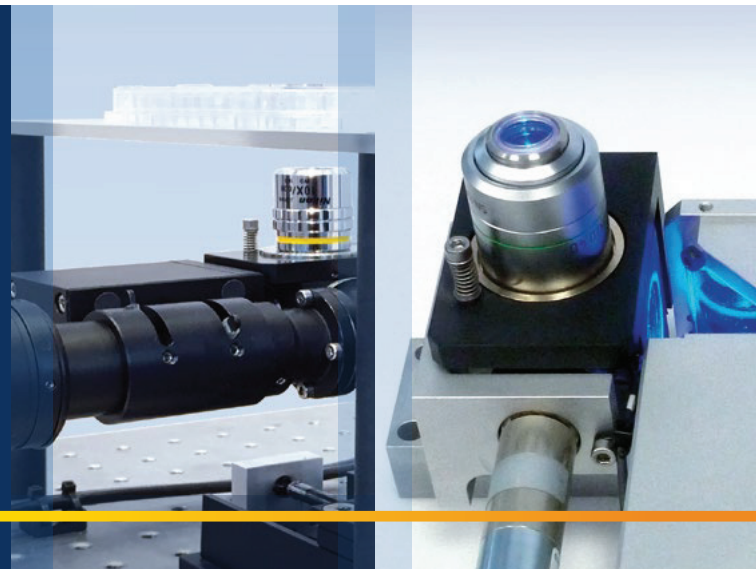


# World Class Optomechatronics

## Prototypes to Series

Solutions in Optics –  
Reduced to Your Needs



## 35 years of optical expertise

- 1980 Founded as Opto Sonderbedarf GmbH
- 1992 First to use CCD's from handycams in Machine Vision
- 1994 Pioneer in using Fluorescence with stereo microscopy
- 1996 Company taken over by Markus Riedi
- 2000 Expansion to 1000 sqm facility in Gräfelfing
- 2006 Opto expands into the UK
- 2008 Founding the French business
- 2012 Establishing the Opto Group GmbH & Co.KG.
- 2013 Introduction of new Corporate Identity and initial successes in Asia business.
- 2014 Opto awarded ISO 9001:2008 and 14001:2004  
Opto Group takes over Alliance Vision a French Machine Vision Distributor
- 2015 Opto Group founds Opto Asia Ltd. in HongKong to expand manufacturing and logistics for Asia



Markus Riedi, President

### OUR VISION

"To be a global market leader for compact, plug and play embedded imaging modules"

### OUR MISSION

"To produce optomechanical components, systems and devices as quickly and efficiently as possible"

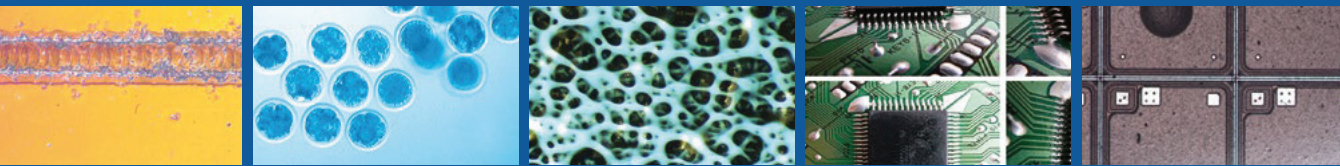
### OUR PROPOSITION

"Reduce customer needs to a simple solution with maximum added value"

