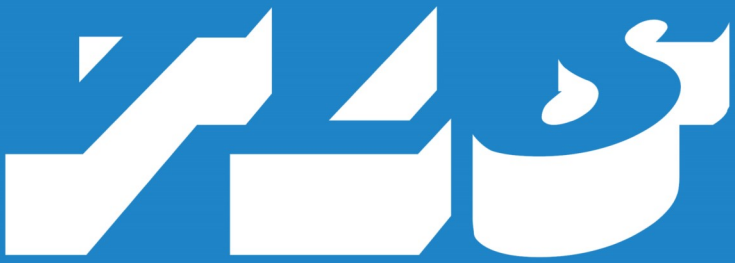

TE LINTELO SYSTEMS BV

photonics is our passion!

34 years in Photonics !

- lasers,
- fiber optics,
- optical components,
- spectroscopy,
- imaging,
- interferometry,
- opto-electronic equipment,
- light metrology

Mercurion 28 A, 6903 PZ Zevenaar, The Netherlands
+31 316 340804 | contact@tlsbv.nl | www.tlsbv.nl

TE LINTELO SYSTEMS BV

photonics is our passion!

For more than 30 years Te Lintelo Systems represent prominent suppliers from all over the world for the Benelux countries with well-educated engineers, experience and knowledge.

Over the years we became the specialist in the field of:

- lasers,
- fiber optics,
- optical components,
- spectroscopy,
- imaging,
- interferometry,
- opto-electronic equipment,
- light metrology,
- And much more.....

Together with our high end suppliers we have the answer for you!

Te Lintelo Systems is your reliable source and long term partner.
Service on all levels is for us our daily business. Our experienced team is fully equipped to assist you with finding your best optical business solution.

Let's get in touch!

Phone: +31 316 340804
Email: contact@tlsbv.nl
Web: www.tlsbv.nl




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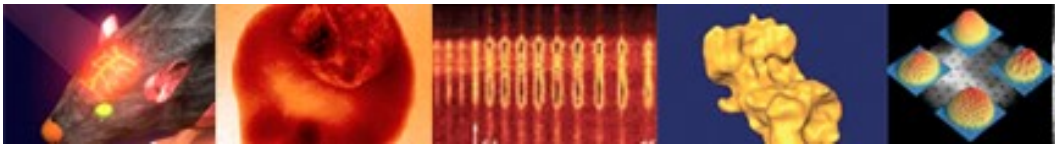
Princeton Instruments

TELEDYNE
PRINCETON INSTRUMENTS
Everywhereyoulook™

Princeton Instruments (PI) designs and manufactures high-performance CCD, sCMOS, ICCD, EMCCD, emICCD, and InGaAs cameras; spectrographs; and optics-based solutions for the scientific research, industrial imaging, and OEM communities. We take pride in partnering with our customers to solve their most challenging problems in unique, innovative ways.



Capabilities:

Scientific Imaging:

High-performance CCD, ICCD, EMCCD, *em*ICCD, and InGaAs cameras for an expansive range of applications, including astronomy, BEC, combustion, PIV, single-molecule imaging, surface and materials analysis, PSP, and nanotechnology.

Spectroscopy:

A wide selection of state-of-the-art CCD cameras, spectrographs, monochromators, and integrated systems for Raman, LIBS, absorption, fluorescence, NIR/SWIR, and luminescence spectroscopy.

X-ray Imaging:

Advanced scientific-grade CCD cameras for x-ray applications such as EUV, lithography, XRS, plasma, diffraction, microscopy, and tomography.

Optics & Coatings:

High-precision mirrors, filters, and coatings for medical, semiconductor, materials processing, analytical instrumentation, aerospace, and defense applications.

Instrument Systems

Expert for accurate light measurement

Instrument Systems was founded in 1986 and is headquartered in Munich, Germany.
The company develops and manufactures turnkey solutions for light measurement and delivers a comprehensive range of products for industrial and research applications.
They include high-performance array and scanning spectrometers as well as imaging photometers and colorimeters.
A wide selection of measurement adapters and accessories like integrating spheres, goniometers and LED test sockets complete the product range. Photometric measurement systems of our Optronik line are developed and marketed at our Berlin facility, with a special focus on automotive and traffic technology.

Instrument Systems is dedicated to working with standardization committees and associations (DIN, CIE) and also cooperates with leading national calibration laboratories.
Therefore, all our instruments provide accurate and reliable results as per CIE recommendations and are on top when new technological benchmarks are defined.

Core competencies at Instrument Systems:

- LED MetrologySpectroradiometer CAS 140D / CAS120
  - LED tester
  - LED test sockets
- Display Metrology
  - Imaging colorimeters of the LumiCam 1300 series
  - Display test systems of the DMS series
  - Display test system DTS 140
- SSL Measurement Systems
  - Goniophotometers (LGS series)
  - Integrating spheres (ISP series)
- Spectroradiometry & Photometry
  - Spectroradiometer Spectro 320
  - Optical probes of the EOP series

Gigahertz-Optik

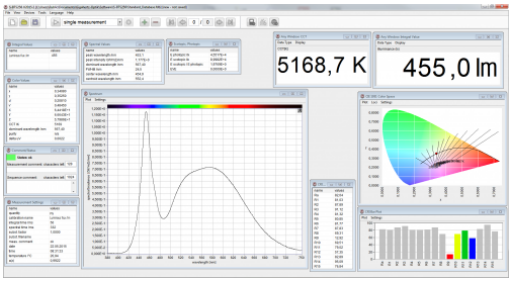
Measurement of light—Measurements with light

Gigaherts-Optik Vision:
Measurement equipment that is traceable to international standards allows comparison of data gathered anywhere in the world. Therefore, traceable data is one of the prerequisites for the globalization of measurement technology.

