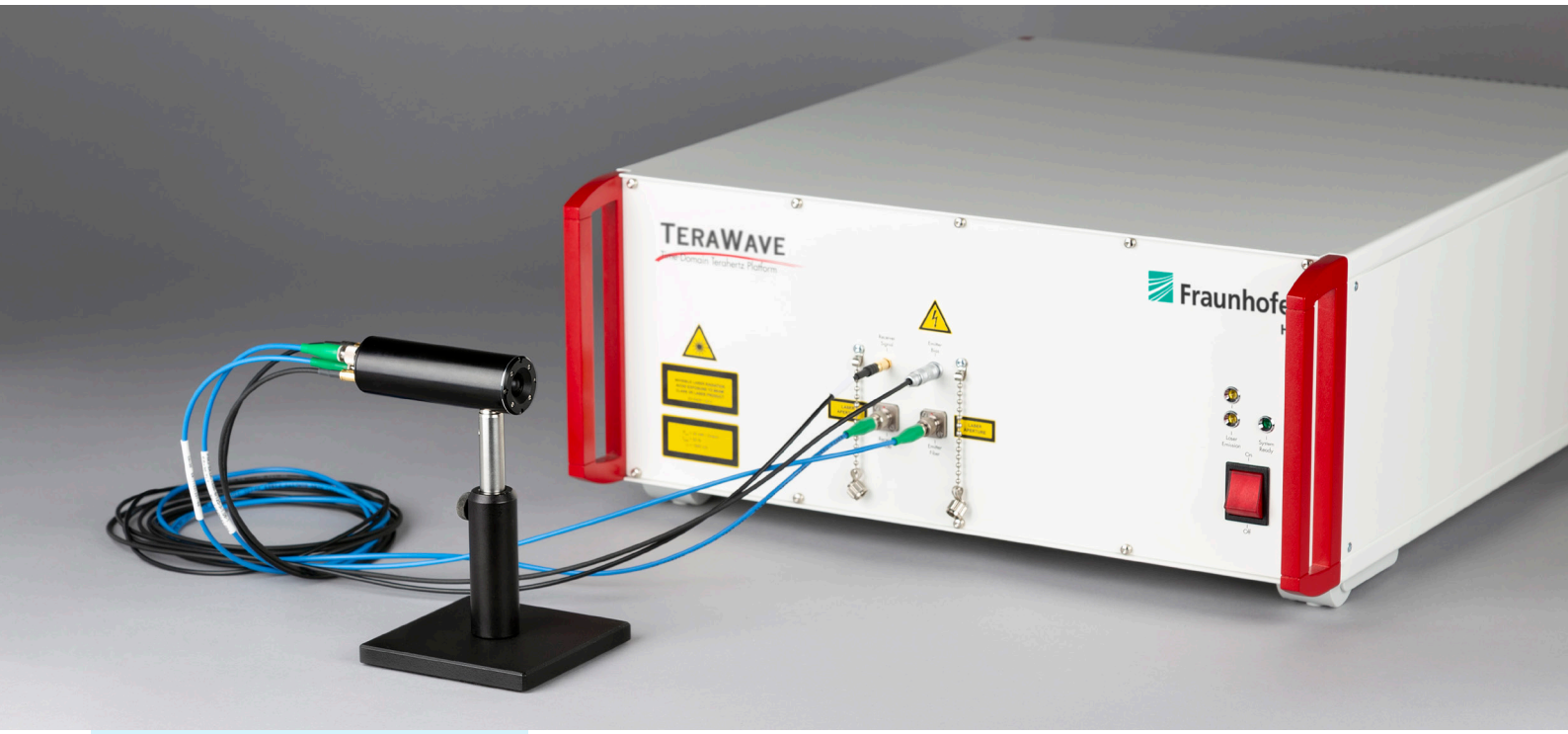
TERAWAVE TIME-DOMAIN SPECTROMETER

Fraunhofer HHI



AT A GLANCE

All-fiber terahertz spectrometer operating at 1.5 µm optical wavelength

Features

- Turnkey operation
- Fully fiber-coupled
- Custom fiber length
- Realtime data aquisition mode
- High power extension

Applications

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

Technical background

Mobile THz systems for field operation: Robust and agile THz systems are the foundation for transferring 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 an unique combination of high flexibility and high performance. This allows us to adapt our THz system to your THz application.

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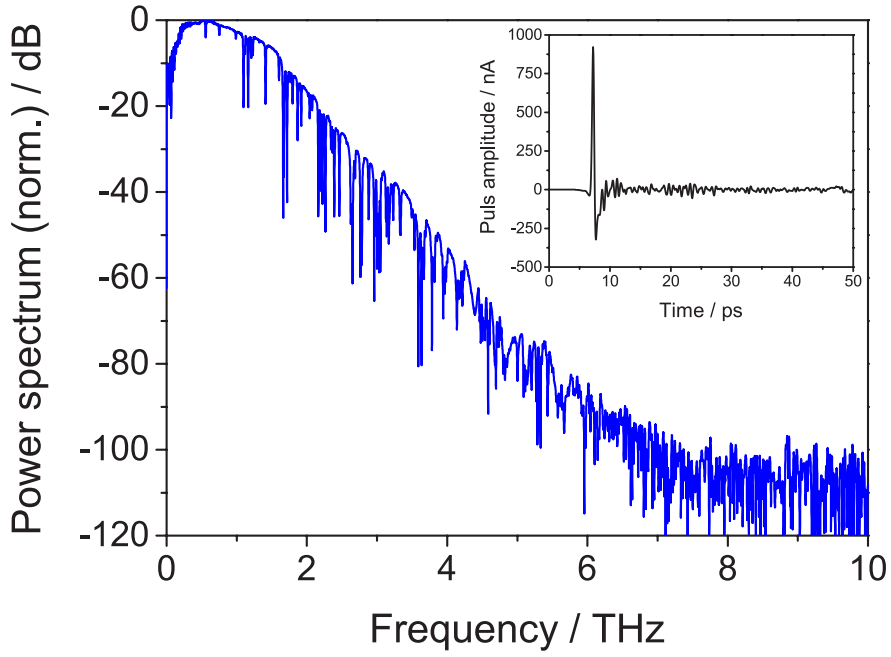

Frequency spectrum recorded with HHI's THz modules. The inset shows the trace of the electrical THz pulse. The operating conditions are given in the specifications.

Specifications

Average optical power	2 × 20 mW
Optical pulse duration	100 fs
Spectral range	0.1 - 6.5 THz
Dynamic range (peak)	> 95 dB
Frequency resolution	1 GHz
Aquisition rate	up to 100 traces/s
Size	48 × 40 × 20 cm^3
Weight	16 kg

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