

T-Ray™ 4000 TD-THz System

The T-Ray™ 4000 changes the paradigm of time-domain terahertz (TD-THz) generation and detection. No longer is terahertz the experiment. Now it is the tool. With interchangeable fiber-coupled heads and all necessary components built-in, the T-Ray™ 4000 moves terahertz measurements from the lab table to the bench-top to the factory floor.

Operating in either reflection or transmission mode, the interchangeable fiber-coupled sensor heads deliver a picosecond duration TD-THz pulse, allowing high-speed, scanned images to be easily produced.



FEATURES

- Complete system in a 4 RU 19" enclosure
- Fiber-coupled sensor heads
- Transmitted or reflected data collection
- Full waveform resolution
- High-speed scanning and data acquisition
- Scanned images through most materials
- Multiple sensor heads available
- Dedicated software package
- Multiple lens configurations available

APPLICATIONS

- Gas, liquid and solid spectroscopy
- Nondestructive materials inspection
- Package inspection
- Semiconductor wafer inspection
- Reaction kinetics monitoring
- Medical and biological imaging research
- Remote threat detection
- Subsurface corrosion detection
- Homeland Security solutions

T-Ray™ 4000 System

Parameter	Specification	Units	Comments
Bandwidth	0.02 to 2	THz	3 THz option available
Polarization Extinction Ratio	> 20:1		
Signal-to-Noise Ratio	> 70	dB	Frequency
Rapid Scan Range	320	ps	
Rapid Scan Rate	100	Hz	
Long Scan Range	2.8	ns	
Power Requirements	110/220	VAC	50-60 Hz, 4 A
Size	17.5 x 19.5 x 7	inches	W x D x H
Weight	55	lbs	



Included Software Analysis (Computer with spectroscopy software included)

Time Domain, Fast Fourier Transform, and Absorbance

System Accessories

Options	Description
Imaging Option	8" x 8" 2-D scanning with control electronics, software and focusing lenses
Sensor Head Options	Various sensor heads are available
Fiber umbilical length	2 meters to 30 meters

Quality Vision

As a leader in terahertz instrumentation, Picometrix is committed to providing the highest quality ultrafast products on the market. This quality vision commits us to continually improving our product designs and manufacturing processes in order to ensure the highest level of customer satisfaction. The company maintains a stringent quality control program to ensure that all products meet or surpass customer requirements.



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