Press Release
Photonics West 2011

Date: January 21st, 2011

Jenoptik Optical Systems presents system solution capabilities for optics and opto-electronics at PHOTONICS WEST 2011

Jenoptik will exhibit the total range of capabilities that make it a "One-stop shop" for precision optical needs ranging from optical components to integrated opto-electronic systems. Product highlights displayed comprise CaF_2 Microoptics, LED Display Chips & Light Modulators among others. Visit us at the show, South Hall, booth #1323.

Complete system solutions by leveraging technolgical capabilities

Pairing manufacturing and design capabilities in optics, microoptics, digital imaging and opto-electronic systems, Jenoptik´s Optical Systems division is taking advantage of the unique breadth of its worldwide capabilities to deliver innovative optical solutions. As a world-class OEM partner of optical systems, assemblies and components, the division is dedicated to continuously enhance the successful and competitive performance of our customers.

In line with this principle, the Jenoptik division presents its broadly diversified portfolio along the following eight target markets:

- Semiconductor & Flat Panel Display Equipment
- Laser Material Processing
- Defense & Security
- Health Care & Life Science
- Optical Measurement & Machine Vision

JENOPTIK Optical Systems GmbH I Goeschwitzer Strasse 25 I 07745 Jena I Germany I www.jenoptik.com/os I WEEE--Reg.No.: DE27226230
Managing Directors: Dr. Dirk Michael Rothweiler, Dr. Stefan Stenzel

- Digital Imaging
- Lighting
- Automotive & Mobility

At Photonics West, Jenoptik showcases a complete system for counting and sizing particles as a Live-demonstrator. Based on digital image processing, this specific application presents the division´s expertise in accomplishing integrated customer-specific solutions including optics, illumination, imaging as well as hard- and software integration.

Jenoptik furthermore presents their comprehensive product portfolio including design and manufacture of diffractive and refractive microoptics, optical components and modules, optical lens assemblies and moulded polymer optics. The technology portfolio enables solutions for a wide-range of applications across the spectrum from EUV to LWIR.

Image

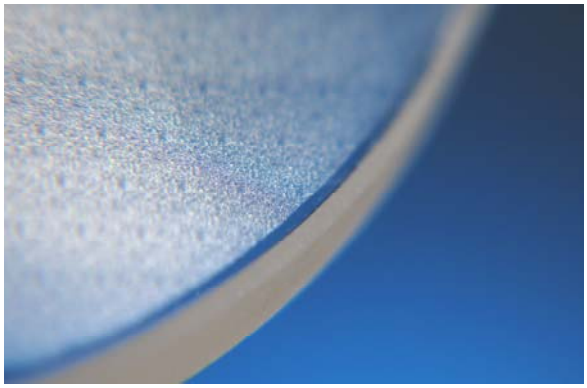
Opto-electronic IR-Module

Increased capabilities for CaF_2 Microoptics manufacturing

Jenoptik´s Microoptics business unit demonstrates its commitment as a leading provider in DUV solutions by expanding its capabilities in manufacturing CaF_2 microoptics. This offers the ability to fabricate very flexible refractive and diffractive microstructures in calcium fluoride.

Compared to conventional materials, CaF_2 is ideal for high power laser systems, ensuring longer operation time and higher damage threshold. Jenoptik´s know-how and production capabilities offer a wide range of custom manufactured micro-optics, i. e. refractive microlens arrays, diffractive diffusers, beamshapers and beamsplitters, which are most suitable for any application that requires excellent uniformity, efficiency, and high power. Jenoptik does not rely on cylindrical or rotationally symmetric surfaces to create fly's eye homogenizers. As a result, we can accomplish the same function in fewer surfaces.

The expansion of Jenoptik CaF_2 technology includes an investment to increase fabrication capabilities and add further flexibility in the final optical design. The investment is planned to be complete by the end of Q1/2011 and will result in CaF_2 microoptics with increased efficiency and better uniformity for Semiconductor and Inspection applications. This investment also serves as an increase in overall capacity, which will position Jenoptik to be ready for any production ramp ups as required.



