







Optical Components
Liquid Lenses
Opto Mechanics
Laser & Lightsources
Laser Dyes
Spectrometers
Software
Vision & Cameras





**▲**Vadeno

OPTICAL SOLUTIONS

### **Optical Components**

- -Singlets
- -Achromats & Lens systems
- -Laseroptics
- -Microscope Optics
- -Plane Optics
- -Polarizing Optics
- -Mirrors
- -Gratings
- -Thin Film Coatings
- -Faraday Isolators
- -Laser Modulators
- -Pockels Cells













- -Machine Vision lenses
- -Inspection lenses
- -Microscope objectives
- -Macro CCD lenses







### Liquid lenses

The unique characteristics of Corning Varioptic Lenses offer:



- No moving parts
- Hundreds of millions of cycles endurance
- Speed: much faster than mechanical actuators
- Robustness and unmatched mechanical shock resistance tested at 2000g / 0.25ms / 100 times (x2 directions)
- Close focus ability: from infinity to below 5 cm
- Low power consumption: <1 mW ( $\sim$ 20 mW with driver)
- Silent operation

### Applications:

- Barcode readers
- Biometrics
- Endoscopes
- Lasers
- Low vision devices
- Machine vision
- Medical imaging
- Ophthalmology equipment





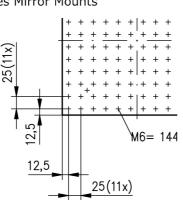


### **Opto Mechanics**

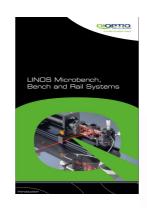


- -Microbench
- -Nanobench
- -Tube System C
- -Positioners
- -Rail Systems
  - 25 95 mm
  - Carriers
- -Mounts & Posts
- -Breadboards
- -Mounting plates
- -Mirror Mounts

Lees Mirror Mounts



















### Lasers

- -HeNe lasers
- Solid State lasers
- -Diode lasers
- -Line lasers
- -Multi color lasers





- -High power diodes
- -DPSS lasers

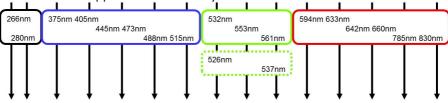




### Applications:

- -Biophotonics
- -Measurement & spectroscopy
- -Low frequency Raman spectrosopy

-Industrial application and many more...





OPTICAL SOLUTIONS

### Near-infrared lasers in an entirely new wavelength range

Nanosystems and Technologies GmbH

The primary products of nanoplus are single mode DFB lasers in the NIR and MIR spectral range for:

- -sensing
- -metrology
- -spectroscopy
- -telecom application
- -DBF diode lasers (760-3000 nm)
- -DFB ICL;s (3-6 μm)
- -Quantum cascade lasers (6-10 μm)

### Lightsources: Cold light and LED's

The perfect solution for applications requiring intensive, infrared-free lighting in which the light selectively guided to the object via fibre-optic components

### Applications:

- -Inspection / surface inspection
- -Technical endoscopy
- -Machine Vision
- -Microscopy







### X-Cite® Fluorescence Illuminators for Microscopy & Analytical Instrumentation

Fluorescence Microscope Light Sources



TURBO

X-Cite offers a wide range of lamp and LED light sources and fluorescence illumination systems ideal for a variety of microscopy applications. From our standard X-Cite 120Q model used for routine assays, to our most advanced high-end X-Cite XLED1 and X-Cite TURBO, X-Cite has the right fluorescence illumination system for your application. The X-Cite XYLIS features our newest broadband technology providing LED illumination powerful enough to match the output of a lamp!

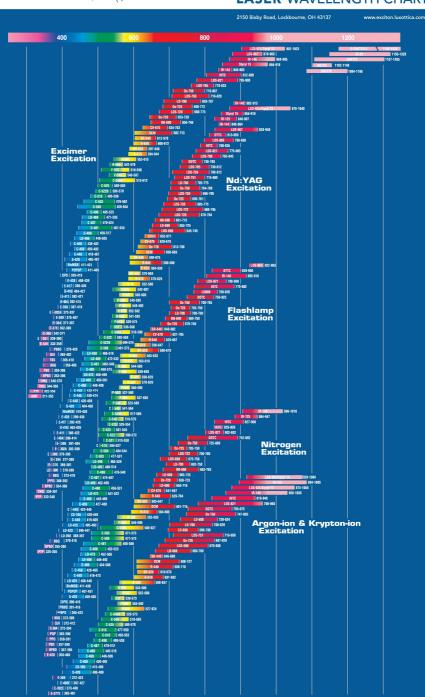
### How does one choose a microscope light source?

