



R&D ULTRAFast LASERS LTD.

## Femto-Fybre™

All-fiber, femtosecond pulse ytterbium oscillator/amplifier system



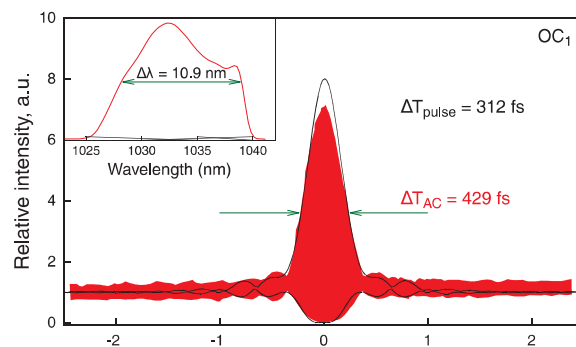
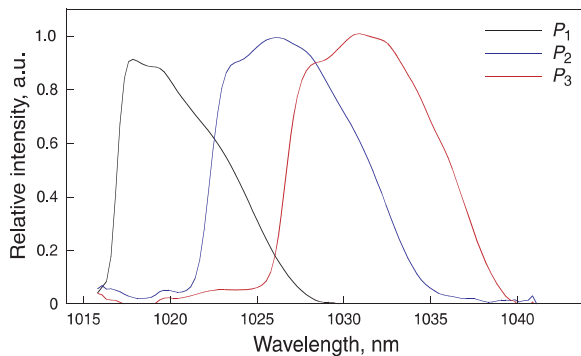
### Key features

- 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

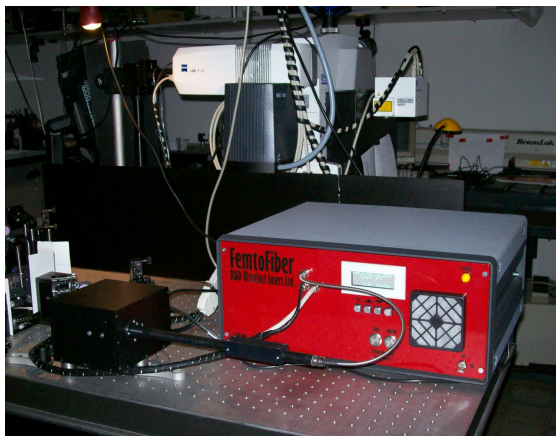
## Typical output spectra and SHG autocorrelation trace



### 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