One of the most important elements in nature and technology is optical radiation. Gigahertz-Optik develops and produces measurement devices for measuring optical radiation.
It is our aim to offer our customers latest and future-oriented measurement technology now and in the future. In this way we are contributing to the process of globalization.

Our central themes are:

- Measurement of light and optical radiation
- Measurement with light and optical radiation
- Components of light measurement systems
- Laser power meters
- UV Spectral and Power meters
- Par meters



Spot Optics

SpotOptics
THE SOFTWARE PEOPLE FOR OPTICS

Wavefront Analysers from 193nm to 14µm

Optino Special design for highest precision & accuracy

SpotOptics Wavefront sensors for R&D and production

Highest precision for Zernike aberrations: lambda/3000
Highest precision for WF rms: lambda/1000

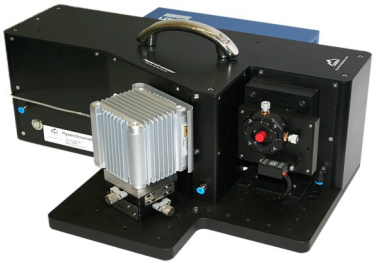
Different models of Optino					
Feature	UV	Vis	SWIR	MWIR	LWIR
Wavelength (m)	0.193-1.1	0.38-1.05	0.9-1.7	1-5.5	8-14
Detector	CCD	CMOSis	InGaAs	InSb	mBolometer
Resolution (spots)	75x75	45x45	45x45	45x45	35x35
Camera Speed (Hz)	7.5	90	100	100	25
Software	Zernikes/WF/MTF/PSF/Diagnostics/Alignment				

Mountain Photonics

Mountain **Photonics** GmbH

Hyperchromator a highly efficient monochromator for Energetic's EQ-99X LDLS™

The Hyperchromator is a high throughput monochromator originally designed for the Energetiq EQ-99X LDLS™. With fast optics, up to f/1.5, it efficiently collects the light directly from the small plasma spot of the light source without an entrance slit. This monochromator is optimized for monochromatic illumination applications where a tunable output from a point source is required. Additionally, white light output is available (zero order reflection).



The output port has been designed with a very flexible opto-mechanical interface. This allows for a multitude of illumination or light coupling options using standard catalog components, rendering the integration of the Hyperchromator into your setup hassle free and straight-forward. Possible configurations include fiber coupling, collimated or free-beam output.

The Hyperchromator is motorized and may be controlled via USB/RS232 and an intuitive GUI.

Solar Light Company

Solar Light Simulators, a precision research-grade instrument

Solar Light Company, Inc. has been providing research professionals with laboratory-grade solutions for the advancement of light sciences ever since we invented the world's first Solar Simulator in 1967.

Solar Light Simulators, or solar simulators, are precision research-grade instruments are specifically designed to comply with the latest laboratory standards from ASTM, IEC, ISO, and others.

A wide selection is offered, from the patented Model 601 Multiport® SPF Testing 6-output Simulator to the single output units, which are available in 150W / 0.4" (1 cm) output through 1000W / 6 "(15.25 cm) output, in UV, Air Mass, and Custom Spectra configurations.

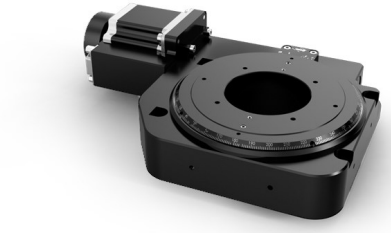
They can reliably produce UV levels several times stronger than tropical sun, without any of the associated heat load, which is ideal for measuring the damaging effects of UV during materials testing. These devices are well suited to a variety of applications including materials testing, in vitro and in vivo scientific research, PMMA plate pre-irradiation, academic studies, photobiological applications, and SPF testing, just to name a few.

Materials Testing Services

Solar Light's Materials Testing Services Lab offers Accelerated UV Testing including outdoor accelerated UV testing and indoor accelerated light testing. Please check with us .

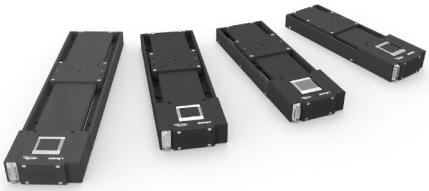
OWIS

Highly precise positioning systems & optical beam handling



OWIS GmbH was founded in 1980 and is headquartered in Staufen near Freiburg, in South-Western Germany. Our employees ensure excellent products and consistent customer service.
We are very proud to be a successful family-owned company.

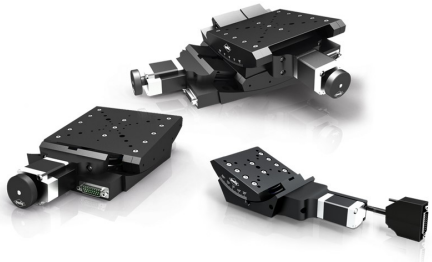
The company develops, produces, distributes and services optical beam handling as well as highly precise positioning systems – still according to the maxim »Made in Germany«. Information technology, mechanical engineering, biotechnology, medicine, image processing and printing industry are some of our product application areas.



An own development and an ultramodern manufacturing make OWIS to your perfect system partner in connecting macro, micro and nano worlds. This ideal combination enables short-term adjustments to our catalogue products – up to customized solutions.

We dedicate all our activities to constantly developing the OWIS® products and improving internal processes and at the same time to continuously deepening our knowledge and experience.
Because we are sure: This is the only guarantee for steady customer satisfaction and future success.

Our strength is based on the innovation capacity and market orientation, which have tradition with OWIS from the very beginning.



