SINTEC NEWSLETTER

Sintec Optronics

Laser Expert in Singapore

February 2018 Issue www.Sintec.sg www.SintecOptronics.com

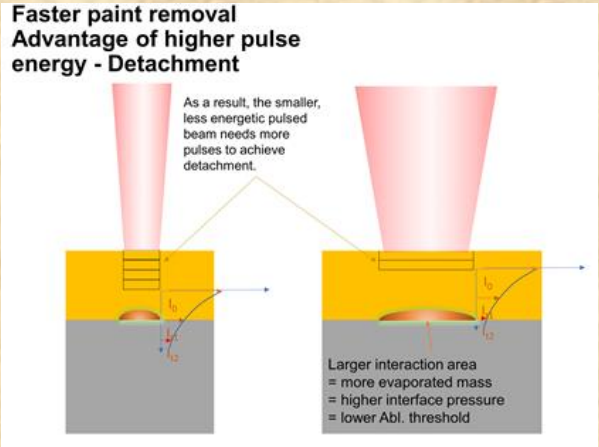
Quality and Excellence, presented by Sintec Optronics

NEW Laser De-painting

Our STPL-V laser emits pulsed NIR radiation with power up to 1600W. The laser beam is fibre delivered to the handheld processing tool.

The high energy pulses of the STPL-V laser cleaning system can reach up to 250mJ , in this case this was tuned to 150mJ thus enabling a detachment or hybrid detachment process that removes paints and primer coatings at high speed over large spot sizes. The STPL-V thus makes the process attractive to industries such as aerospace, energy generation, automotive, marine and others, where paint and coating removal speeds are important.

The patented process used by the STPL-V system can remove most paints with speeds in excess of 0.5m²/min.



NEW Diffractive Optical Elements (DOE) for laser cutting of metal & glass

Laser cutting works by directing the output of a high-power laser, usually through an optical system & moving stage, to scan the focus on a workpiece and cut it. It is typically used in industrial manufacturing applications. The goal is to extend the depth of focus of the system, without increasing the focal length of the focusing optic, or to improve cut quality and reduce exfoliation and material re-melting in the cut area.

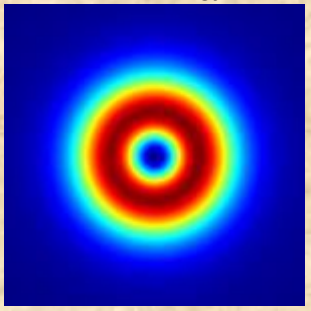
Metal laser cutting is performed by locally heating the material at the focal point of a focused laser beam above its melting point. The resulting molten material is ejected by a gas flow, so that an open cut is formed.

Glass laser cutting or laser dicing is usually done with high powered lasers in the IR regime. Because glass has a weak absorption of light in most wavelengths, more powerful lasers are needed to cut glass. By using a focal DOE, the energy is spread in the bulk of the glass wafer. This enables one-pass cuts, without the need of adjusting the focal depth of the spot and z-movement during the cut. This is especially useful for stealth dicing, where the laser light modifies the glass to make it brittle, instead of ablation cutting, and then the glass is mechanically separated along the laser process line.

Relevant products:
for *metal* cutting -- Vortex Lens, Top Hat;
for *glass* cutting -- Elongated Focus, Multi-focal Lens

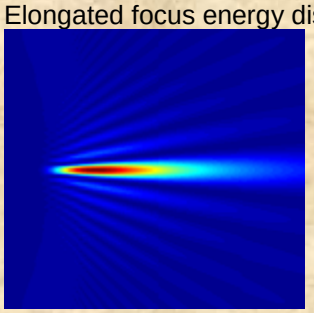
Metal cutting:

Vortex lens energy distribution:



Glass cutting:

Elongated focus energy distribution along optical axis



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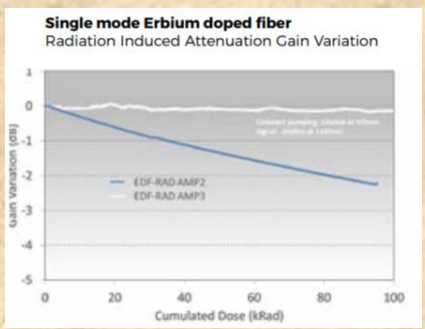
NEW Rad Hard Fibers

Our new product-line includes radiation resistant erbium doped optical fibers. The need for new earth and universe observation satellites is becoming more and more important, with new challenges in this very hostile space environment where components are exposed to ionizing radiation. Longer missions, very distant satellite for deep space sensing, and new telecommunication demands necessitate stronger photonic devices and components to withstand ionizing radiation. Hence, these radiation resistant optical fibers are perfect for space-based applications.

Key Features
- High efficiency
- High pump and consistent absorption
- High brightness single mode core
- Low background losses
- Large mode area with low NA
- MM background (dB/km): 2.10-4/Panda
- Power conversion efficiency : >40%
- Proof test level (kpsi): 50 or 100
- Core diameter: up to 30µm



NEW Lithium Niobate Phase Modulators at NIR and O, C, L bands and 2 µm Band

We are now offering Lithium Niobate phase modulators designed to operate at NIR band, O band, C band, L band, and 2 µm Band. Their specific design relies on the combined use of the waveguide process. The result is a modulator with low insertion loss characteristics, high extinction ratio capabilities and a high optical power handling. Applications include: Quantum optics, atom optics, short pulse generation, pulse picking, pulse shaping, SR4 100 GbE testing, frequency shifting, laser frequency stabilization, interferometric sensors, spectral broadening, laser combining, up to 50 Bg/s optical transmission NRZ, RZ, DPSK Duo Binary formats, test and measurement, side bands generation, chirping, quantum key distribution, PSK, Dual sideband modulation, carrier suppression, stimulated brillouin scattering, distributed fiber sensors, DQPSK, QPSK, OFDM, single-side band modulation, LIDAR, Gas sensing, Spectroscopy, Mid-IR wavelength generation. Inquire now for the full specs !

NEW We exhibited at Laser World of Photonics Shanghai

We successfully exhibited at Laser World of Photonics Shanghai 2018 ! WE thank everyone who came to our booth to visit us. We looks forward to developing laser markets for the year of 2018 !

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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