

Press Release



Page: 1 of 6
Date: June 15, 2010

Jenoptik at OPTATEC 2010: Innovative optical solutions for growth markets

Jenoptik's Optical Systems division is presenting itself as a partner in the development, manufacture and sale of customized optical systems, modules and components at OPTATEC in Frankfurt. Operating via four business units – Optics, Microoptics, Optoelectronic Systems and Digital Imaging – it displays a variety of solution-finding capabilities, targeting ambitious markets of broad diversification.

OEM partner for optical solutions in eight target markets

Powerful optical solutions are a key technology and, typically also, the core part of innovative products in numerous fields of industrial application. Combining its skills in optics, microoptics, optoelectronic systems and digital imaging in a single network, the Optical Systems division is able to provide excellent solutions for use in sophisticated environments and a wide range of applications worldwide. Its efforts to develop, manufacture and test custom-engineered optical systems, optoelectronic and optomechanical subsystems, as well as modules and components, facilitates innovative approaches to solutions.

Optical Systems is dedicated to continuously enhancing the successful and competitive performance of customers as their OEM partner. In line with this principle, this Jenoptik division is making its first presentation of a broadly diversified portfolio with solution-finding expertise along eight target markets at OPTATEC 2010:

- Semiconductor & Flat Panel Display Equipment
- Laser Material Processing
- Defense, Security & Aerospace
- Health Care & Life Science



Page: 2 of 6
Date: June 15, 2010

- Optical Measurement & Machine Vision
- Digital Imaging
- Lighting & Energy
- Automotive & Mobility

Optical module & system competence from DUV to MWIR

Focus of the Optics business unit's presentation at OPTATEC is as much on highly precise inspection lenses and modules for optical process control in the semiconductor industry as on distortion-free objective lenses for biotechnological analysis. For use in defense and security applications, Optics offers customized optical modules for image capturing and target detection.

Jenoptik continues their key role in discovering advanced solutions for application-specific transmission and modulation of a laser beam in the field of laser material processing. These custom-tailored solutions are complemented by powerful F-theta lenses and beam expanders and will be demonstrated at the exhibit. [\(more information\)](#)

Speckle-free homogenization from DUV to IR

Many applications, such as lithography and inspection equipment for semiconductor and flat panel display fabrication, imaging and projection systems, require very uniform illumination of a certain area or object. Some applications require even uniformities below 1%.

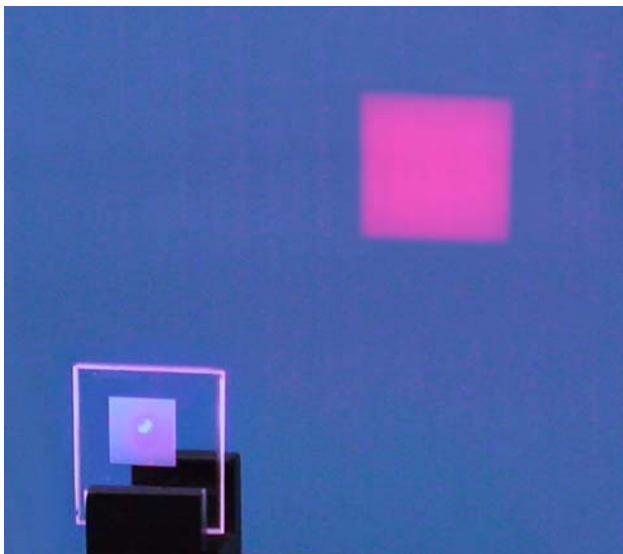
The Microoptics business unit is a leading OEM-partner for custom specific homogenizer solutions and can tailor diffractive diffusers, beam shapers and refractive homogenizers, e. g. fly's eye homogenizers to the desired light source, typically lasers and LEDs.

In optical setups where a coherent light source is used in conjunction with a diffuser, one observes so-called speckle that can lead to poor local homogeneity. This effect can be minimized by destroying the temporal coherence of the laser. Besides custom specific designs and fabrication of diffusers, Microoptics provides complete plug and play solutions for de-speckling.

Jenoptik can satisfy the requirements of the entire spectral range from deep UV to infrared, providing microoptics of CaF₂, Fused Silica, Glass, Silicon, Sapphire and others.

The Microoptics business unit offers a complete portfolio of micro-optical products featuring excellent performance. Based on a broad range of technology skills, customers can choose from a variety of options – from the design and flexible rapid prototyping to the manufacturing of small and large batches of refractive, diffractive or hybrid microoptical solutions.

With fabrication sites in Germany and in the USA and sales representatives worldwide, we are globally and conveniently positioned to serve our customers. ([more information](#))



Image

Diffractive beam shapers

Optical fibre cables for special applications in spectral range VIS & NIR

Optical fibre cables are used in various fields of optical technology for light transmission and beam forming. The Digital Imaging business unit demonstrates a broad spectrum of special fibre cables that can be adapted in terms of design, protection and terminations to exactly meet the customer's specifications.

