

Efficient diode laser beam shaping for your application

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Hannover 2011

Forum: Innovation for industry

Facts + Figures

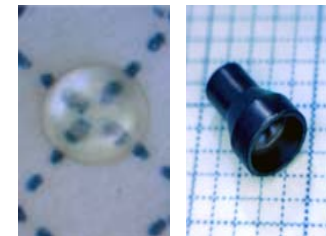
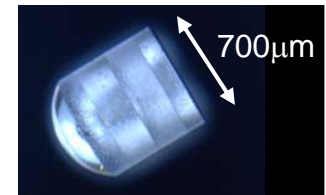
- Located at St. Gallen, Switzerland
- Founded in 1957
- Approx. 330 employees
- Markets: 10% Switzerland
80% EU
10% Rest of the World
- In private ownership



FISBA OPTIK

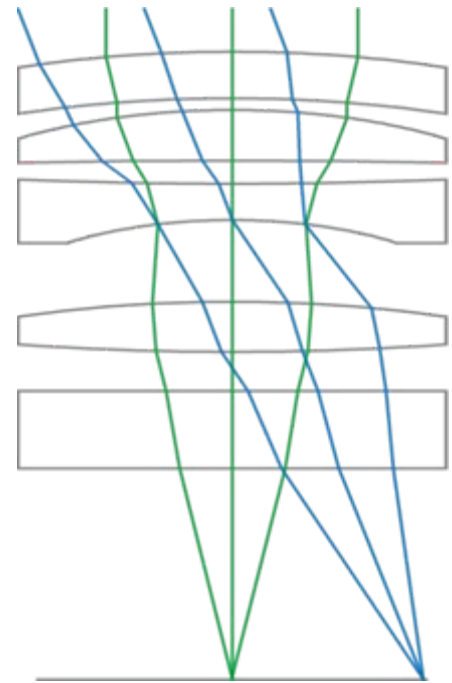
A short introduction

- Finding Solutions, Realizing Solutions, Optical Solutions That Work
- Business Unit Optical Solutions
 - Advanced Optical Components
 - Expert Optical Systems
 - Optical Micro Systems
- Development and production of technological and economical system solutions