As a system partner to our customers we take special responsibility in continuously developing and improving our product portfolio to meet our customers' needs.

You can find a detailed product catalog at:

Www.tlsbv.nl/suppliers/owis

Eksma Optics

EKSMA OPTICS

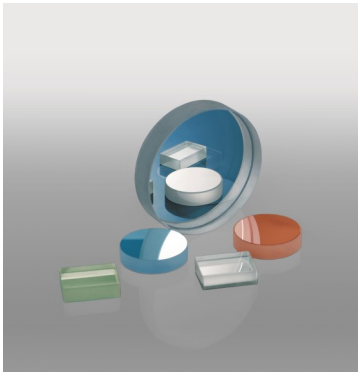
Optical Components
Nd:YAG laser line Components
Femtoline Components
Pockels cells
Non Linear Crystals
Laser Crystals
Opto-mechanical Components
Pulse picking systems

Since 1983 EKSMA OPTICS is a manufacturer and global supplier of precision optical components, optical systems, laser & nonlinear frequency conversion crystals, opto-mechanics and electro-optical Pockels cells with drivers used in lasers and other optical instruments.

Our laser components are used across different laser and photonics applications in scientific, industry, medical and aesthetic, military and aerospace markets.

The applications of the laser components offered by our company cover a wavelength spectrum from the UV (193 nm) through VIS to IR (20 µm) and at Terahertz (1-20 THz) ranges.

EKSMA Optics polishing facility specializes in the processing and final polishing of flat optics made of BK7, UVFS, Infrasil, CaF_2 and also BBO, DKDP, LBO, $ZnGeP_2$ and AGS crystals whereas high quality precision polished faces are required for high power laser applications.



Manx Precision Optics

High Precision Optics and Coatings

Manx Precision Optics

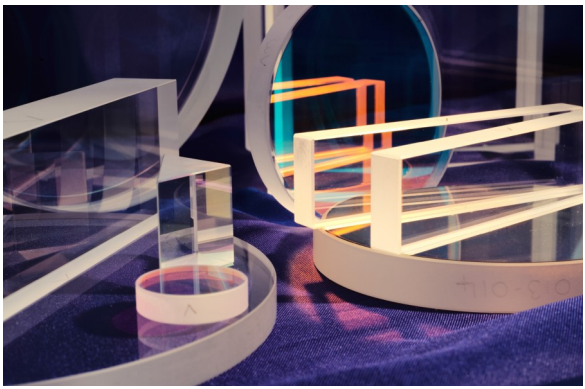
Manx Precision Optics Ltd. a family-owned manufacturer of high precision optics. Founded in 2013, the company employs an experienced workforce with all senior employees having over 20 years experience in precision optics manufacture. Manx Precision Optics' state of-the-art production facility is based in an Isle of Man Government owned high-tech industrial park and comprises over 5000ft2 in manufacturing space in close proximity to the Isle of Man Airport.

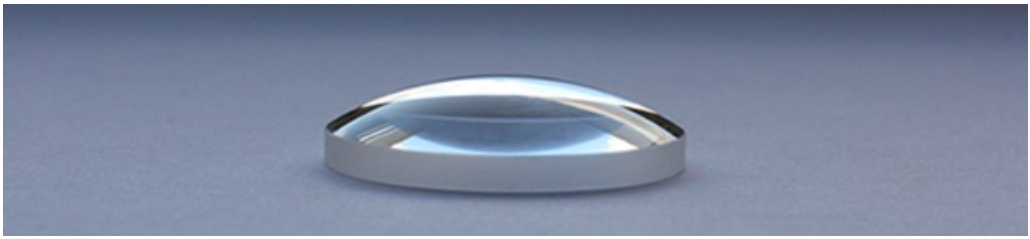
To ensure full traceability and the highest quality standards, Manx Precision Optics manufacturing processes are all ISO 9001:2008 certified. Having the full manufacturing process from shaping, grinding and polishing to optical coating (e-beam and sputter coating) and assembly in-house allows Manx Precision Optics to have full control of all aspects of precision optics manufacture.

We work with our customers to identify cost drivers at the very early stages of development and find the best, tailor-made solution for their applications. Our large stock enables us to manufacture prototypes within a short timeframe.

Our Capabilities

- Optical Windows
- Air-spaced Etalons
- Solid Etalons
- High-LIDT Mirrors
- VIPA Etalons
- Ultrafast Mirrors
- Protected Metal Mirrors
- Reference Flats
- Optically contacted Cube Polarisers
- Beamsplitters
- Beamsamplers
- Plate Polarisers
- Ultrafast Polarisers





Custom Optical Components

From	To
R&D	OEM
QTY 1	QTY ∞
Wollaston prism*	Cylindrical lenses*
Flat optics Ø 0,5 mm □ 0,5 mm	Flat optics Ø 1.700 mm □ 3.200 mm
Curved optics Ø 2 mm	Curved optics Ø 150 mm
HR / AR coatings	Laser coatings
Components	Assemblies
Stock	Build to print

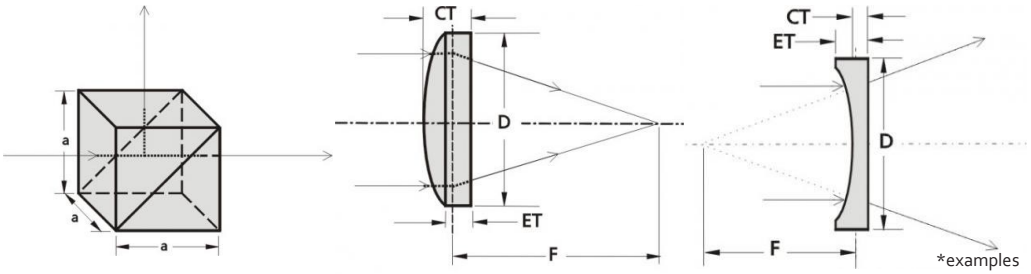
When building a lab experiment, the first prototypes or the final product, we are your source for optical components.

