

customized.

Innovative laser systems tailored by our experts to advance your research!



FemtoFiber TeraFlash TRTS

Cutting-edge | Customized | Reliable | Simple & Turn-key

Laser system for time-resolved terahertz time-domain spectroscopy (TRTS)

- 100 dB dynamic range & more than 6 THz bandwidth
- Dual option – simultaneous operation of 2 antenna pairs
- Optical synchronization to femtosecond pump lasers for TRTS
- Integrated pump-probe delay up to 500 ps
- Simple, turn-key, and compact solution

Contact our experts
and discuss your
laser solution.



www.toptica.com/customized

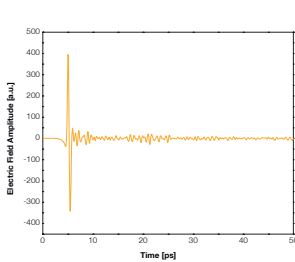
FemtoFiber TRTS



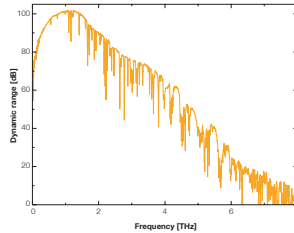
DANGER – VISIBLE AND INVISIBLE LASER RADIATION. AVOID EYE OR SKIN EXPOSURE TO DIRECT OR SCATTERED RADIATION, CLASS 4 LASER PRODUCT, EN60825-1:2014

Specifications				
Laser output	TeraFlash pro	Pumplaser Option #1 FemtoFiber ultra 1550	Pumplaser Option #2 FemtoFiber ultra 780 / 390	Pumplaser Option #3 FemtoFiber ultra 1050 / 525
Spectral range / Wavelength	0.1 – 6 THz	1550 nm	780 nm / 390 nm (switchable)	1050 nm / 525 nm (switchable)
Power	typ. 30 μ W	> 2W	> 500 mW / > 100mW	> 4 W / >1 W
Pulse duration	not defined	< 200 fs	< 150 fs / < 200 fs	< 120 fs / < 200 fs
Repetition rate	80 MHz, optically synchronized via common laser oscillator			
Amplitude modulation (optional)	Pulse-picking down to 40, 20, 10 MHz (others upon request)			
Relative timing control (optional)	Integrated delay line to adjust the relative timing between optical pump and THz probe pulses, 500 ps total scan range			
Output coupling	Free space			
Cooling	Air-cooled			

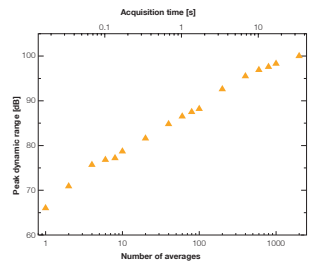
Specifications are subject to change without further notice



Terahertz pulse measured by THz-TDS (time-domain spectroscopy) using the TeraFlash pro.



Terahertz spectrum of air measured with the TeraFlash pro featuring a bandwidth of 6 THz and a dynamic range of 100 dB.



Peak dynamic range as function of total acquisition time / number of averages.