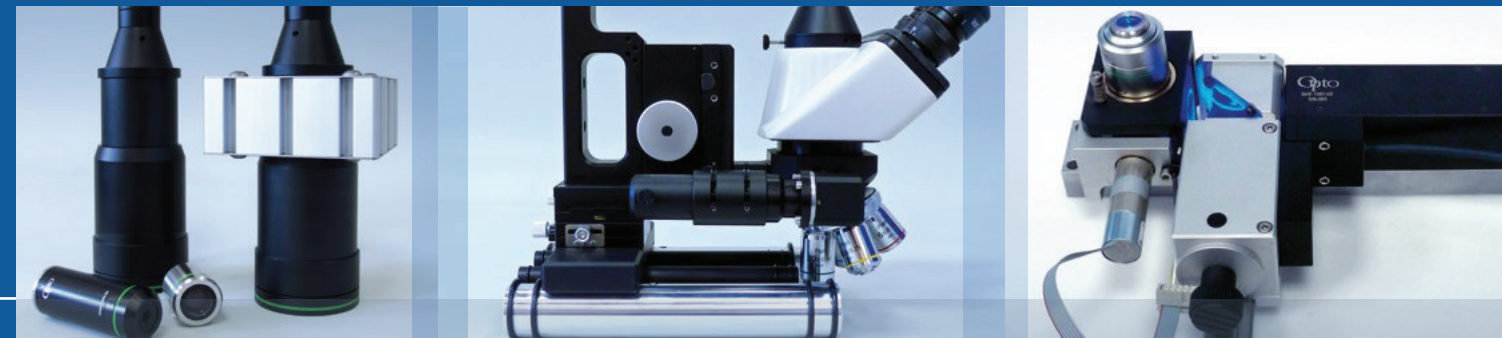


Opto is a leading developer and manufacturer of embedded optical imaging modules and instrumentation for the worlds most technically demanding inspection applications.

## Our experience



## Our offer



### MACHINE VISION

- Dimensional measurement of mechanical parts
- Micro-bond optical inspection devices
- Comparator optics for advanced forensics

### BIOLOGY

- Live cell imaging modules
- Embedded optics for drug development instrumentation
- Miniaturised fluorescence modules for pathology instrumentation
- Surgical laser system integration

### MATERIAL SCIENCE

- High contrast modules for micro-hardness testing instruments
- Optical imaging of steel porosity
- Surface defect imaging of silicon wafers

### PHOTONIC

- 3D laser measurement of component height
- Interferometric surface scanning
- Imaging modules for laser micro machining
- Laser microscope system development

### CUSTOM OEM MODULES & SYSTEMS

- Telecentric lenses
- Motorized zoom optics
- High magnification megapixel objectives

### IMAGE ANALYSIS SYSTEMS

- Cylinder Inspection systems
- Cleanliness Analysis stations
- Portable inspection instruments

### MACHINE VISION OBJECTIVES

- Motorized stereo and 3D imaging modules
- Miniaturized cellular imaging devices
- Embedded micro-imaging modules

opto.de

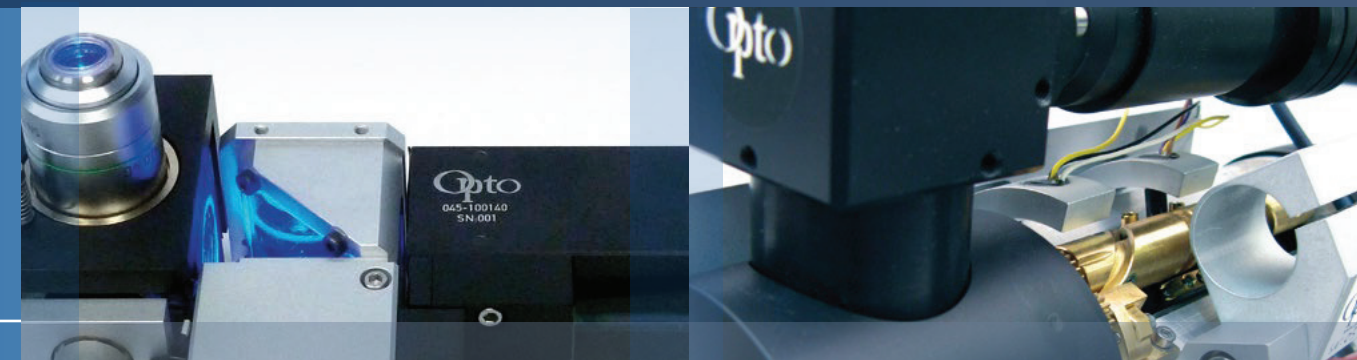




For over 30 years, Opto has developed and delivered perfectly designed custom imaging modules and devices for integration into some of the worlds most advanced high tech instrumentation.