Nothing is strange to us!

With our knowledge of the product, we can address all your needs. We will be able to advise you on your optical design, material selection, coatings, surface specifications, etc., to achieve together a better performing component and / or cost savings.
We work together with well-established European suppliers and are able to offer you compatible pricing and delivery time for singles pieces, small series and OEM volumes.

Te Lintelo Systems offers you optical components and assemblies build to your specifications.

We can offer the complete range of optical components



SIOS Messtechniek

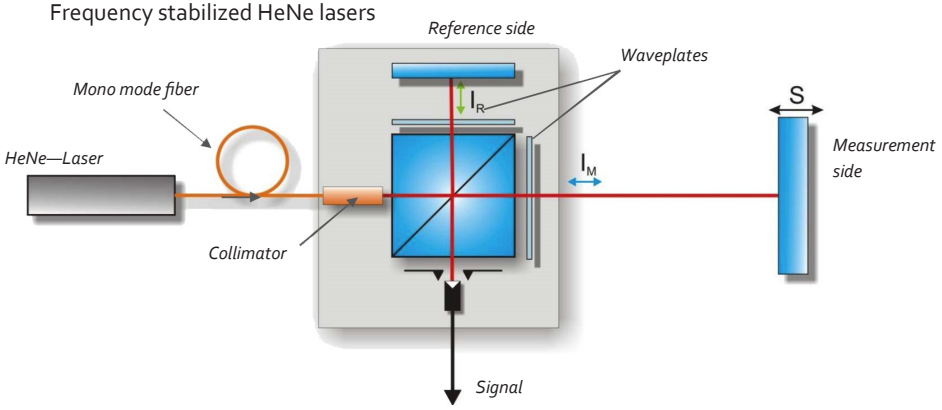
SIOS Messtechnik GmbH is a company for design and manufacturing of laser-interferometric precision instruments for nano-metrology.

The measurement of lengths, angles, vibrations and other measured categories is done with the highest resolution and precision in conjunction with beneficial properties for users in areas of engineering, optics and semiconductor industries, in the calibration and metrology field, in research and development and many other application areas.

The flexible structure of SIOS allows individual adaptations to customer request and varying measuring conditions. SIOS Messtechnik GmbH is a company for design and manufacturing of laser-interferometric precision instruments for nano-metrology.
and metrology field, in research and development and many other application areas.

Applications

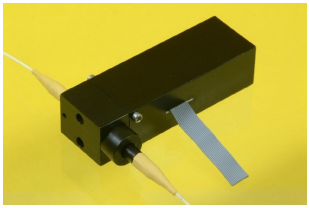
- Length measurement systems
- Combined length- and angle measurement systems
- Vibration measurement systems
- Calibration rigs and nano-measuring machines
- Frequency stabilized HeNe lasers
- Length measurement systems
- Combined length- and angle measurement systems
- Vibration measurement systems
- Calibration rigs and nano-measuring machines
- Frequency stabilized HeNe lasers

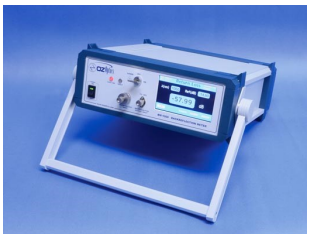


OZ Optics

Fiber Optic Components
Polarization Maintaining components

Established in 1985, OZ Optics Limited is a leading worldwide supplier of fiber optic products for existing and next-generation optical networks. In addition to designing and manufacturing components and test equipment for fiber optics markets, the company offers award-winning fiber optic sensor systems for remote monitoring of oil and gas pipelines, wells, refineries, bridges, dams and other large structures, security fences and for fire detection .





OZ makes world famous:

- Laser to Fiber Delivery Systems
- High Power Fiber Optic Components
- Polarization Maintaining Components
- Attenuators
- CO_2 Fiber Optics Cleaning Unit
- Brillouin DSTS Systems for monitoring
- Benchtop & Handheld Polarization extinction ratio meter
- Benchtop & Handheld Backreflection meters
- Variable Bandwidth Tunable Filter
- Inline Optical Tap Monitors
- High Power Non-Contact Visible Fiber Optic Fault Locators
- Bare Fiber Adapters with Magnetic Clamps
- Compact High Power Isolators/Collimators
- High Power Shutters/Safety Interlocks
- V-Groove assemblies
- V-Groove chips
- Hermetically sealable patchcords with glass solder
- Collimators and focusers also high power —pigtail style
- Optical Fibers
- High Speed Electrically Operated Polarization Controller/Scrambler
- Etc.....

LASOS

LASOS
For worldwide photonics

Helium-Neon, diode and diode-pumped solid-state lasers

LASOS designs, develops and manufactures high quality gas, diode and diode-pumped solid-state lasers from the ultraviolet to the near-infrared with special focus on OEM applications in Biophotonics, Microscopy, Raman Spectroscopy and Holography. Besides original equipment manufacturing LASOS is also a reliable partner and supplier for research and educational institutes.

- Microscopy
- Flow Cytometry
- Bionanalytical Research
- Industrial Measuremnt
- Holography
- Testing, Science and Education
- MultiColor Lasers
- Confocal Microscopy
- Interferometry

Gooch & Housego

Fiber Optic Components
Polarization Maintaining components

Gooch & Housego is a global leader in photonics technology. Our expertise extends from research through the development of prototypes to volume manufacturing and enables innovation and effective manufacturing in the aerospace & defence, industrial, life sciences and scientific research (Big Science) sectors.

