

The flexible solution for THz spectroscopy

The **TeraSys® - AiO** provides a flexible solution for laboratory THz spectroscopy and imaging. It offers maximum flexibility with measurement capabilities in transmission and reflection without realignment of the optics. It is based on organic crystals, to allow access to terahertz frequencies not available with conventional antennas. The **TeraSys® - AiO** includes all optical, mechanical and electronic components for the generation and detection of THz waves such as delay line, terahertz generator, terahertz detector, pump source optics, electronics, humidity sensor, purge chamber, dedicated software, and laptop.



TeraSys[®] - *AiO* (55 cm x 45 cm x 28 cm)

TeraSys [®] - AiO Specifications		
THz generator / detector	DSTMS	
Spectral range	0.3 – 14 THz (in transmission)	
	0.3 – 8 THz (in reflection)	
 Options ◆ THz imaging with a scanning range of 50 x 50 mm² for transmission or reflection operation 		

Frequency domain spectrum measured with the *TeraSys® - AiO* using DSTMS as terahertz generator/detector in transmission and reflection.



TeraSys [®] - AiO	Transmission	Reflection	
Spectral range Dynamic range Signal to Noise (@4 THz) Scan range	0.3 - 14 THz > 70 dB > 60 dB up to 60 ps	0.3 - 8 THz > 40 dB > 35 dB up to 60 ps	
Frequency resolution Dimensions (including the pump source)	< 100 GHz 55 cm x 45 cm x	< 100 GHz 28 cm	
Pump Source (high power ultrafast Erbium fiber laser)			
Pulse length	< 20 fs	< 20 fs	
Total average power	> 200 mW		
Peak power	> 120 kW		
Central wavelength	1565 nm		
Repetition rate	80 MHz	80 MHz	



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