## OEM Custom Manufacturing

OEM (Original Equipment Manufacturer) customers build the foundation of our business. In the industrialised microscopy world, many leading manufacturers rely on the consistent quality, and innovation speed which we provide. We are proud to be a long term module supplier to many of these manufacturers.



### EMBEDDED MICROSCOPES FOR MACHINE INTEGRATION

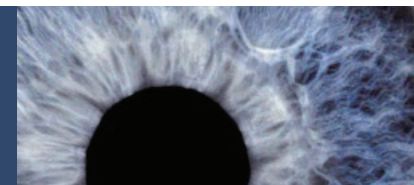
- Inverted autofocus phase contrast modules
- Motorized Excimer stereomicroscope
- Motorized coaxial zoom modules
- Contrast enhanced modules

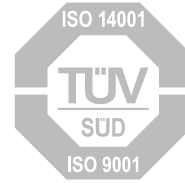
### MODULES WITH SPECIAL CAMERAS, MAGNIFICATION, WAVELENGTH AND CONTRAST

- Compact USB long working distance colour analysis modules
- Compact high magnification 90° GigE megapixel modules
- Splitfield dual magnification imaging modules
- Eye tracking imaging devices
- 3D stereo micro inspection modules

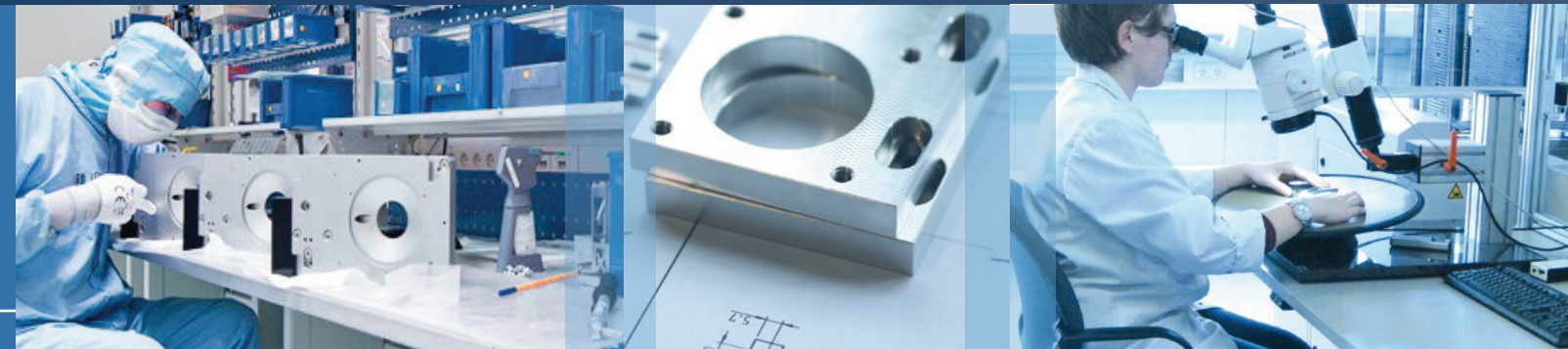
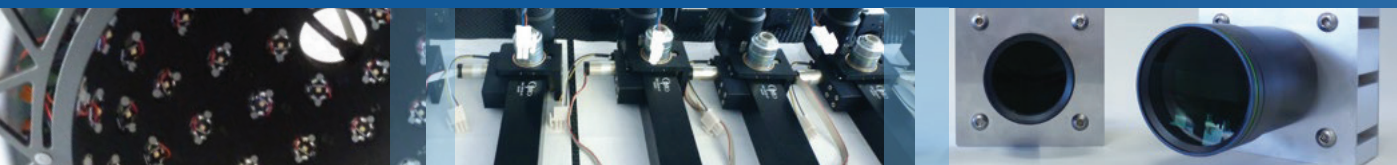
#### Laser eye surgery

For many years, optical modules from Opto are used to deliver the surgical laser beam to the eye during LASIK procedures, whilst enabling simultaneous 3D viewing of the eye by the surgeon.