Image

CaF_2 Microoptic

New LED Display Chips – more brightness, less power consumption

The optoelectronic business unit of Jenoptik´s Optical Systems division launches a new generation of LED display chips. These chips display numbers, letters and symbols on a minimal space. This information can be reflected into the optical beam path. A recognizable emission can already be reached at ca. 400nA with the emission color red (650 nm). The standard 7-segment chip has a digit-size of ca. 0.7 mm (see picture). For customized solutions the size of single segments is freely selectable.

In comparison to the previous generation the chips of the newly developed generation have a more than one hundred times higher luminous intensity. This leads to an enhanced brightness and contour sharpness, which improves the visibility in the application. Furthermore the power consumption of the new generation is drastically reduced to 1/100 and expands the battery lifetime in portable devices.

Fields of applications for LED display chips are, among others, battery-operated measuring instruments (laser measuring systems, binoculars), as well as medical and sports medicine devices (microscopy, reflection of information into glasses).

Image

In comparison:
chips of the first (on the right) and
of the second generation (on the left)

Light Modulators for modulation of amplitude, phase, polarization and spectrum

Jenoptik is one of the few companies in the world to address the market for pulse modulation of high and low power lasers.

The Digital Imaging business unit presents at Photonics West their highly specialized Light Modulators, utilized for modulation of amplitude, phase, polarization and spectrum as well as for pulse shaping, pulse rate reduction and fast switching of light from multiple laser sources.

A unique feature of the waveguide modulators is the high stability against high optical power. This leads to comparably high damage threshold in the near-infrared (NIR) spectrum as well as the possibility of light modulation of visible light. The production process allows to fabricate the modulators for nearly any wavelength between the green and the telecommunication range and with customized pigtails, fiber connectors etc.

Outstanding properties of the liquid crystal modulators are wide operating wavelength range in the visible (VIS) and near-infrared (NIR) spectrum, high phase shift and the possibility of very flexible application due to the sophisticated driving electronics suitable for feedback pulse optimization.

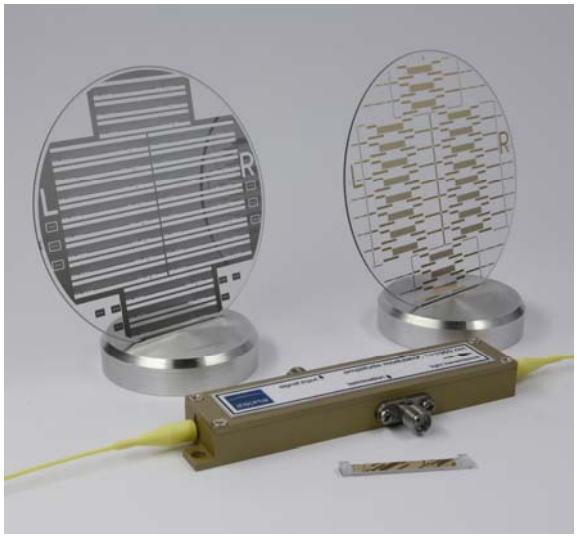


Image
Waveguide Modulators

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

To gain an insight into the numerous applications of solutions devised by the business units Optics, Microoptics, Digital Imaging and Optoelectronic Systems, 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

Dr. Markus Besenbeck
Director Marketing & Business Development

JENOPTIK Optical Systems GmbH
Goeschwitzer Strasse 25
07745 Jena I Germany
Phone: +49 3641 65-2276 I Fax -3658
info.os@jenoptik.com
www.jenoptik.com/os

Ray Malcom
Vice President Sales & Marketing

JENOPTIK Optical Systems, Inc.
16490 Innovation Drive
Jupiter I FL I 33478 I USA
Phone: +1 561 881 7400 I Fax 1947
sales@jenoptik-inc.com
www.jenoptik-inc.com