



Quality and Excellence, presented by Sintec Optronics

NEW Fast electrically tunable lens for laser processing

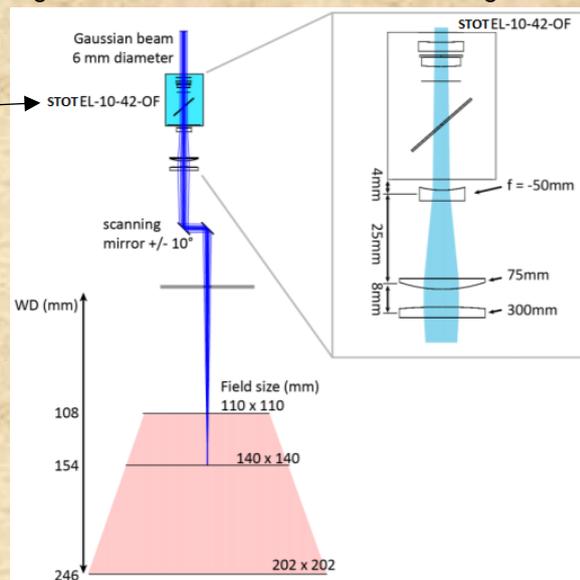
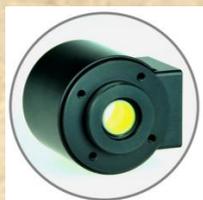
We currently offer focus tunable lenses for diverse applications. The electrically focus-tunable lens STOTEL-10-42-OF is dedicated to 3D laser processing applications and sets the highest standards in terms of spot quality, speed and repeatability. With a focus tuning range of -2.0 to +2.0 diopters the spot can be controlled over a large range along the z-axis (working distance change of up to 180mm). Our proprietary built-in optical feedback mechanism allows for a long term repeatability of <math><0.02</math> diopters. The STOTEL-10-42-OF is optimized for the use at 1064nm and 532nm. Using this lens will remove the need for f-theta lens ! The approach without an f-theta lens is attractive not only considering the reduced costs but also increasing the horizontal scan field as well as the z-range.

Features

- Compact design
- Less mechanics
- Fast response
- Low power
- Less tolerance sensitivity
- **No need f-theta lens!!!**
- Reduced costs
- Increased horizontal scan field and z-range

Applications

- Laser marking
- Micromachining
- OCT
- 3D printing
- Laser projection templating



The figure to the right shows the optical layout of an f-theta free marking system. As a first element, the EL-10-42-OF tunes the beam divergence. The $f = -50$ mm lens diverges the beam further to achieve a beam expansion of about a factor 2. The $f = 75$ mm lens collimates the beam, which gets focused by a $f = 300$ mm lens onto the working plane. All the lens in this layout can be obtained cheaply from thorlabs or other lens supplier of your choice! **No need for expensive f-theta lens !** Our electrically tunable lenses can be tailored to your specific demands in terms of size, tuning range, transmission range or speed. Tell us your requirements and we will be happy to assess the feasibility!

NEW 100W picosecond laser optimized for laser material processing

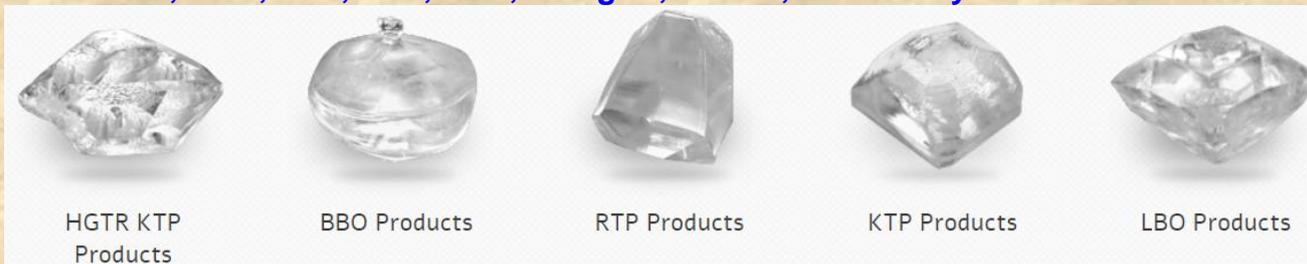
To satisfy the increasing demand of picosecond laser workstations, the STOF-G-10 XP has been optimized to provide up to 100 W of average power and 300 μ J pulse energy at the industry-standard wavelength of 1064 nm. Wavelength conversion options are available as well. Pulse repetition rates up to 80 MHz can be achieved. It also offers burst-mode operation. The laser can be tailored to work at lower repetition rates with even higher energies. The STOF-G-10 XP has been designed for the easiest and most cost-effective possible system integration. It is an all-in-one design containing seed laser, amplifier and driving and timing electronics in one box. The laser can be completely



