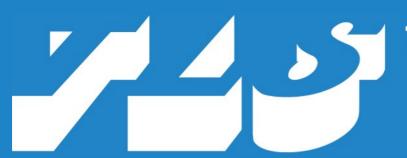


Photonics for precision engineering,
your guide to
Emitting, Manipulating & Detecting of light.

laser • fiber optics • optical components • spectroscopy imaging • interferometry • opto-electronic equipment • light metrology

Mercurion 26 • 6903 PZ Zevenaar • The Netherlands +31 316 340804 • contact@tlsbv.nl • www.tlsbv.nl



te lintelo systems bv photonics. our passion!



For more than 35 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 developed the specialism 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!















www.alliedphotonics.com

Te Lintelo Systems is a -founding- member of Allied Photonics, an association of independent European companies engaged in the photonics business.

All members operate according to the same entrepreneurial philosophy and ethical principles and, of course, we share our technical expertise.

The result is an international network with benefit to all participants of business: our customers, our suppliers and the members of Allied Photonics.







## **Emitting of light**

#### Lasers

We offer a wide variety of lasers: from the deep UV to FIR wavelength ranges; from reasonable simple diode, to ultra-fast Femto second lasers.





- Helium-Neon (He-Ne) lasers
- Argon-Ion (Ar-Ion) lasers
- Diode Pumped Solid State (DPSS) lasers
- Intercavity DPSS lasers
- Supercontinuum white light lasers, ultrafast lasers
- Multi Colour Laser Systems
- Nano second intercavity laser
- picosecond intercavity laser
- Water free, diode pumped laser
- Free beam DPSS and fiber coupled DPSS



**Photonics** 



#### Laser safety

- Laser safety eyewear based on all available technologies
- Coatings on glass and plastic filters
- Absorbing glass and plastic filters
- Mineral glass laser safety windows
- Large area acrylic or plastic laser protection windows
- •Laser safety curtains, slats and barriers





Quantum Instruments





## **Precision Lighting Solutions**

We offer a wide range of parabolic and elliptical reflectorized lamps.











## JENOPTIK • light & optics division

The Light & Optics division of Jenoptik is a supplier of solutions and products based on photonic technologies. Jenoptik provides a broad portfolio, combining outstanding knowledge from more than 25 years of experience in the fields of optics, laser technology, digital imaging, optoelectronics and sensors. We are the exclusive partner for JENOPTIK Laser beam expanders and F-Theta lenses & Fiber Lasers within the BeNelux region.

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

Lasers are ideal tools when it comes to processing materials guickly and efficiently they can be used for cutting, marking, engraving, drilling and structuring purposes. Jenoptik's high-quality objective lenses and beam expanders meet the tough requirements of laser material processing. They will offer you the right objective lenses and beam expanders for your application and laser type.

#### NKT Photonics

NKT Photonics is the leading supplier of high-performance fiber lasers, fiber optic sensing systems, and photonic crystal fibers, with its headquarter in Denmark. Their main markets are within imaging, sensing and material processing. Their products include ultrafast lasers, supercontinuum white light lasers, low noise fiber lasers, distributed temperature sensing systems and a wide range of specialty fibers.

With lasers in space and deep under the oceans and products running in both clean rooms and on oil rigs at sea. They seed the World's largest laser fusion experiment and power hundreds of the most advanced microscopes on the Globe. Their aim is to make a difference in the World and they are involved in projects that will transform the way we live through life-science, renewable energy and the basic understanding of the Universe. With over fifteen years of expertise, IP and experience, NKT Photonics strives to continually be the market leader in everything we do.





## Manipulating light

#### **Optical components**

Our complete assortiment of optical-components enables you to find solutions for various (laser) applications.





#### Fiber optics

Fiber Optics, from single- & multimode fibers to dedicated to customer specification build cables and or fiber delivery systems.



We offer a wide range of precision opto-mechanics: from optical tables and breadboards to smaller opto-mechanical components, like optical rails, translation stages, optical mounts or posts.