Researching and manufacturing in eight sites across the USA and UK, G&H are experts across a uniquely broad range of photonic technologies – crystal growth, optical materials processing, acousto-optics and electro-optics, fiber optics, DFB laser modules, precision optics (thin-film coating, birefringent optics, non-linear, planar and aspheric), RF driver electronics in addition to light measurement and calibration solutions.

When combined with the company's optical, mechanical, electronic and software design capabilities, G&H is able to provide complete optical system design services.

Acousto-optics.

We offer a range of acousto-optic devices, i.e. Acousto-optic modulators, beam deflectors, Fiber-Q fiber coupled modulators, frequency shifters, mode lockers, multi-channel modulators, pulse pickers and cavity dumpers, q-switches, tunable filters and RF drivers.

Crystal optics.

We offer a range of crystal optics, i.e. Lithium niobate wafers, nonlinear optics and periodically-poled lithium niobate (PPLN)

Electro-optics.

Pockels cells, pockels cell drivers and lithium niobate Q-switches

Fiber optics.

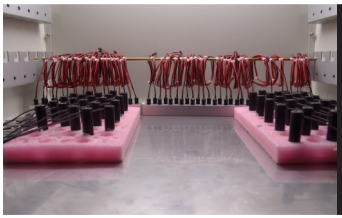
Benchtop laser controllers, DFB lasers and modules, Fiber-Q RF drivers, Fiber optic components, High reliability Erbium-doped fiber amplifier, high speed detectors, pump lasers, OCT and fiber optic assemblies.

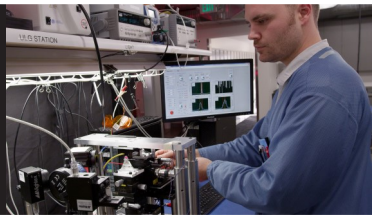
DLC diode laser concepts

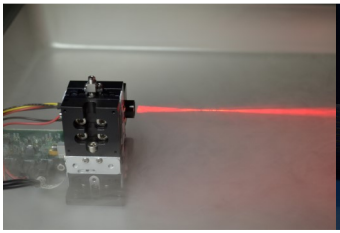
Custom build diode assemblies

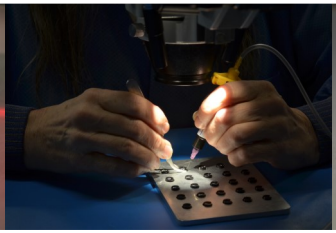
We leverage your engineering capabilities with our proven laser and optical design expertise. We solve manufacturing challenges by providing turnkey, high-quality optoelectronic and mechanical solutions.
We deliver your production capacity needs from prototypes to full-scale OEM volume.

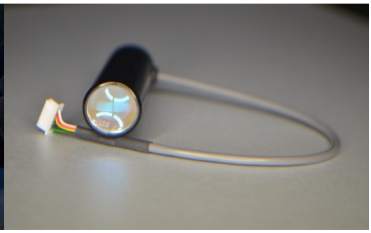
- Biomedical
- Medical Imaging
- Healthcare
- Machine Vision
- Factory Automation
- Industrial Sensing and Measurement
- Defense/Security/Law Enforcement
- 3D Scanning and Imaging
- Optical Design and Engineering











Jenoptik

Laser beam expanders and F-Theta lenses

Beam expanders increase or decrease the diameter of a laser beam, allowing various elements of an optical system to be calibrated to one another. Beam expanders are primarily used in laser material processing. All beam expanders can be integrated with F-theta objective lenses from Jenoptik in a wide range of beam guidance systems.

The 1x-4x and 2x-10x beam expanders are available for laser wavelengths of 355, 532 and 1030 to 1080 nanometers. The extended zoom range enables a maximum tenfold beam expansion to be achieved. All versions are infinitely adjustable from a minimum to a maximum expansion factor. Expansion and divergence are adjusted separately. This means the beam expanders allow a focus correction of the entire optical system.

The beam expanders come in a highly robust design and a compact housing. There is no rotation of lens elements even during a setup modification. This results in an exceptionally high level of beam stability. The beam expanders are also diffraction-limited: The diameter of the laser beam is limited only by the diffraction of the light. A zoom and focus gauge is engraved on the beam expander, so any manual adjustments can be made quickly and easily.

The BEX 1x-4x steadfast is characterized by a new mechanical design: The moving optical elements are guided linearly. This reduces the influence of mechanical manufacturing tolerances and increases the beam direction stability when changing the magnification and / or divergence. The beam expander achieves a high radiation direction stability of less than one milliradiant.

The newly designed Beam Expander can also be used to lock the setting. This minimizes influences such as vibrations or accelerations on the system. In addition, the BEX 1x-4x steadfast is easy and safe to handle, which reduces set-up times to a minimum.

JENar™ F-theta objective lenses are particularly well suited for use in micromachining laser applications. You can use standard F-theta lenses at laser wavelengths of 1080 to 355 nanometers.

The conventional F-theta objective lenses from Jenoptik offer exceptional durability and enable you to perform high-precision laser material processing. You can use them for the micro structuring, marking and labeling of a wide range of materials. The F-theta lenses come with protective glass. As a special service, we are able to offer you our STEP files, which allow you to integrate the JENar™ F-theta objective lenses quickly and easily into any system.

Configurator: www.tlsbv.nl/FT-BE.html

laservision

laservision

Laser safety eyewear and laser safety products

Based on more than 30 years of history ,
laservision has a long lasting experience on all relevant fields of laser safety.

