Press Release

Date: June 11, 2009

Jenoptik´s Optical Systems division at LASER 2009: new developments in microoptics, optoelectronics systems and digital imaging

At „LASER World of Photonics" from June 15 to 18, 2009 in Munich, the world´s leading trade fair for optical technologies, Jenoptik´s Optical Systems division will present numerous innovative products in hall C2 at booth #311.

Pulse Compression Gratings (PCGs) with outstanding thermal stability for Ultrashort-Pulse-Lasers

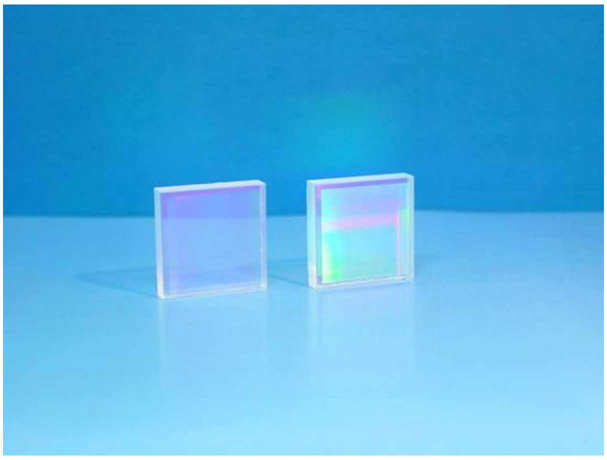
JENOPTIK Businesss Unit Microoptics, a world leader in microoptics, provides two product lines of Pulse Compression Gratings for the utilization in Femtosecond–Lasers. Diffraction gratings are a key element for pulse compression of laser systems. In addition to our high performance transmission gratings we have developed highly efficient dielectric reflection gratings to cover the whole application area for customers from Ophthalmology to Laser Materials Processing.

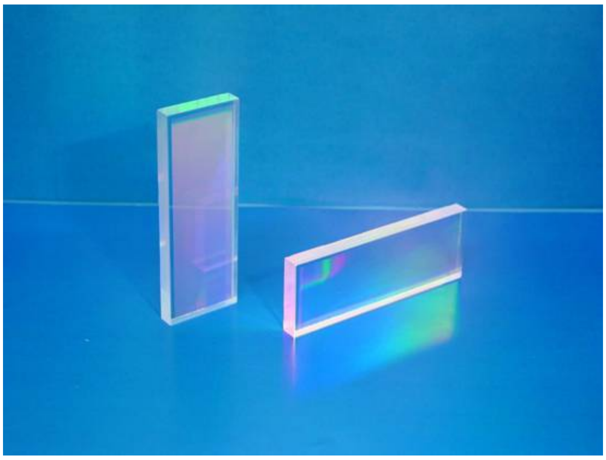
State of the art gold coated reflection gratings suffer from poor performance in terms of efficiency and absorption. The new dielectric reflection Pulse Compression Gratings, designed for 1030 nm and 1057 nm wavelength with a groove density of 1740 lines per mm, enable very compact setups due to the feasibility of small areas for higher power due to low absorption.
The dielectric reflection PCGs show efficiencies of more than 97 %. The new product complements the existing product line of transmission PCGs with high damage threshold and outstanding thermal stability.

Customized microoptics for versatile customer applications

The Business Unit Microoptics offers a complete portfolio of micro-optical products featuring excellent performance. Based on a broad range of technology skills which are available under Jenoptik's corporate umbrella, 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 micro-optical solutions.

Capabilities to handle materials other than fused silica or plastics enable us to cover a broad range of wavelengths from DUV to IR. They also provide the platform to successfully address a diversity of working tasks using production equipment in semiconductor fabrication or laser material processing, or apparatus technology in life science or defense and civil system applications. Where new and highly efficient solutions are required, OEMs and system integrators can rely on Business Unit Microoptics to be your competent point of contact.