Manx Precision Optics

#### **Opto-electronics**

We offer a wide range of opto-electronical components, such as:



- Acousto- optics and acousto optics modulators
- Acousto-optic deflectors
- Pulse pickers
- O-switches
- Pockels Cells for applications in wavelengths from the UV to the IR and the drivers





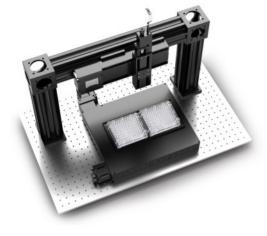
#### Nonlinear and Laser Crystals

A complete line of nonlinear optical crystals for different frequency conversion applications.









#### **OWIS**

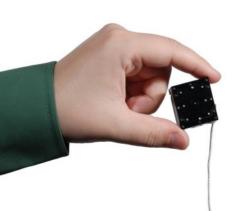
OWIS GmbH was founded in 1980 and we are very proud to distribute this successful family-owned company. The company develops, produces, distributes and services excellent optical beam handling as well as highly precise positioning systems – still according to the maxim »Made in Germany«.

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.

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

You can find a detailed product catalog at: www.tlsbv.nl/suppliers/owis.

# New Scale Technologies



## **New Scale Technologies**

Since 2002, New Scale has been awarded numerous patents in the development of piezoelectric motors and motion systems. These patents, combined with our proprietary know-how, enable us to create products with unmatched miniaturization, micrometer-scale resolution, fully-integrated micro-electronics and intelligent firmware.

#### M<sub>3</sub> Smart Modules

Our M<sub>3</sub> Smart Modules are "all-in-one" motion systems, with built-in electronics, that deliver sub-micrometer precision in the smallest smaller possible space. Each M<sub>3</sub> Smart Module is a fully engineered solution that integrates our patented and propriety piezoelectric motor, drive, sensing, guide and control technologies.

Our standard M<sub>3</sub> Smart Modules include M<sub>3</sub>-LS linear stages, M<sub>3</sub>-RS rotary stages, M<sub>3</sub>-FS focus modules and M<sub>3</sub>-L linear actuators. These positioning modules and micro stages deliver ten times better movement precision and ten times the force and range of motion of VCM, stepper motor or galvo solutions.

Besides standard products NewScale can also do custom products.





## **Detecting light**

#### **Spectrometry**

We offer a wide range of spectrometers for Scientific, Industrial & OEM, i.e.:

- FT-NIR, (handheld) Raman spectroscopy
- LIBS, absorption, fluorescence, NIR/SWIR, and luminescence spectroscopy





#### Light metrology

A full range of light measurement tools, from relatively simple handmeters to in-line LED inspection systems, from DUV-IR.





#### **Diagnostics**

- Interferometry: The measurement of lengths, angles, vibrations and other measured categories, with the highest resolution and precision.
- Our Shack-Hartmann Wavefront Sensors offers complete solutions for precise metrology of optical systems and lasers.



• We provide quality solutions for laser power and energy measurement applications.

#### **Imaging**

We offer solutions, i.e. for: EUV, X-ray and low-light level imaging.



#### **Detectors**

We can provide you with a large range of detectors, i.e. PSD, InGaAs, silicon, etc.











## Piezosystem Jena

Piezosystem jena is a world leading company in the development, design and engineering of piezo electric actuators with almost 30 years of experience. These positioning systems are ideal for micro- and nanopositioning.

They show outstanding precision in the sub-nanometer range and can generate forces of up to several thousands of Newtons while achieving precise positioning in microseconds. piezosystem jena offers grippers, mirror tilting systems, shutters, objective positioning systems, piezo stack type actuators, high load piezo actuators and piezo composites for material testing and shock generators. They have an extensive knowledge and in-depth technical expertise in the application of piezo technology to nano positioning tasks, and in the design of piezo flexure stages and development of piezomechanical systems.

Their systems can be easily integrated into many existing applications like optics, lithography, life science and highly precise/dynamic scanning applications so as for vibrational excitations and shakers.





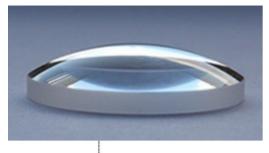
#### SIOS Messtechnik

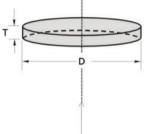
SIOS Messtechnik GmbH is a company for design and manufacturing of laserinterferometric precision instruments for nano-metrology.

