



## Quality and Excellence, presented by Sintec Optronics

### \*NEW\* Multi-wavelength laser

Special offer single and multi-channel fiber coupled laser systems are designed with integrated electronics and easy operation. Single channel combines 2~20 wavelengths into one box, multi-channel combines 2-4 wavelengths into one box and then output from the light outlets of the respective channels. USB or RS232 connector is optional. Wavelengths are available for UV-Visible-IR range, lasers include diode and DPSS lasers. The multi-wavelength lasers are widely used for medical, biomedical, and industrial application, etc.

#### Customisable Features:

- Available wavelengths: 320nm – 1064nm
- Fiber coupled output on request
- Output power customised on request
- USB or RS232 optional
- CW, TTL, or analog on request



### \*NEW\* STKM-XUUS – Extreme Ultraviolet (EUV) Laser source

Extreme ultraviolet (EUV) and soft X-ray (SXR) science and high harmonic generation (HHG) sources has seen revolutionary advances over the past decade. HHG sources bring a tunable X-laser to your laboratory, with selectable wavelength from 2 – 47 nm (26 – 700 eV), control over the linewidth from <100meV to a coherent supercontinuum, fully spatially coherent beams, linear and circular polarization, as well as the ability to generate attosecond pulses and pulsetrains that are perfectly synchronized to the driving laser pulses. This allow scientists to make the most precise measurements to date – from capturing intrinsic sub-femtosecond electron dynamics in materials, to implementing the first sub-wavelength EUV/SXR microscopes.

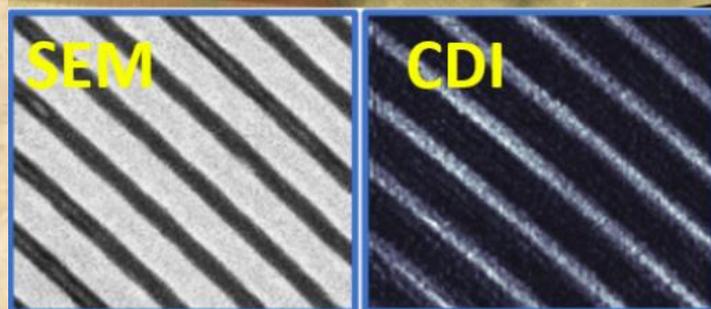
STKM- XUUS upconverts ultrafast laser pulses into the Extreme UV (EUV) or Soft X-Ray regions of the spectrum. Employing the process of high harmonic generation, the output beam is fully coherent and laser-like, with a wavelength that can be tuned from ~10 to 47 nm. Moreover, customized systems can generate coherent beams with wavelength as short as 6.5 nm.

#### Applications:

- Metrology for nanoelectrics and EUV lithography
- High-resolution and time-resolved lensless nanoimaging
- Ultrafast magnetic materials & spintronics studies
- Photoemission: tr-ARPES & attosecond materials science
- High spatial and temporal resolution pump-probe of magnetic, materials, molecular, and nano dynamics
- Molecular dynamics and attosecond science

#### Features:

- Patented high harmonic conversion in a waveguide for optimum conversion, stability, and minimum gas usage. EUV flux can exceed > 1x10<sup>12</sup> ph/sec, for the most demanding applications
- Wavelength Ranges: EUV 10-47 nm (26-144 eV) and Soft X-rays 6.7-10 nm (124-200 eV)
- Ultrastable, 4-axis active stabilization, generating an EUV beam intensity and highly coherent wavefront stability
- Repetition rate from 1 kHz to >100 kHz depending on drive laser
- Custom XUUS systems to generate soft X-rays to wavelengths ~2nm
- XUUS output can be optimized for different applications: ARPES, imaging, transient absorption, MOKE, XMCD



### \*NEW\* STKM-Y-Fi Ultrashort pulse (sub-100 femtoseconds) laser series

STKM-Y-Fi laser series is a family of compact high average power, high repetition rate near-IR ultrafast Yb fiber lasers. Y-Fi products are based on a single rugged opto-mechanical platform and are engineered for hands-free operation.

The STKM-Y-Fi family employs a patented all normal dispersion (ANDi) modelocked Yb fiber laser coupled with a fiber amplifier. This configuration offers numerous unique advantages, including: Bandwidth supporting sub-100 fs pulses, High output energy from oscillator requires less amplification for shorter, low temporal pedestal pulses, Robust long-term operation. The short, clean pulses giving more peak intensity than competing products.





### Applications:

- OPCPA seeding; OPA Pumping
- Precision micromachining of tissues, glass and plastics

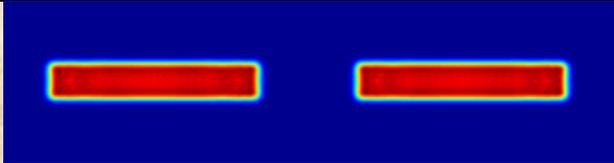
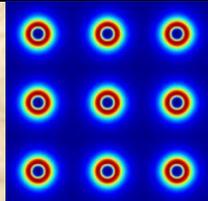
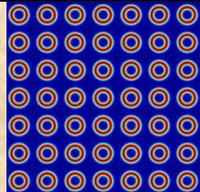
### Features:

- Average power: 4.5 W / 20 W / 35 W (Y-Fi / Y-Fi HP / Y-Fi Ultra)
- 100-200 fs pulse length with low pulse pedestal gives improved performance for driving nonlinear optical interactions: optimum efficiency at lower pulse energy / average power
- Tunable repetition rate (0.5-15, 60 MHz)
- Small optical head footprint (~ 30 x 45 cm) for Y-Fi™ and Y-Fi HP
- Pulse energies up to > 20 μJ, with custom higher power systems available

### NEW\* Diffractive Optical Element (DOE) combinations – splitting & shaping

Many applications require both splitting and shaping of the incoming beam. These combinations are useful for parallel processing applications to increase throughput and shorten process time. While it is impossible to achieve these combinations by refractive optics, our DOE can achieve both splitting and shaping actions in a single component.

By doing so, one can generate some interesting patterns. For example:

Top-Hat + Multi-Spot 1x2:	Vortex Lens + Multi-Spot 3x3:	Diffractive Axicon + Multi-Spot 7x7:
		

### Advantages of this solution:

1. Single, thin element (standard diameter - Ø25.4mm, thickness - 3mm)
2. Simple mechanical integration
3. High laser damage threshold
4. Can be tailored to specific EFL, beam size, wavelengths, spot size and DOF

### NEW\* Laser World of Photonics India 2018 in Bangalore (26-28 Sept 2018)

We exhibited at Laser World of Photonics in Bangalore India 2018 at BIEC! Thank you to everybody who visited us at our booth!



### Promotional items!

We are currently overstocked on items such as Q-switch drivers, laser lamps, CO2 focusing lens and CO2 f-theta lens, high power fiber cable, ceramic reflectors, Optical galvanometers that supports 12-30mm apertures, and galvo drivers. Inquire about our stock items now and receive large discount! Our LSLC-DIGI self-tuning scanheads are on offer too!

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