Due to the unique characteristics of laser radiation (i.e. coherent, collimated and monochromatic) there is an increased danger to the eyes. Therefore special optical filters that transmit 'normal' light but block laser light must be used. Since laser light has a specific wavelength which is dependent on the laser active medium that emits light, protective filters that match the wavelength and power of the specific source of laser radiation are needed.

When wearing laser safety glasses some wavelengths of the spectrum that would normally reach our eyes are filtered out. This means, if light from the visible region is blocked, this will inevitably change the perception of the environment as well. First, by attenuation of the transmission the environment gets darker (similar to the effect of sun glasses). Second, blocking some wavelengths changes our perception of colour.

Therefore, a careful selection of the right filter resp. filter technology in accordance to the calculated and required protection levels and the requirements of the application pose an important challenge.

Our **Laser Safety Officer** Danny van Dongen, will help you with selecting the right products for your "dangerous" laser radiation situation. We can also arrange a Laser safety training. Get in touch with Danny to discuss your situation.

Laser safety products of laservision:

- Laser safety eyewear
- Laser safety filter
- Laser safety windows
- Laser safety curtains, slats and barriers
- Laser driven lightsource safety eyewear

Jenoptik

Lasers for Precise and Efficient Material Processing

Jenoptik manufactures products and applications across the entire value chain for your laser material processing – from individual components to complex laser systems.

In the laser technology field, we specialize in high-quality semiconductor lasers and reliable diode lasers. We also produce innovative solid-state lasers such as disk and fiber lasers for the pulse width range from cw to fs.

Our laser machines process polymers and metals extremely precisely, efficiently and safely, allowing you to optimize and automate your production processes. The units can be easily integrated into existing systems.

Nanosecond fiber laser JenLas® fiber ns 25 - 105 (from 20 to 500 Watt)

The JenLas® fiber ns 25-105 laser product family opens up a wealth of possibilities for laser material processing applications: the pulsed nanosecond fiber lasers are suitable for labeling, marking, and cutting different materials, as well as for structuring your surface exactly. They create laser marks on metals or plastics, for example, while extremely thin layers can be removed precisely.

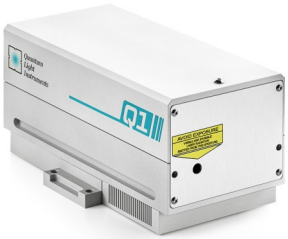
The JenLas® fiber ns product family is available in 20, 30, 50, 100 & 500 wattpower categories, based on reliable, industry-tested fiber laser technology. The lasers are air-cooled, offer pulse duration settings ranging from 190 to 250 nanoseconds, and reach peak pulse powers of up to 8 kilowatts. The laser's immunity to back reflections has been significantly improved through optical isolators, which are built-in as standard.

Quantum Light Instruments

Compact, diode-pumped, air-cooled, DPSS Lasers

Quantum Light Instruments

Quantum Light Instruments (QLI) was founded in 2014 by team of laser scientists and engineers with more than 40 years accumulated experience in lasers and photonics industry.



QLI designs and produces compact, diode-pumped, air-cooled (and water-free!), passively or actively Q-switched, diode-pumped, solid-state lasers and accessories for them (harmonics generators, OPOs, Raman shifters, attenuators, energy monitors, fiber couplers etc.).

QLI focuses on bringing DPSS laser technology into types of applications that require pulse energy in the fundamental from 10mJ up to 200 mJ at relatively low pulse repetition rates (typically in the range of 10-100 Hz). Available wavelengths are: 1064nm, 1053nm, 532nm, 527nm, 355nm, 351nm, 266nm, 263nm, 213nm, 211nm. Pulse widths are always < 10ns. Another huge advantage of QLI's DPSS lasers is the lifetime of the lasers, which can be > 2 Gigashots.

QLI key innovation is water-free laser crystal cooling technology combined laser diode end-pumping. Absence of water resulted in single box, compact, user-friendly turnkey system that requires little to no maintenance. There are no chillers or bulky power supplies that one needs to fit under the table. The only external module is mains adapter.

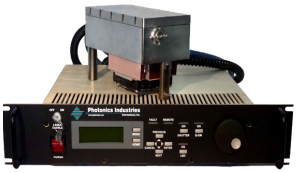
Lasers of QLI is mainly used in the following applications: Laser Induced Breakdown Spectroscopy (LIBS), Time-of-Flight Spectroscopy (TOFS), Laser Induced Fluorescence (LIF) Spectroscopy, Flash photolysis, Matrix Assisted Laser Desorption/Ionization (MALDI), Pulsed light deposition (PLD), Remote sensing, Laser ablation and many others.

QLI's harmonics generators produces deep UV radiation down to 211 or 213 nm. Q-TUNE series Optical Parametric Oscillators provides tunable wavelength in 210-2300 nm range.

Photonics Industries

The Pioneer of Intra-Cavity Solid-State Harmonic lasers

Photonics Industries International (PI) designs, develops and manufactures diode-pumped solid-state laser. Photonics Industries serves industrial, scientific and defense customers, providing a broad range of diode-pumped picosecond and nanosecond lasers as well as many tunable and customized laser solutions.
Photonics Industries has a strong commitment to adapting and improving our products to keep up with today's high demanding technology markets. Applications can be found in industrial, scientific, defense and medical market.



Photonics Industries Lasers:

- Nanosecond Lasers
- Picosecond Lasers
- Subnanosecond Lasers
- Special Lasers

Typical applications are:

- micromachining,
- cutting,
- drilling,
- (ITO) patterning,
- dicing,
- spectroscopy,
- laser pumping,
- LIDAR,
- PIV,
- photoacoustic imaging,
- biophotonic research,
- chemical detection
- and many more.