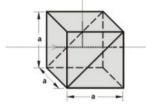
The measurement of lengths, angles, vibrations and other measured categories is done with the highest resolution and precision in conjunction with beneficial properties for users in areas of engineering, optics and semiconductor industries, in the calibration and metrology field, in research and development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

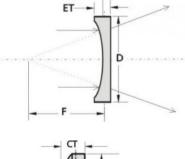
Application areas such as: Length measurement systems, combined length- and angle measurement systems, vibration measurement systems and calibration rigs and nano-measuring machines.

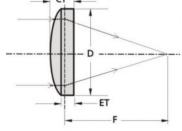












## **Custom Optical Components [OEM]**

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

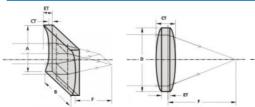
#### Nothing is strange to us!

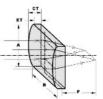
With our knowledge of the product, we can address all your needs. We will be able to advise you on your optical design, material selection, coatings, surface specifications, etc., to achieve together a better performing component and / or cost savings. We work together with well-established European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

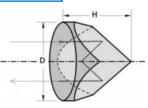
Te Lintelo Systems offers you optical components and assemblies build to your specifications.

#### \* We can offer the complete range of optical components

From	То
R&D	OEM
QTY 1	QTY ∞
Wollaston prism*	Cylindrical lenses*
Flat optics Ø o,5 mm ② o,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













## **SALVO Technologies**

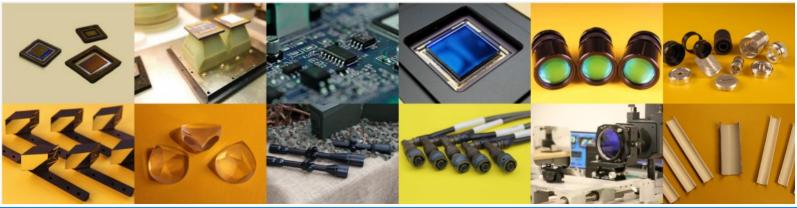
Since 2006, Salvo Technologies and their various divisions have provided an integrated suite of technologies to serve the security and defense, medical, industrial, semiconductor, commercial, science and technology markets.

Salvo Electro-Optics, specializes in the fabrication of optical and electro-optical components and assemblies. Their products range from zoom and objective assemblies, to the full range of optical components including beamsplitters, filters, output couplers, and etalons, as well as laser gain media and nonlinear crystals. Salvo EO can access the engineering capabilities of Salvo Defense and Salvo Coatings to customize systems to achieve design goals.

Salvo Coatings combines the microlithographic processes of the semiconductor industry with precision optical thin film coatings to create a wide range of multispectral and hyperspectral sensing and imaging products. Their products enable key technologies in the dynamic industries ranging from Industrial to Agriculture industries.

Another division, EOITech, provides sensing and imaging products and services by combining unique processes to solve complex problems in the medical, consumer, and industrial markets. EOITech has a goal to bridge a gap between scientific research and commercialization of products by creating cutting edge technology.

Salvo Technologies is a vertically integrated manufacturing company based in Seminole, Florida since 2006. With more than 10 divisions, Salvo caters to every industry as the go-to supplier in sensing and imaging, optical components and assembly, photonics, and more.







#### Vacuum

To manage your photonics vacuum application, together with our partners Te Lintelo Systems has a wide variety of products. For instance, to deliver your light into the vacuum chamber the best way and once in vacuum to highly and accurately manipulate photons using specialized equipment up to V-11.

Think of vacuum multi axis positioning systems, fiber optic vacuum feedthrough solutions, optical beam handling and manipulation systems, photonic vacuum chamber windows and vacuum optical fibers and components.

Please contact us to discuss your (photonics) vacuum application.







### **EUV**

Specific for the EUV region we provide camera's which are designed for direct detection in EUV, VUV and X-ray imaging. For example the PI-MTE3 in-vacuum CCD cameras from Princeton Instruments are engineered to encompass the energy range ~10 eV to 30 keV.

Besides camera's Owis has the V-11 product line consisting out of:

- Optical Beam Handling Systems
- Optical Components
- Manual Positioning Systems
- Motorized Positioning Systems





# te lintelo systems bv photonics. our passion!





# Let us know your application!









you take care of the coffee, we take care of the cookies!