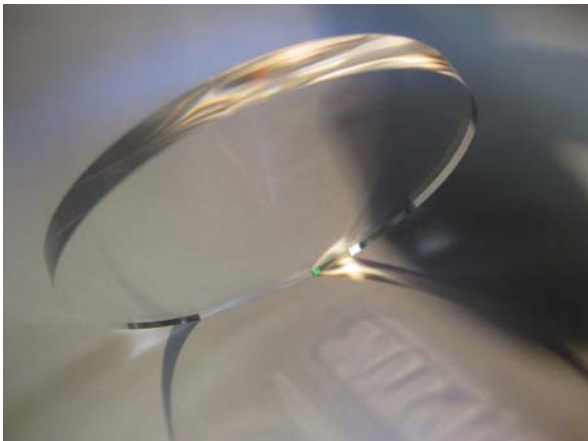
Especially for high tech systems in the visible and near infrared spectral range, Jenoptik is able to supply qualified optical fibre cables and come up with a system solution to your problem. Optical fibre cables are being employed for telecommunication, sensor and laser technology, life science, metrology and the light & signalling technique. ([download datasheet](#))

Miniaturization of optical components in optoelectronics

A trend towards small and compact modules and systems can be noticed in different areas of many markets. Its advantages do not only translate into a smaller size, but also a reduced weight in some applications.

Driven by this development, the Optoelectronic Systems business unit presents two kinds of optical components: freeform surfaces and microlens arrays, which successfully face the challenge of growing miniaturization in optoelectronic applications.

Freeform surfaces help to minimize optical components and optimize their end-use functionality in addition. They are used, for example, into head up displays (HUDs) or head mounted displays (HMDs) of cars or airplanes. Moreover they are applied for beam shaping of light and for complex light and luminance distribution. [\(more information\)](#)



Image

Polymer lens with freeform surface

Another optical component represents a further developed version of a double-side microlens array as part of microprojectors used in the consumer business, mini-beamers in laptops or mobile phones, for example. This type of array allows illumination beams to be homogenized and beams to be guided through laser projection systems.

Through further development of this technology it becomes possible to align both sides of a microlens array to each other with μ -range accuracy thus warranting high overlay precision.

Selection of plastics as working material allows for cost-efficient manufacturing and makes these components attractive in different market segments, including automotive, lighting & energy, medical engineering and sensor technology. [\(more information\)](#)

New ProgRes® **SpeedXT^{core}** microscope cameras

The Digital Imaging business unit has now added two USB camera types to its ProgRes® CCD microscope camera range: ProgRes® **SpeedXT^{core} 3** and ProgRes® **SpeedXT^{core} 5**. Establishing this new product range, Jenoptik meets the increased requirements of a large user community in the industrial and scientific areas demanding perfect image quality combined with outstanding speed.

The impressive live image speed of 17 fps (**SpeedXT^{core} 3**) and 13 fps (**SpeedXT^{core} 5**) at the maximum possible resolution of 2080 x 1542 pixels (**SpeedXT^{core} 3**) and 2580 x 1944 pixel (**SpeedXT^{core} 5**) is a decisive advantage of ProgRes® **SpeedXT^{core} 3** and 5 cameras.

When maximum resolution is not required, even higher frame rates of 30 resp. 45 fps are possible.

Users benefit from an optimized workflow: thanks to a two to three fold-enhanced live image speed in combination with high resolution, specimens can be focused and positioned more easily and quickly – a clear advantage where moving objects have to be analyzed and routine work done in laboratories. Exposure times of up to 180 seconds ensure optimal image capturing, even in poor light conditions. The maximum available color depth is 36 bits. [\(more information about ProgRes® cameras\)](#).



Image

ProgRes® **SpeedXT^{core} 3** – Digital microscope



Page:

6 of 6

Date:

June 15, 2010

Detailed information on the range of services available from Jenoptik's Optical Systems division at the OPTATEC trade fair can be found at www.jenoptik.com/optatec.

To gain an insight into the numerous applications of solutions devised by Optics, Microoptics, Optoelectronic Systems and Digital Imaging, visit our market-targeting presentation area in hall 3, booth B12.

About Jenoptik Optical Systems division

With its Optical Systems division, the Jenoptik Group is one of the few manufacturers in the world to produce precision optics and systems designed to meet the highest quality standards.

Besides optomechanical and optoelectronic systems, modules and assemblies, the Optical Systems division is a development and production partner for optical, micro-optical and coated optical components - made of optical glasses, IR materials as well as polymers.

It possesses outstanding expertise in the development and manufacture of optics and micro-optics for beam shaping used in the semiconductor industry and laser material processing. The product portfolio also includes systems and components for life sciences as well as lighting & energy applications, modules and system solutions for digital image capture and processing as well as cameras for digital microscopy.

Contact

Markus Besenbeck

Director Marketing & Business Development

JENOPTIK | Optical Systems

JENOPTIK Optical Systems GmbH

Goeschwitzer Strasse 25 | 07745 Jena | Germany

Phone: +49 3641 65-2276 | Fax -3658

info.os@jenoptik.com

www.jenoptik.com/os