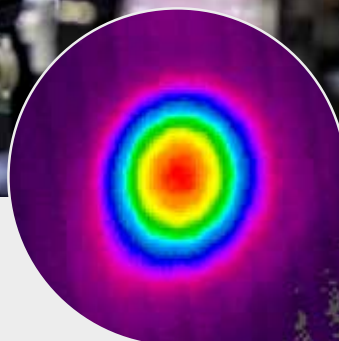
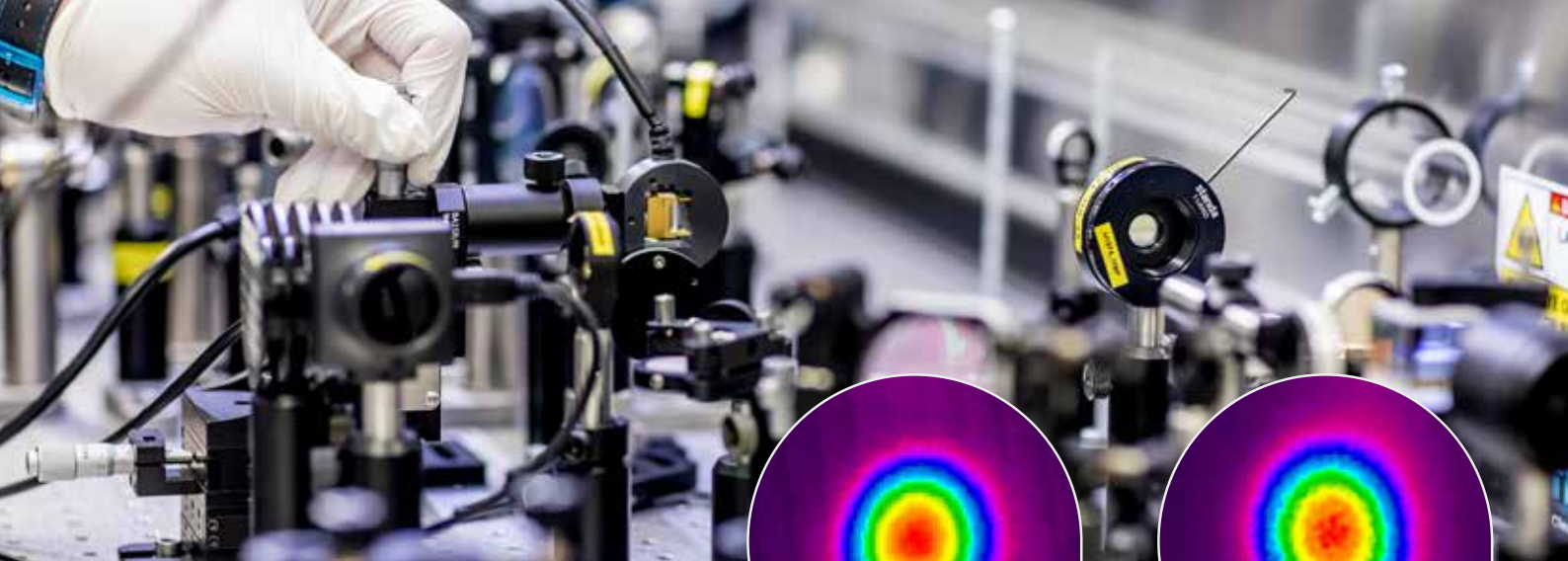




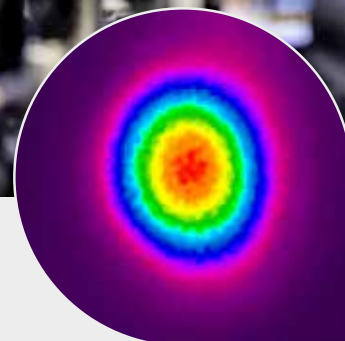
SUPERLASERS FOR THE REAL WORLD

HIGH-POWER MID-IR 2.0 – 10.0 μm BEAMS

The continuous development of high power mid-infrared direct lasers and parametric amplifiers enables their usage in many applications. Optical parametric processes in nonlinear crystals can be used to convert near-infrared radiation of high-power thin-disk lasers to the mid-infrared spectral region. Utilizing these optical parametric processes, the potential to generate high average power beams at wavelengths covering regions inaccessible by other laser technologies is now made available. Two converted beams, so called signal and idler beam, are available at the system output simultaneously.



GAUSSIAN LIKE FLUENCE PROFILE
OF THE IDLER BEAM
AT THE OPA STAGE OUTPUT



GAUSSIAN LIKE FLUENCE PROFILE
OF THE SIGNAL BEAM
AT THE OPA STAGE OUTPUT

FEATURES / ADVANTAGES

- Wavelength tunability for laser-matter interaction optimization
- Processing of transparent samples by multi-photon absorption
- Selective material removal
- Heat affected zone minimization by use of ultrashort pulses
- High spectral energy density
- Eye-safe region

SPECIFICATIONS

- Output wavelength range: 1.5 μm – 3.5 μm
(extendable to 10 μm region)
- <2 ps pulse width
- 100 kHz repetition rate
- High average power up to 10 W

APPLICATIONS

- Medicine and biology
- Spectroscopy
- Laser induced damage threshold measurement
- Material processing of transparent materials
- LIDAR
- Defence and security

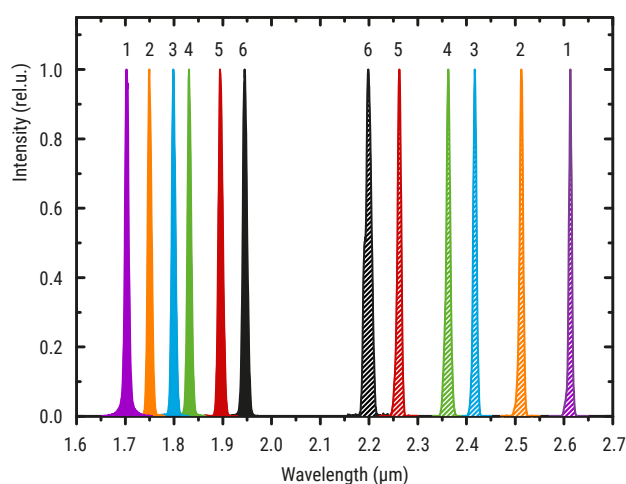
OFFERED SERVICES

- Wavelength conversion modules for use with PERLA laser or other similar lasers
- Laser beam time rental with diagnostics and expertise

For more information please contact: solutions@hilase.cz



NONLINEAR CRYSTALS
OF THE MID-IR SETUP



EXAMPLES OF THE OUTPUT SIGNAL (BELOW 2.06 μm) AND IDLER BEAM (ABOVE 2.06 μm) SPECTRA FOR SIX DIFFERENT SETTINGS OF THE WAVELENGTH TUNABLE MID-IR SYSTEM