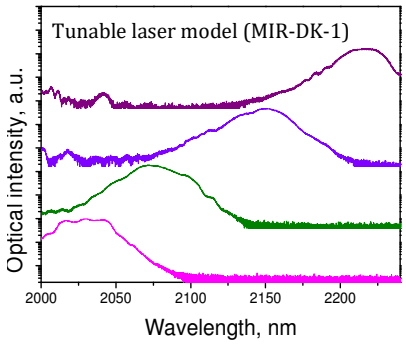
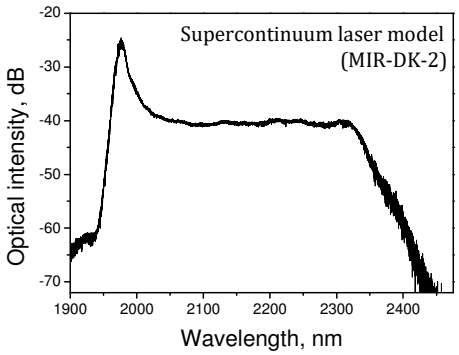
MIR-FIBER

MIR-DK Series High Energy, High Repetition Rate Tunable Fiber Lasers & Supercontinuum Sources

High Sensitivity Molecular Spectroscopy, Stand-off Detection
and Fine Materials Processing at 2 – 2.5 µm

Typical output spectra





Dimensions: 45x44x13 cm
(standard 19-inch 3U-rack)

Key features at a glance

- 10 MHz to 250 MHz rep. rate, single- or multiple pulse, high energy (up to 0.5 µJ) femtosecond or picosecond pulses
- Electronic tunability between 2 and 2.5 µm
- Ulra-broad spectral coverage (2 – 2.5 µm) directly from the laser
- Superb beam quality with typical M^2 ≈1.2

ATLA Lasers MIR-DK Series is a family of compact all-fiber lasers that have been designed to produce high-energy (up to 0.5 µJ) ultra-short pulses (femtosecond or picosecond) over a large pulse repetition frequency range from several MHz to 250 MHz. With broad range of laser parameters available, users can select the ideal combination of pulse repetition rate, pulse energy, pulse duration and spectral bandwidth to maximize performance for specific application – fine material processing or sensing.

The most attractive feature distinguishing ATLA Laser from the other commercial fiber lasers is the possibility to electronically tune from 2 µm to 2.5 µm or produce a broad flat-top spectrum directly from the laser. The MIR-DK tunable and supercontinuum versions of the laser are unique on the market.

ATLA Lasers MIR-DK Series architecture offers along with the rugged all-fiber design the compactness and user-friendliness of the best commercial femtosecond Yb-fiber lasers with advantage of mid-infrared wavelength coverage, where molecules have their fundamental absorption lines. This enables several novel sensing and fine material processing applications.

Applications

- Trace-gas sensing and stand-off detection
- Mid-IR OPO pumping, including mid-IR supercontinuum generation
- Fine material processing of novel composite, glass, polymer, semiconductor materials
- Accelerated precision marking
- Biomedical applications – surgery, multi-photon imaging, breath analysis