controlled by RS232 offering full remote control capability. It offers excellent pointing stability and is maintenance-free. Picosecond laser-based micromachining and industrial production is proven to have several advantages for quality control, high-precision, and lack of post production needs. Nevertheless high-power pulsed lasers remain expensive and complex for many standard industrial processes. The STOF-G-10 XP has been developed to remove these constraints offering a compact, cost-effective and long lasting product. It has been especially designed for micro-machining, and several other industrial applications.



HGTR KTP, BBO, RTP, KTP, LBO, PPMgLN, PPSLT, PPKTP Crystals



KTP - produces high quality single domain KTP NLO elements. Our controlled growth methods ensure a reliable supply of KTP crystals of consistent quality

HGTR KTP - KTP crystals with gray track resistance up to ten times greater than typical flux grown KTP. This is possible due to advances in the controlled growth of KTP crystals, using proprietary modified fluxes and heat treatment. These HGTR KTP elements are suitable for high power density applications, where many other KTP elements would suffer from gray tracks or photorefractive breakdown.

PPKTP- Periodically Poled KTP is an entirely new type of non-linear material. It can be tailor- made for all non-linear applications within the transparency range of KTP, without the phase matching limitations of bulk KTP. It's effective non linear coefficient is about three times larger than that of bulk KTP.

RTP - which has only recently become commercially available, is the material of choice for many NLO and electrooptic applications. It's high optical damage threshold makes it especially useful in high power SHG and OPO applications. RTP's high electrical resistivity is important for many electrooptic applications, and in the production of Periodically Poled RTP elements.

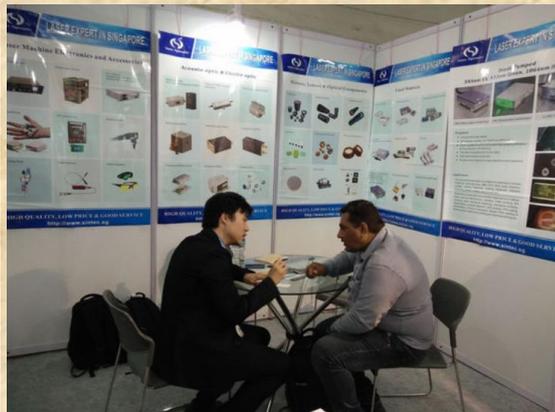
BBO - BBO crystals combine very wide transparency, moderately high nonlinear coupling, high damage threshold and good chemical and mechanical properties. BBO phase matches over a wide range, yielding SHG from 0.19 to 1.75 microns.

LBO - LBO crystals combine wide transparency, moderately high nonlinear coupling, high damage threshold and good chemical and mechanical properties.

BN Raman Crystals - Barium Nitrate monocrystals are one of the best solid state materials for shifting the emission frequency of lasers to different spectral region using Stimulated Raman Scattering effect.

NEW We exhibited at Laser World of Photonics India !

We have exhibited at Laser World of Photonics in New Delhi from 14-16 September. Thank you to everyone who came to our booth to discuss your requirements!



Promotional items!

We are currently overstocked on items such as Q-switch drivers, laser lamps, CO2 focussing 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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