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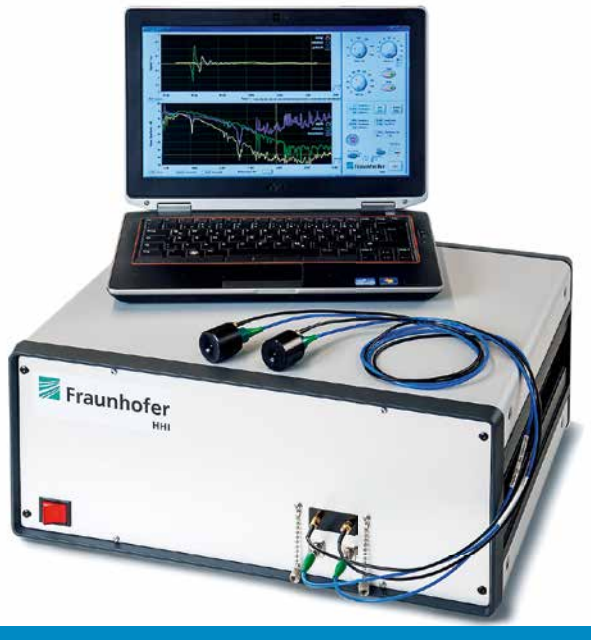
TERAWAVE TIME DOMAIN SPECTROMETER

AT A GLANCE

- All-fiber Terahertz spectrometer operating at 1.5µm optical wavelength



Features

- Turnkey operation
- Full fiber coupling
- Custom fiber extend
- Realtime data aquisition mode

Applications

- High-bandwidth terahertz spectroscopy
- Industrial process control
- Non-contact coating film thickness measurement

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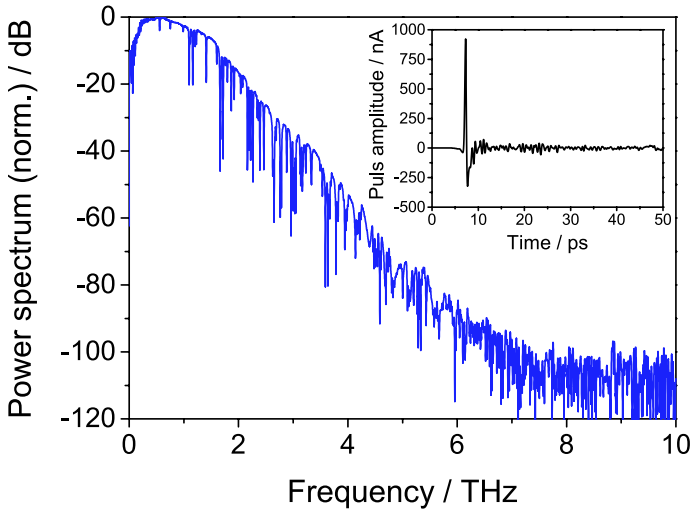
Specifications

- Average optical power 2 × 20 mW
- Pulse duration 100 fs
- Spectral range 0.1 - 6.0 THz
- Dynamic range (peak) > 95 dB*
- Frequency resolution 5 GHz
- THz power 60 µW
- Aquisition rate up to 20 traces/s
- Size 48 × 40 × 20 cm³
- Weight 16 kg
- Price starting from 100.000 Euro

* 1000 averages; 60 s total measurement time



Frequency spectrum recorded with HHI's TeraWave TD spectrometer. The inset shows the trace of the electrical THz pulse. The operating conditions are given in the specifications.

Technical background

Mobile THz systems for field operation – Robust and agile THz systems are the foundation for trans-ferring THz technologies from research facilities to industrial environments. Our Time Domain Spectrometer (TDS) is based on mature telecom components, all operating at an optical wavelength of 1.5 µm. Utilizing HHI's fiber-coupled emitter and detector modules, our THz system provides a unique combination of flexibility and high performance. This allows us to adapt our THz system to your THz application.

The Fraunhofer HHI

One of the prime research and development foci of the Fraunhofer Heinrich Hertz Institute lies in photonic networks, components and systems and their application in fields such as digital media.

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