

TOPAS

Optical Parametric Amplifiers for Ti:Sapphire lasers

TOPAS is a range of white light seeded femtosecond Optical Parametric Amplifiers (OPA), which can deliver continuous wavelength tunability from 189 nm to 20 μm , high efficiency and full computer control. With more than 1700 units installed worldwide, TOPAS has become an OPA market leader and standard tool for numerous scientific applications. TOPAS can be pumped by Ti:Sapphire amplifiers with pulse duration ranging from 20 fs to 200 fs and pulse energies from 10 μJ up to 60 mJ. Custom solutions beyond given specifications are also available.

FEATURES

- ☒ Typical energy conversion into the parametric radiation > 25–30% (signal and idler combined)
- ☒ Tuning range 1160–2600 nm out of a single box (extendable to 189 nm–20 μm)
- ☒ High output stability throughout the entire tuning range
- ☒ Nearly bandwidth and diffraction limited output
- ☒ Passive carrier envelope phase (CEP) stabilization of the idler (1600–2600 nm)
- ☒ Computer controlled operation
- ☒ Custom solutions available

TOPAS-Prime

TOPAS-Prime is a two stage optical parametric amplifier of white-light continuum. TOPAS-Prime offers high energy conversion efficiency (>30% typically) without compromise in spatial, spectral and temporal qualities of the output. Two main versions of TOPAS-Prime are available: a standard version with input energy of up to 3.5 mJ @ 35 fs and TOPAS-Prime-Plus with increased input energy acceptance of up to 5 mJ @ 35–100 fs.



TOPAS-HR

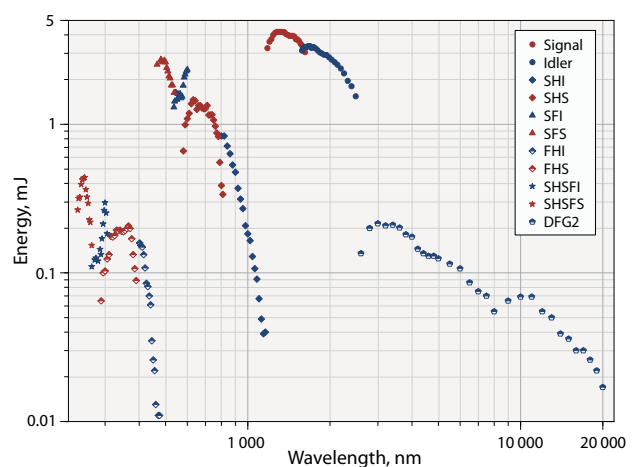
for High Repetition Rate Applications

TOPAS-HR is an optical parametric amplifier designed for high repetition rate (10 kHz–1 MHz) applications. TOPAS-HR provides high pulse-to-pulse stability throughout the entire tuning range, high output pulse and beam quality, full automation via USB port as well as optional frequency mixing stages for tuning range extension. TOPAS-HR can be pumped by high repetition rate Ti:Sapphire femtosecond laser amplifiers and is an invaluable tool for spectroscopy, multiphoton microscopy, micro-structuring and other applications.

HE-TOPAS-Prime

for High Pump Energy

HE-TOPAS-Prime is a three stage optical parametric amplifier of white-light continuum designed for input energies higher than 5 mJ. Over 40% energy conversion efficiency to signal and idler is typically achieved. The system is compact, user-friendly and easily reconfigurable for different pump pulse parameters. Two main versions of HE-TOPAS-Prime are available: a standard version with input energy of up to 25 mJ @ 100 fs (8 mJ @ 35 fs) and HE-TOPAS-Prime-Plus with input energy of up to 60 mJ @ 100 fs (20 mJ @ 35 fs). Additional custom solutions are available, e.g. higher pump energy, temperature stabilized housing, slow loop idler-CEP stabilisation etc.



HE-TOPAS-Prime tuning curve. Pump: 22 mJ, 45 fs, 805 nm

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