

FemtoFiber™

All-fiber, femtosecond pulse ytterbium oscillator/amplifier system



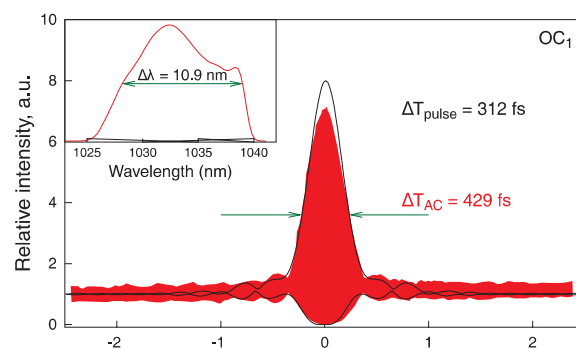
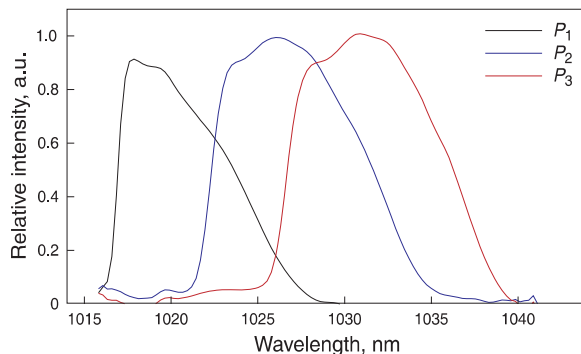
Key features

- All-fiber, all-normal dispersion oscillator
- Automatic control for low RMS noise operation
- Tunable in the 1020-1040 nm regime

Applications considered

- Multi-photon and CARS microscopy
- Ultrafast spectroscopy
- Seed for femtosecond pulse OPO-s and FOPO-s

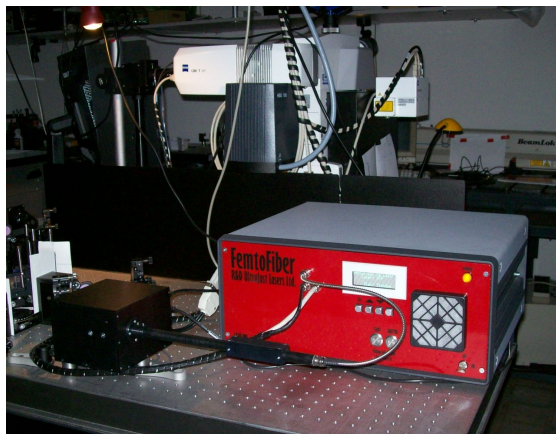
Typical output spectra and SHG autocorrelation trace



Reference

Fekete J, Cserteg A, Szipócs R; All-fiber, all-normal dispersion ytterbium ring oscillator. *Laser Phys. Lett.* **6** (1) 49-53 (2009)

Application for nonlinear microscopy



System Specifications (preliminary)

Average output power: > 900 mW
 Operation wavelength: ~ 1030 nm
 Bandwidth: > 6 nm
 Pulse duration at laser output: ~ 20 ps
 Repetition Rate: 20-80 MHz
 Spatial Mode: TEM00
 Polarization adjustable by QWP and HWP

Optional compressors:

Transmission grating or hollow fiber compressor
 Compressed pulse duration: < 300 fs or < 600 fs