



A Passion for Precision.

Press Release

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FemtoFErb: Turnkey fs-pulses Most compact and cost effective laser source for Terahertz generation

TOPTICA's new FemtoFErb is a turnkey laser system providing 100 mW average power at 1560 nm and a pulse duration of less than 100 fs at a repetition rate of 100 MHz. The all-fiber system is based on Erbium doped fiber and saturable absorber mirror mode-locking (SAM) technology and is equipped with a direct polarization maintaining fiber output interface. With its compact footprint of only 202 x 122 x 69 mm³ it is the most compact fs-fiber laser available on the market that includes optics and all necessary control electronics in one single box. The FemtoFErb perfectly fits the requirements of fiber-based time-domain Terahertz, fully replacing bulky and cost-consuming solid-state lasers.

The fiber technology ensures a very compact design and highest robustness against vibrations and mechanical shocks. Telecom-qualified components guarantee reliability and a long lifetime of the product. The passive SAM device ensures self-starting and reliable mode-locking.

The FemtoFErb is a plug&play system for both OEM integrators and single unit customers. It provides an electrical interface for remote control and only requires a 12 V supply for all internal electronics. For single system users, an optional SwitchBox provides all switches, supply and status lines to run a FemtoFErb as a stand-alone system without integration environment.



FemtoFErb ultra-compact system for pulsed THz generation

Author:

Dr. Marion Lang, TOPTICA Photonics AG

Key Features

- Ultrafast: < 100 fs pulse duration
- > 100 mW output power
- Turnkey
- Fiber pigtailed output (standard, others on request)
- Saturable-absorber mirror technology
- State of the art fiber-technology: robust and reliable all-fiber setup
- Telcordia-proved components
- Compact footprint (202 x 122 x 69 mm³)
- All necessary control electronics inside
- optional: USB interface

The FemtoFERb will be live demonstrated at BIOS / Photonics West 2011 in San Francisco at the TOPTICA booth 8(8)17.

TOPTICA Photonics AG develops, manufactures, services and distributes technology-leading diode and fiber lasers and laser systems for scientific and industrial applications. Sales and service is offered worldwide through TOPTICA Germany and its subsidiary TOPTICA USA, as well as all through 14 distributors. A key point of the company philosophy is the close cooperation between development and research to meet our customers' demanding requirements for sophisticated customized system solutions and their subsequent commercialization.

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