



REAL TIME MEASUREMENT AND CONTROL OF YOUR  
ULTRAFAST LASER AMPLIFIER

# b·shot



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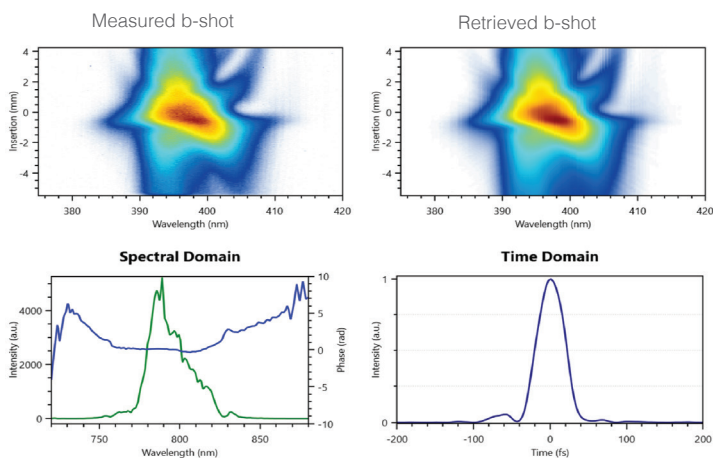
[www.sphere-photonics.com](http://www.sphere-photonics.com)

## REAL TIME MEASUREMENT AND CONTROL OF YOUR ULTRAFAST LASER AMPLIFIER

The b-shot is a compact, user-friendly system for measuring ultrafast laser pulses across a broad range of repetition rates, from single-shot to MHz. Beam coupling to the b-shot takes just a few minutes, and the system delivers real-time, video-rate measurements. Its intuitive trace offers immediate visual feedback, enabling rapid optimisation of your laser source or experiment. The b-shot is ideal for real-time alignment and fine-tuning of laser systems, pulse shapers,

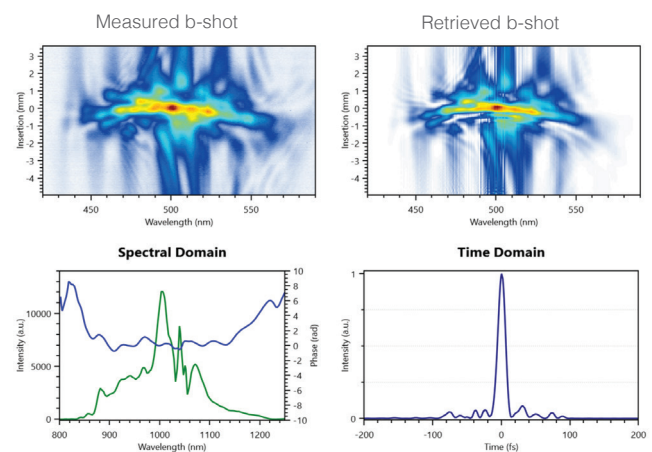
pulse post-compressors or for monitoring the pulse temporal profile and duration after spectral broadening stages. Its proprietary retrieval algorithm enables fast, accurate reconstruction of the full electric field, making the b-shot a powerful tool for advanced ultrafast diagnostics. Combining precision, speed, and simplicity, the b-shot makes pulse characterisation easy and efficient in both laboratory and industrial environments.

### Amplified system (800 nm)



(top) Measured and retrieved b-shot traces, (bottom left) retrieved spectrum (green), retrieved spectral phase (blue), (bottom right) Retrieved temporal profile (42 fs @FWHM).

### Two-stage MPC output (1 $\mu$ m)



(top) Measured and retrieved b-shot traces, (bottom left) retrieved spectrum (green), retrieved spectral phase (blue), (bottom right) Retrieved temporal profile (12.5 fs @FWHM).

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

#### TECHNICAL SPECIFICATIONS

	b-shot	
Wavelength range	650-1000 nm	700-1400nm
Pulse duration (FTL) <sup>(a)</sup>	10 fs to 50 fs	
Chirp range	$\pm 1500$ fs <sup>2</sup> <sup>(b)</sup>	
Repetition rate	single shot - MHz <sup>(c)</sup>	
Input polarization	Linear	
Input aperture diameter	2 mm	
Input energy	>10 $\mu$ J	
Dimensions (WxLxH)	220 x 152 x 98 mm	

(a) FTL = Fourier-Transform limit. The temporal duration can be much longer if the pulse is chirped (within the chirp range of the model).

(b) Other chirp ranges on request

(c) Single pulse measurements for repetition rates < 1 kHz



Contact us to discuss customized solutions for different wavelength ranges, chirp ranges, input apertures, and more