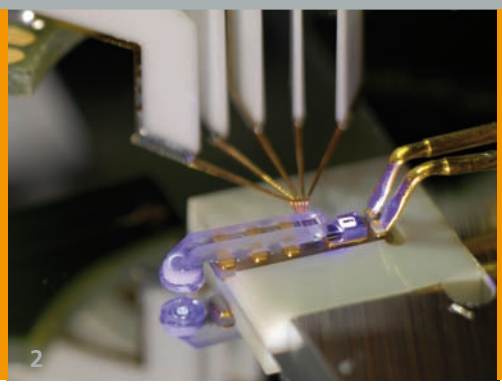
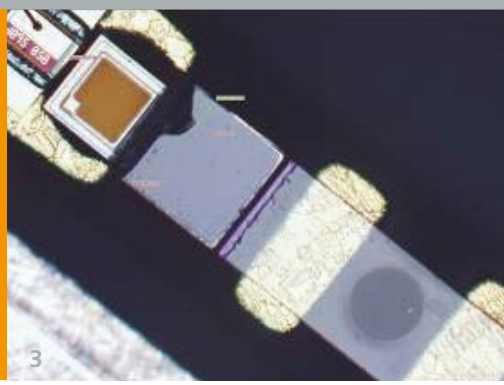
Fraunhofer
IOF

FRAUNHOFER INSTITUTE FOR APPLIED OPTICS AND PRECISION ENGINEERING IOF





1 *Gripped prism.*
2 *Alignment of the detektor.*
3 *Optical bench with aligned prism on top.*

INTEGRATION OF MICRO-OPTICAL COMPONENTS FOR A BLUE RAY DVD PICKUP SYSTEM

Motivation

- Mobile data storage system, blue ray laser diode @ 407 nm
- Increasing packaging density of the components leads to higher requirements on the assembly and alignment process
- Use of microelectronic system platforms
- Assembly process and alignment procedures for mass production

Our Offer

- Development of assembly and aligment processes
- Realization of high precision assembly devices
- Assembly and aligment of prototypes

Alignment technologies

By means of geometrical characteristics
- Alignment of the components using mechanical stops
- Detection of component geometry - edges and alignment structures using image processing
- **Alignment accuracy: 10 – 50 µm**

By means of optical functionality
- Measurement of beam parameters and intensity
- Detection of the data signal
- **Alignment accuracy: 1 – 10 µm**

Fraunhofer Institute for Applied Optics and Precision Engineering IOF

Albert-Einstein-Straße 7
07745 Jena

Director

Prof. Dr. Andreas Tünnermann
Phone +49 3641 807-0
andreas.tuennermann@iof.fraunhofer.de

Contact

Dr. Ramona Eberhardt
Phone +49 3641 807-312
ramona.eberhardt@iof.fraunhofer.de

www.iof.fraunhofer.de