Lasers available in:

- 211 & 266 nm
- 351 & 355 nm
- 527 & 532 nm
- 1053 & 1064 nm
- Triple wavelength head

Output power from

- 0.5 W—200 W
- -> 100 mJ

NeoSpectra

FT-NIR spectral sensors

NeoSpectra™ sensors are compact and low cost Fourier Transform Near InfraRed (FT-NIR) spectral sensors. They deliver the spectral response of the light absorbed by materials for quantification, qualification or identification.

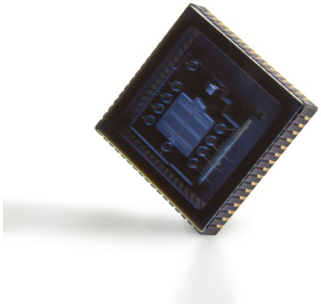
NeoSpectra's unique features bring a new perspective to optical spectroscopy. The sensors are constructed from low cost, robust, permanently aligned, and highly reproducible components. The core technology is based on semiconductor fabrication techniques promising unprecedented economies of scale.

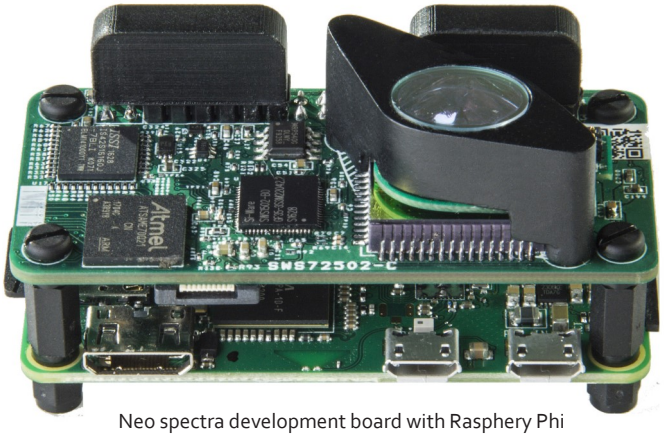
NeoSpectra sensors are low cost, miniaturized, OEM spectral sensors, that are based on Micro Electro Mechanical Systems (MEMS) technology. Spectral sensors read input light and generate the corresponding spectral response with different wide Near InfraRed (NIR) spectral ranges between 1,150 nm and 2,500 nm.

NeoSpectra's unique features can enable new usage models for material composition analysis and identification in wide range of applications areas.

Now available!

NeoSpectra Micro will bring the power of NIR spectroscopy to consumer applications. It is designed to be used in different systems as an OEM module for applications that can be enabled by the spectral range 1,250 – 2,500 nm.





Neo spectra development board with Rasphery Phi

Princeton Instruments

TELEDYNE
PRINCETON INSTRUMENTS
Everywhereyoulook™

Fergie aberration-free spectroscopy

The high performance, flexible FERGIE spectroscopy instrument is the perfect system for your Raman, fluorescence, absorption and other imaging spectroscopy techniques.
View the site www.fergiespec.com to learn more about how the compact, integrated FERGIE will change the way you do spectroscopy.

FEATURES + BENEFITS:

Proprietary, aberration-free optical design

FERGIE spectral profiles are completely free from coma and other aberrations, eliminating broadened asymmetric peak profiles.

Enabling line of accessories

FERGIE'S pre-aligned optical modular spectroscopy cubes, fiber optics and laser sources enable rapid experiment design.

Perfect imaging performance

Proprietary optical design produces diffraction-limited images ideal for microspectroscopy applications at wavelengths from the UV to NIR.

Integrated TE-cooled, back-illuminated CCD

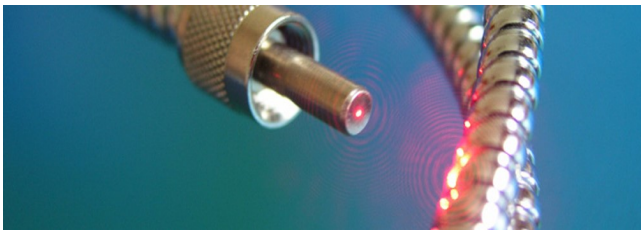
Deep-cooled CCD spectrometers provide extreme high sensitivity with 95% peak quantum efficiency. TE cooling down to -45°C allows long integration times for faint signal detection.

Fiberware

Custom Optical Fiber Assemblies

Fiberware was founded 1990 in Berlin, Germany by Dr. Georg Kuka. The company moved 1996 from Berlin to the new production facilities in Mittweida, which is one of the famous cities for laser- and optical technologies and scientific works.

Today is fiberware a worldwide known producer of specialty optical fibers, fiber-optic based products, cables, sensors, fiber bundles and capillaries for standard and non standard applications. Our product innovation, highest quality, flexibility and product realization is our main competence, which we share proudly with our customers.



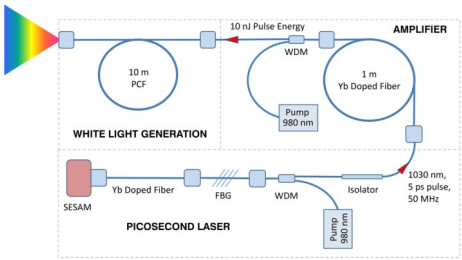
An educational platform to teach up-to-date technologies in nonlinear optics, ultra-short pulse generation and laser amplifications

Since their first theoretical description by Albert Einstein, lasers have become one of the most powerful and multi-applicable tools of our time. The steady ongoing industrial development in the areas of telecommunication, medical technologies, material processing and the multiplicity of measurement tasks shows the need for a hand-in-hand development in the educational sector. The most effective approach to progress academic education in the right direction is the collaboration of educational establishments with leading companies. The newly developed lab course platform is the result of such a joint venture.

