

# physicsworld

## OPTICS CHALLENGES AND SOLUTIONS



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**May 2011**

See you at **LASER** World of **PHOTONICS**  
 Munich, 23.- 26.5.2011, hall B1, booth 428

**HIGH Q LASER**<sup>®</sup>  
 THINK ULTRAFAST!<sup>™</sup>

**femtoTRAIN<sup>™</sup>** Ytterbium High-Power

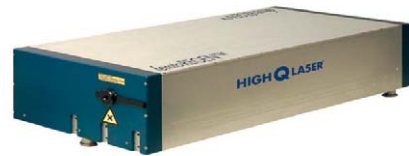
- Optional Green and UV module
- 200...350 fs
- up to **8 W**
- Integrated pump diode, „true turnkey“ operation
- FEA optimized mechanical set-up
- High beam quality, stable output
- Remote maintenance via Internet

**femtoTUNE:**  
 Tunable OPO and  
 OPA for all our lasers  
 available



**femtoREGEN<sup>™</sup>** Industrial

- Optional Green and UV modules
- up to **8W**
- < 400 fs
- TCP/IP remote control
- Industrial MTBF and up-time
- Burst mode for arbitrary pulse sequences
- Integrated **femtoTRAIN<sup>™</sup>** Ultra Compact seed laser



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See you at  
**LASER World of PHOTONICS**  
 Booth B1.668



**Autocorrelator PulseCheck USB**  
 with new PulseLink Controller



- More than 1024 datapoints
- Auto phasematching for SHG signal **20 fs ... 35 ps**  
**420 nm ... 1600 nm**
- External triggering possible
- Scan rate can be phase-locked to external trigger signal
- Complete control via PC

**your partner in ultrafast**

**APE Angewandte Physik & Elektronik GmbH**  
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**LABFER Ltd**

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**MgO:PPLN elements for wavelength conversion**

The business of Labfer Ltd is sale and development of low-cost nonlinear-optical QPM crystals for wavelength conversion of laser light in wide frequency range from ultraviolet to mid-infrared based on periodically poled lithium niobate (LN) and lithium tantalate (LT). It includes manufacturing of the crystals for blue and green light sources using frequency doubling of fiber, solid-state and diode lasers, OPO mid-IR generation as well as custom crystals for specific applications. Original patented technology of the periodic micro- and nanodomain structuring in MgO doped LN and LT is used for crystals manufacturing.

The achieved parameters for single pass SHG (from 1064nm to 532nm) for nanosecond pulse laser: a) conversion efficiency up to 70%, b) average power above 10W in 5-mm length and 1-mm thick crystal, c) QPM temperature 30–80°C at the customer's option.

Crystals can be equipped with special mounts and temperature controllers for ease of use.

