWIR [c]	d-max XR
Wavelength range	500-1000 nm	600-1100 nm	700-1400 nm	600-1100 nm / 700-1400 nm
Pulse duration (FTL) [d]	4 fs to 40 fs	7 fs to 50 fs	7 fs to 50 fs	40 fs to 200 fs
Chirp range	±3520 fs²	±3520 fs²	±7040 fs²	>300,000 fs²
Repetition rate	1 kHz and above [e]			
Input polarization	Linear			
Max input aperture	5 mm			
Required input energy	>100 pJ @ 80 MHz 1 µJ @ 1 kHz			
Dimensions (WxLxH)	250 x 200 x 100 mm			



(a) Optimized for post-compressors
(b) Optimized for Ti:Sapphire oscillators and OPCPAs
(c) Optimized for OPCPA
(d) FTL = Fourier-Transform limit. The temporal duration can be much longer if the pulse is chirped (within the chirp range of the model).
(e) Lower repetition rates possible with external synch option
* Vacuum compatible systems available on request

Talk to us for different wavelength ranges, chirp ranges, input aperture, and other requirements

Patent Pending