The new and innovative educational platform focuses on the utilization of a wide spectrum of applications for fiber based laser systems and integrates them into academic lab courses. The issues of how these lasers are driven, the interaction of their operating parameters, the consequence to their operational states and the correct characterization of these systems are the main educational goals. According to these goals, four experiments were designed and cover a broad spectrum of educational aspects:

- A passively mode-locked fs-laser,
- A supercontinuum-source,
- A dispersion measuring setup,
- A Master-Oscillator Power Amplifier,

Together these four experiments give the opportunity to connect the theory of actual industrial and fundamental research topics with hands-on experience in academic lab courses.



Wasatch Photonics

Why Wasatch for Spectroscopy

'What makes a world-class spectrometer – one that allows you to push the boundaries of analytical research but not manufacturing capabilities?'

That's a question I have been asked and debated at length over many years. It was this question we set out to answer at Wasatch Photonics when we designed our new WP-series spectrometers for Raman, fluorescence, and VIS through NIR.

Our goal was to build a product with a robust opto-mechanical design, electronic interfaces that match use cases for academic, industry and OEM's alike, and – most importantly – the ability to make those precious photons work for you through elegant optical design.
As such, we have combined our experience and skills with what the market requested to deliver on these goals with our new WP-series spectrometers. Ask for the tech docs supporting our claims, here you will see the competitive data to support our performance claims, and a little of how we have gone about it.

- Analytical grade data at a compact system price
- > 10x greater sensitivity – take high quality Raman spectra over 10x times faster
- Trace-level limit of detection – 20x improvement in LoD for fluorescence or Raman
- Superior stray light suppression for high SNR – transmissive grating design
- High thermal stability & unit-to-unit reproducibility – ideal for OEMs

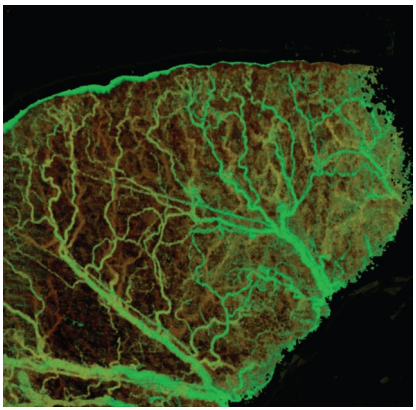
We have similar tech notes for our NIR and fluorescence and OCT product lines.

Wasatch for OCT

WP OCT Improve Your Image

Optical coherence tomography (OCT) is a 3-D imaging technique that can provide high resolution (up to few micrometers) and deep penetration (up to few millimeters) in a scattering media. Applications include medical diagnosis, biological imaging and material inspection

A complete line of OCT product is available, where the knowledge of Spectrocopy, Lasers and software are combined and a complete solution made available for you!



OSI Optoelectronics

Light Sensing Ideas

By leveraging our core expertise in optoelectronics technology and global manufacturing presence, OSI Optoelectronics leads the industry in providing the best, and most advanced economical solutions.

In addition to our extensive assortment of standard products, OSI Optoelectronics has been developing and manufacturing OEM and custom solutions for leading technologies and industries for a wide variety of demanding applications for over 40 years. We have been qualified in many aerospace, medical, communication and automotive companies.

Delivering Innovative Solutions

At OSI Optoelectronics, we provide complete solutions and services from concept to design to production. With our extensive engineering capabilities in a variety of disciplines, we have created the "one stop shop".

Exceptional Reliability & Quality

Our commitment to quality is demonstrated by maintaining all of our worldwide facilities with the highest industry standards. In addition to worldwide ISO 9001:2000 certification, we operate FDA registered facilities in California, Massachusetts, India and Malaysia. We employ strict Statistical Process Control techniques in various stages of Design reviews, Product launch, Product and Process Improvement.

Manufacturing Services

With expertise in medical, aerospace and defense, security, communication and industrial OEM solutions, our manufacturing services are developed for scalability from prototype to volume production.

Silicon Photodiodes

These are semiconductor light sensors that generate photocurrent when its active area is illuminated by light. Generally they are sensitive between 200 to 1100nm.

InGaAs detectors

These are InGaAs based semiconductor light sensors that generate photocurrent when its active area is illuminated by light. Generally they are sensitive between 800 to 1700nm.

GaAs Detectors

These are GaAs based semiconductor light sensors that generate photocurrent when its active area is illuminated by light. Generally they are sensitive between 400 to 850nm.

And more.....

Gentec eo

Partners for accuracy
Laser beam measurement experts

Gentec-EO has a long history in the laser measurement field. With a 45 year track record of innovation and providing quality solutions for laser power and energy measurement applications from the factory to the hospital and laboratory, Gentec-EO stands ready to serve you now and in the future with products in the following categories:

- Laser power and energy monitors
- (High) power meters
- Energy meters
- Photo detectors & THz detectors
- Beam diagnostics

Get *accurate* measurements with fast response times with our power and energy meters.
Available with various absorbers, with the *highest damage thresholds*.
The power meters can be connected with a computer via USB or Bluetooth.

Last, but certainly, not least: we also provide calibration services for Gentec's monitors and power and energy meters.

Calibration service ensures traceability to the:
- National Institute of Standards and Technology (NIST) &
- Physikalische Technische Bundesanstalt (PTB) .

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photonics is our passion!

One stop shop for your photonics products

The best products from stock at one source !
Let us help you, so you can concentrate on your photonics tasks.

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Gigahertz-Optik
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Manx Precision Optics
SpotOptics THE SOFTWARE PEOPLE FOR OPTICS
JENOPTIK
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