



## Press Release Photonics West 2011

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# Jenoptik offers an advanced level of microoptics system integration for Semiconductor and FPD-equipment manufacturers

During Photonics West 2011, Jenoptik's Microoptics business unit will present demonstrators of microoptic technology for improving current and next generation products.

Semiconductor and Flat Panel Display-fabrication equipment is getting more and more sophisticated to meet the huge challenges of shrinking feature dimensions and larger wafer and panel size. This leads to a demand for custom specific microoptics with increased performance and extraordinary optical properties. Ultimately the microoptical components have to perform in conjunction with optics, electronics and mechanics.

There is a growing trend that Semiconductor and FPD-equipment manufacturers require a higher integration level in order to simplify the interfaces between their systems and the optical sub-systems with integrated microoptical functionality.

Therefore the Microoptics business unit strengthened its capabilities to follow this trend. As a result, a comprehensive portfolio of advanced system-integration methods and tools is available. Assemblies, interconnections, contacting and compounds of our custom specific microoptics with opto-electronical components, PCB's and micro-machined parts can be realized. This is done using highly sophisticated technologies, e.g. gluing and optical contacting of 3 dimensional stacks and modules consisting of optical glasses, metals, electronics boards and semiconductors with flatness and placement accuracies down to sub-micron level.





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These integration activities are performed in recently extended class 100 clean rooms with specifically designed alignment tools, such as a 6 axes robot. Moreover, Jenoptik developed processes for the fabrication of sub-micron optical structures on top of optoelectronic sensors or sensor arrays as well as for sub-micron structuring of membranes for microoptical systems working in the Extreme Ultraviolet (EUV).

The [Microoptics business unit](#) of Jenoptik's Optical System division offers a complete portfolio of customized microoptical products featuring excellent performance. Based on a broad range of technology skills customers can choose from a variety of options – from the design and rapid flexible prototyping to the manufacture of small and large batches of refractive, diffractive or hybrid microoptical solutions. With fabrication sites in Germany and in the USA and sales representations worldwide we are positioned close to our customers.

Capabilities to handle a huge variety of materials including fused silica, GaP, ZnSe, glass, Ge, Silicon, Sapphire and plastics enable the business unit to cover a broad range of wavelengths from DUV to IR. They also provide the platform to successfully address a diversity of applications for Semiconductor, Flat Panel Display and Laser Materials Processing equipment as well as life science, defense and civil system applications. Where new and highly efficient solutions are required, OEM-manufacturers and system integrators can rely on Jenoptik.



## Image

Clean room at Jenoptik's Microoptics



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Detailed information on the range of services available from Jenoptik's Optical Systems division at the PHOTONICS WEST trade fair can be found at [www.jenoptik.com/photonics](http://www.jenoptik.com/photonics)

To gain an insight into the numerous applications of solutions devised by the Microoptics business unit, visit us at South Hall, booth #1323.

## 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 opto-mechanical and opto-electronical systems, modules and assemblies, the Optical Systems division is a development and production partner for optical, microoptical 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 microoptics 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 applications, modules and system solutions for digital image capture and processing as well as cameras for digital microscopy.

## Contact

Tim Lindsey  
Sales Manager Microoptics

JENOPTIK Optical Systems, Inc.  
205 Import Circle  
Huntsville | AL | 35806 | USA  
Phone: +1 256 859 1886 | Fax 5890  
sales@jenoptik-inc.com  
www.jenoptik-inc.com

Uwe Wielsch  
Sales Manager Microoptics

JENOPTIK Optical Systems GmbH  
Goeschwitzer Strasse 25  
07745 Jena | Germany  
Phone.: +49 3641 65-2440 | Fax: -2443  
microoptics.os@jenoptik.com  
www.jenoptik.com/microoptics