

PHAZOR – ALL OPTICAL DELAY LINE FOR CW THz SPECTROSCOPY



AT A GLANCE

All optical THz phase control for cw THz systems

Features

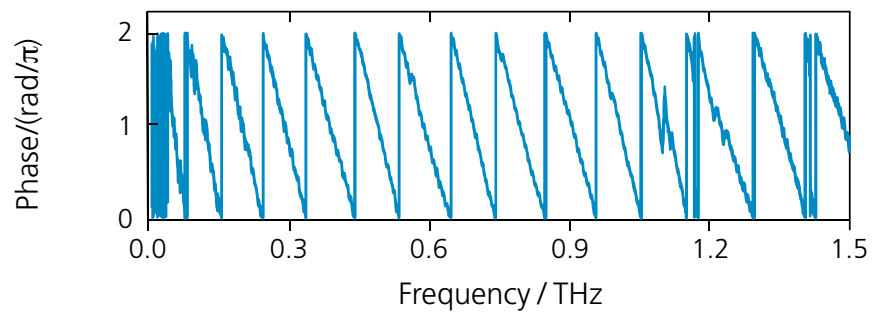
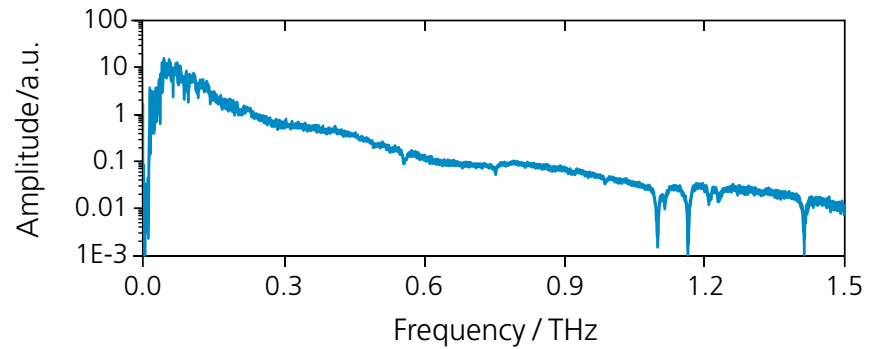
- Plug and play design
- PM fiber
- No moving parts
- Suitable for any laser type

Applications

- High-resolution terahertz spectroscopy
- Precise high-speed terahertz measurements

Technical background

Photomixing based cw THz systems are a reliable tool for precise spectroscopy in the frequency range from 100GHz up to several THz. Up to now, bulky mechanical delay lines are required for coherent detection. This severely limits the measurement time to several minutes for a whole spectrum. In our new Phazor phase control unit we eliminate all moving components and free beam optics by using a fiber optics only standard Telecom phase modulator. Now we can acquire a full spectrum within just a few seconds. The Phazor delay line is a milestone for the successful transfer of THz technologies from academic facilities to industrial applications.



*Coherently recorded frequency spectrum. Measurement time – 20s for 15.000 frequency points
Frequency resolution – 100MHz*

Specifications

- Optical wavelength 1.5 μm
- Insertion loss 4 dB
- Maximum modulation
frequency 150 MHz
- Size 20 × 10 × 3 cm³
- Weight 0.5 kg

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