## Our capability



- Full optomechanical design & optimization
- Optical component development
- Laser coupling & integration
- Fluorescence & contrast enhancement
- Zoom systems

### OPTICS

### MANUFACTURING

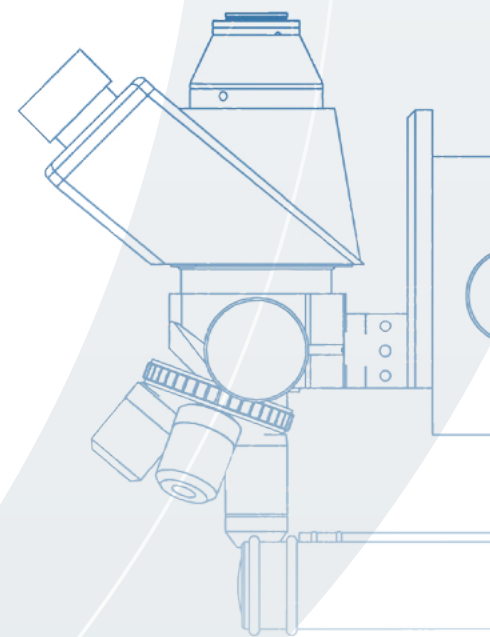
- Extensive in-house manufacturing capability
- Rapid prototyping service
- Just-in-time serial production
- Fully ISO 9001 accredited

- CAD/CAM design capability
- 3D model prototyping
- Space envelope optimization
- Combined opto-electro-mechanical design capability

### DESIGN

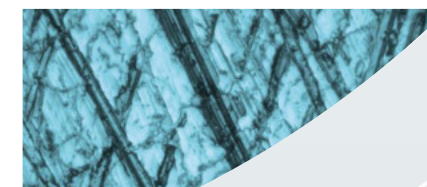
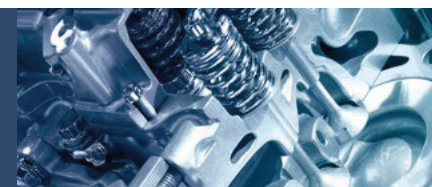
### SOFTWARE

- Driver development and interfacing (motorization, illumination, image capture)
- Image analysis
- Peripheral control



#### Analysis of cylinder walls

Opto technology examines the surface finish of automotive engine cylinders. The data extracted assists in adjusting the process and maintaining the quality.





With a personal project manager we are close to you and guarantee the quickest route to market.

We deliver customized plug and play solutions at the price of standard components.

We present you solutions reduced to their needs, in the most compact form to guarantee highest added value.

## Why Opto?

Opto is your dependable supplier with a 35 year reputation in producing perfect optomechanical solutions. From one-off prototypes to full scale production, we deliver optical solutions to the highest quality standards, within budget and on time.



With over 30 years experience delivering optical solutions to 'mission critical' applications such as surgical imaging and eye tracking, you can be assured that reliability comes as standard with a solution from Opto.

### RELIABILITY

As an established supplier to machine builders worldwide, we recognise the need for flexibility – in scaling up to increasing production volumes, but equally, in a design sense, in rapidly implementing design changes to equipment rapidly.

### FLEXIBILITY

### SPEED

As a developer of novel optomechanical solutions for our customers, we understand that time to market is everything, and so operate a rapid feasibility design service to explore the potential of a new concept. A 'just-in-time' manufacturing service enables us to integrate seamlessly into your production.

### EFFICIENCY

A solution from Opto will be delivered with efficiency included as standard, and which balances price and performance perfectly. We maintain a constant eye on innovation, ensuring that the solutions we develop for our clients are representative of the most efficient solutions we can deliver, both technically and commercially.

Detection of surface defects

Optos portable metallurgical microscope is used for inspecting the surface finish of aircraft wings, increasing airplane safety.





## Contact Us

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**JM VisTec System**  
"Our Vision, Tomorrow's Innovation"  
- The Machine Vision Specialist