Images

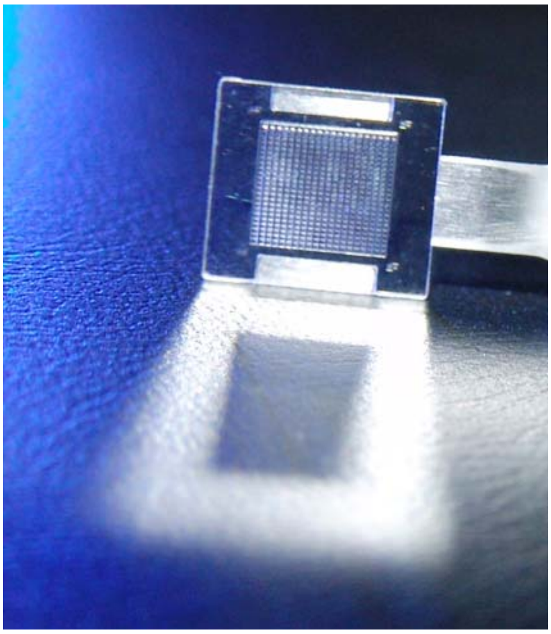
Dielectric reflection gratings

High efficiency microoptics for illumination projection systems

In close cooperation with Microoptics Business Unit the Optoelectronics Systems Business Unit developed a double-sided microlens array in plastic. Due to a unique proprietary tooling this array can be reproduced for series production.
A double-sided microlens array enables, among others, homogenization of laser sources as well as beam guidance in laser projection systems. The new technology allows for an array precisely aligned front-to-back in the sub-µ-area.

This development reacts to increasing demands for micro projectors in the consumer markets, which are used, for example, for mini beamers in laptops and mobile phones. The use of plastics for these micro arrays enables an economic production and makes these components ideal for applications on the broad consumer market. Varios customers demands have opened up different areas of applications for the use of the double-sided lens array; in the fields of automotive, lighting & energy, health care and life science and sensors.

With injection molding it is possible to design mounting and alignment features as an integral part of the optical component to aid in packaging and system assembly.



Image

Double-sided microlens array 9 x 7 mm

A new product line with USB Interface is added to the ProgRes® Camera family

The new USB 2.0 based cameras in the ProgRes® CMOS and CCD Research camera line have been optimized according to customer wishes and will be available worldwide at authorized ProgRes® Resellers.

The CMOS Camera models ProgRes® CT1, CT3 and CT5 are now equipped with USB interface. With an extended resolution up to 5 Megapixel and a live frame rate up to 20 fps the new USB Camera of the CMOS Line delivers faster high resolution with excellent image results. New in the ProgRes® CCD Research Series are the USB Models ProgRes® CS and MS.
These extraordinary and very sensitive cameras perform high sensitive imaging with up to 50 fps in full resolution (CCIR/PAL). You can also get the ProgRes® CF and MF cameras now with USB interface with faster live imaging in SXGA resolution with 15 fps. We adapted the USB interface to our cameras to satisfy the needs of our customers for easy connection. The basic requirement for productive work in Life Science and Material Science is the need for fast live preview imaging with excellent color reproduction. With the new USB 2.0 interface the ProgRes® cameras will connect fast and easy to the computer and do not require an external power supply.

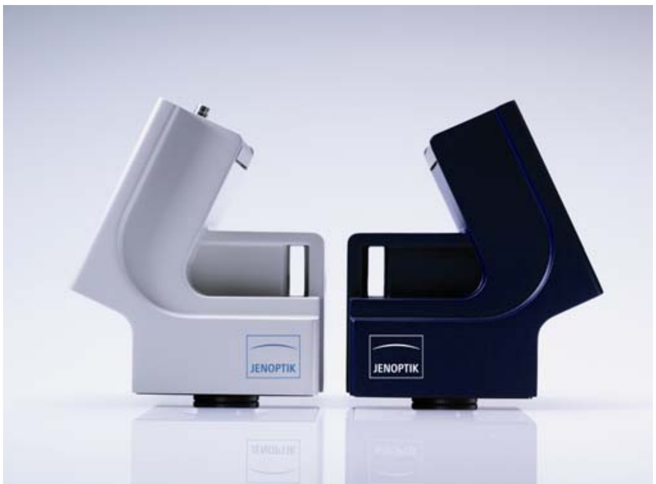


Image
ProgRes® Digital Cameras

Jenoptik´s 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. The division is a development and production partner for optical, micro-optical and optical coating components, opto-mechanical and opto-electronical assemblies, modules and systems - made of glass, crystal as well as polymer. It possesses outstanding expertise in the development and manufacture of micro-optics for beam shaping used in the semiconductor industry and laser material processing.

The product portfolio also includes components and systems for life sciences as well as lighting & energy applications, cameras and camera components for the world of professional digital photography, cameras for digital microscopy and macroscopy as well as digital imaging modules for integration within industrial image capture and processing systems.

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