

PHAROS-UP

NEW ULTRASHORT PULSE FEMTOSECOND LASER WITH <math><100\text{ fs}</math>



Femtosecond laser series Pharos is extended by a new short pulse version with <math><100\text{ fs}</math>. The previously available models provide 10 W or 20 W at <math><190\text{ fs}</math> and up to 1 MHz. Pharos stands out by its high flexibility and excellent beam and stability properties.

Ti:Sapphire lasers are often used when short pulse durations are required. While this technology is limited to a few kHz, Yb-based Pharos-UP offers up to 1 MHz at <math><100\text{ fs}</math> and even better beam quality. This enables higher throughput in scientific and industrial applications. Pharos-UP can also be used as pump laser. New Orpheus-ONE-UP with tuning range from 1450 nm - 4 μm (optionally up to 16 μm) was especially designed for short pulses <math><100\text{ fs}</math>.

This technical advancement has also been noticed by journal Laser Focus World. Their experts award this year's innovators prize to Pharos-UP as one of the best technical innovations in photonics.

FEMTOLUX30

INDUSTRIAL FEMTOSECOND LASER RECEIVES INNOVATORS AWARD

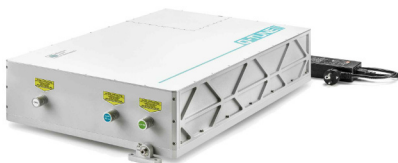


Industrial femtosecond laser FemtoLux30 is the second laser in our portfolio receiving this year's innovators prize from journal Laser Focus World. Instead of standard water cooling, it uses Direct Refrigerant Cooling which provides high heat transfer rates, high temperature stability at compact dimensions. Unlike water cooling, it requires no periodic maintenance.

FemtoLux30 delivers tunable pulse durations from <math><350\text{ fs}</math> to 1 ps at repetition rates from single pulse to 4 MHz. Maximum pulse energy of >90 μJ is achieved at 200 kHz. Using burst mode even up to 250 μJ are available. FemtoLux30 is a versatile tool for processing brittle materials like glass, sapphire or ceramics, for microelectronics manufacturing as well as for high precision micro-structuring of metals and polymers.

Q-TUNE-HR

NEW TUNABLE 100 kHz NANOSECOND LASER



Q-Tune-HR is a new tunable wavelength optical parametric oscillator with tuning range from 750 - 1800 nm @ 100 kHz or 1600 - 3200 nm @ 10 kHz. The high repetition rate enables fast data acquisition for many spectroscopy and microscopy applications. This OPO requires an external pump laser with 5 - 8 ns pulse width at 532 nm and 100 or 10 kHz. Maximum conversion efficiency of 20% is optimized for the range 750 - 950 nm or 1200 - 1800 nm on customer choice.