Selecting a fluorescence microscope light source depends on the application. How fast are you acquiring images? How much intensity control do you need for your light source? How fast do you need to shutter the light? What fluorophores are you exciting? Find out which system is most suitable, or contact us for your application.





### LASER WAVELENGTH CHART



### Highest quality dyes and specialty chemicals



Exciton is supplying the highest quality laser dyes, absorber dyes, and specialty chemicals over 40 years. Exciton continuously strive to bring new dyes to market across spectral regions from the infrared to the ultraviolet. Exciton introduces the latest science in the form of new dyes with superior performance.

Laser & Fluorescent Dyes



Dyes and dye lasers still provide the unique combinations of power, pulse length, wavelength and reliability that are required for many applications. Our products are used in research laboratories and medical offices around the world.

### Absorber Dyes



Selective light filtration (absorption) is key to the performance of many optical products from ophthalmic lenses for laser protection and enhanced contrast, to filters for digital sensors (cameras). Our nonfluorescent narrow band visible and infrared dyes are incorporated into products that are sold globally.





### GoSpectro

The power of spectroscopy at your fingertips

### The Most Mobile Spectrometer

-Compatible with most smartphones and tablets

 -Dedicated mobile applications available on Android and iOS

-Live spectra at video rate





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### 1. MEASURE

Point to a light source or object with sufficient lighting. Watch the spectrum on the display. Press SAVE to record a spectrum.

### 2. EXPORT

Send spectra by e-mail, to the cloud or to your computer via USB.



### 3. ANALYSE

Fine peak positions, perform baseline correction and spectral subtraction, compare spectra with databases.

### KEY APPLICATIONS GoSpectro



Hands-free analysis

Nanometric scale measurements

Gem analysis, storage & data export

No eye fatigue



Portable reader for anti-counterfeit labels (fluorescent ink)

Direct authentication of products in real time

Easy to use



Playful way to learn spectroscopy with a smartphone

Tutorials available
Affordable material



Light spectrum characterization

Wavelength calibrated measurement

Optical filters characterisation



### Software

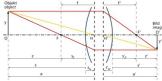
WinLens: Optical Design Software (Free)



Qioptiq Lens Calculator for Android Find it in the Google Playstore

MachVis: Machine Vision Lens Selector

Using 4 simple parameters — object size, working distance, sensor size and camera mount — MachVis calculates the necessary optical parameters and then pre-selects all suitable lenses that meet the specifications.



- create on-axis and folded systems
- model lenses, mirrors, prisms, gratings and HOEs
- serious optical engineering features
- ideal for learning and



teaching technical optics





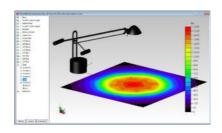


### Software



TRACEPRO®: Illumination design, analyses and Optimization Software

A seamlessly integrated suite of optical and opto-mechanical design tools includes: TracePro®, TracePro Bridge and a menu of add-ins enabling streamlined workflow and interoperability among other commercially available optical and mechanical design software tools.



TRACEPRO® offers engineers and scientists the confidence that the performance of the finished products will concur with the simulated design without costly prototype iterations.

Interested? Try our 14-day free trial of TracePro and TracePro Bridge.





### Vision - Cameras

Applications: Interfaces:

-Aviation -Analog Video
-Automotive -CameraLink
-Microscopy -Fast Ethernet
-Defense -Gigabit Ethernet

-Measurement -HDMI 1.3 Light Measurement -HD-SDI Machine Vision -USB 2.0

-Medical .... this is just an extract from-Power Distribution our portfolio

-Unmanned Vehicles









**OPTO**MOTIVE

### Customizable high performance FPGA cameras

Cameras with the stereoscopic eye of the Cameleon, the extensibility and flexibility of the Camelopard and the speed of the Velociraptor!

NEW: T-REX is the ultimate FPGA camera with a very large Xilinx Zynq FPGA and high speed

imaging sensor.





Our expertise in the world of Photonics makes us the perfect partner and supplier for you.
You can count on Vadeno Optical Solutions to plan, design, develop and produce the most demanding optical systems exactly to your specifications.



### You can turn to Vadeno Optical Solutions for...

Optical Solutions for research and investigation
Optical devices for production equipment
Lasers, Illumination and lighting
Spectroscopy and Raman
Imaging
Assembly equipment
Security and construction
Special recognition
Fabric and tissue production
Space applications
Free space optical communication
Biotech Lab instruments

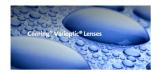
And much more...



Our suppliers train and advise us for the best way to use the products. With more than 25 in business we can say: "We have experience".

































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