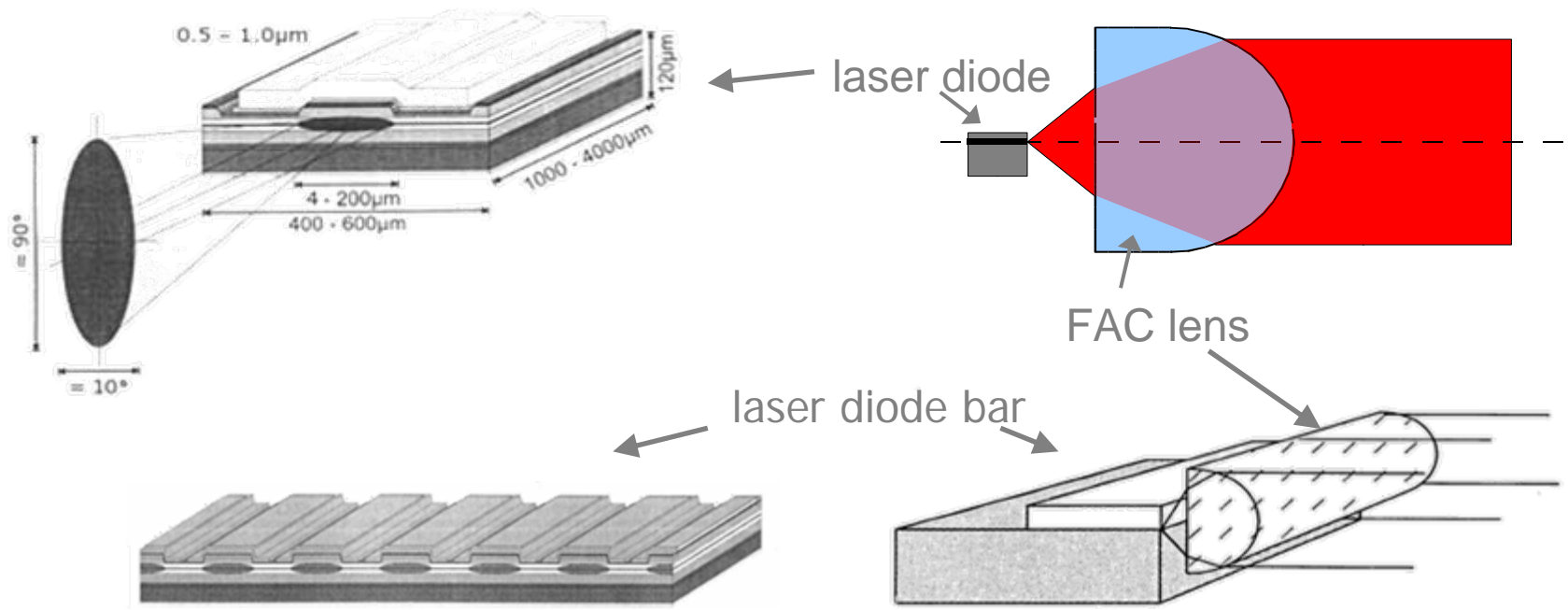


Finding Solutions, Realizing Solutions

- **Product and System Development**
 - Precise optical micro components and systems
 - Lens design and coating design
 - Design for glass precision moulding
 - Metrology system design
- **Integrated Fabrication**
 - Glass precision moulding and tooling
 - Advanced process lines for precise optic fabrication
 - Integrated coating fabrication
 - Assembly, measurement and fabrication of systems



Finding Solutions: Laser beam shaping begins with...

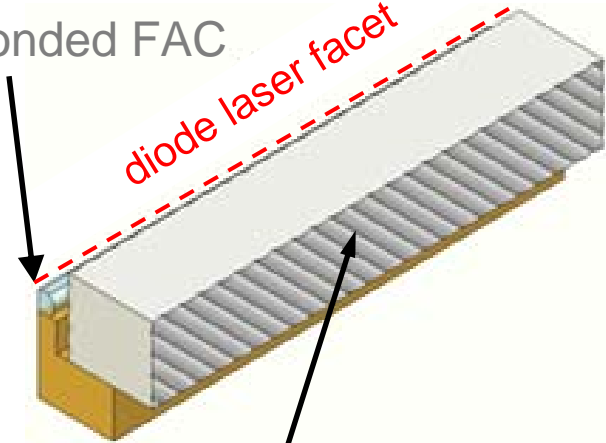


...micro optics for Fast Axis Collimation (FAC)

Finding Solutions: FBT FISBA Beam Twister™

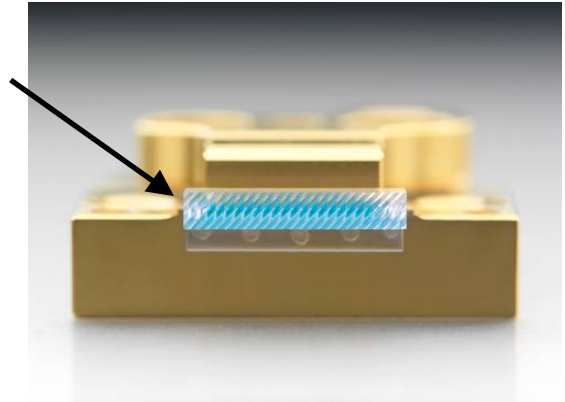
High precise
bonded FAC

diode laser facet

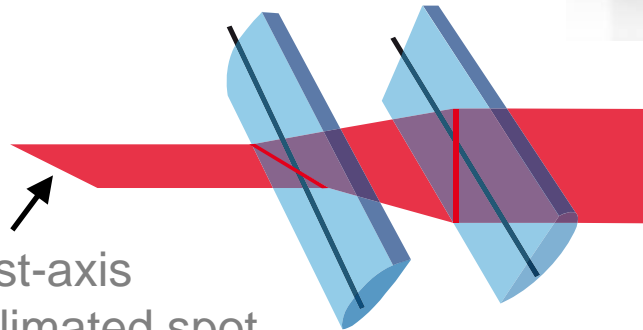


precision moulded FBT

High precision
micro assembly

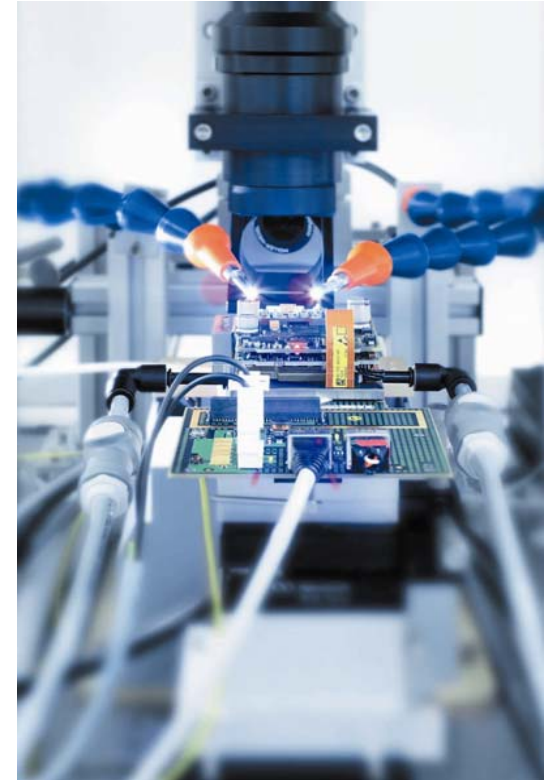
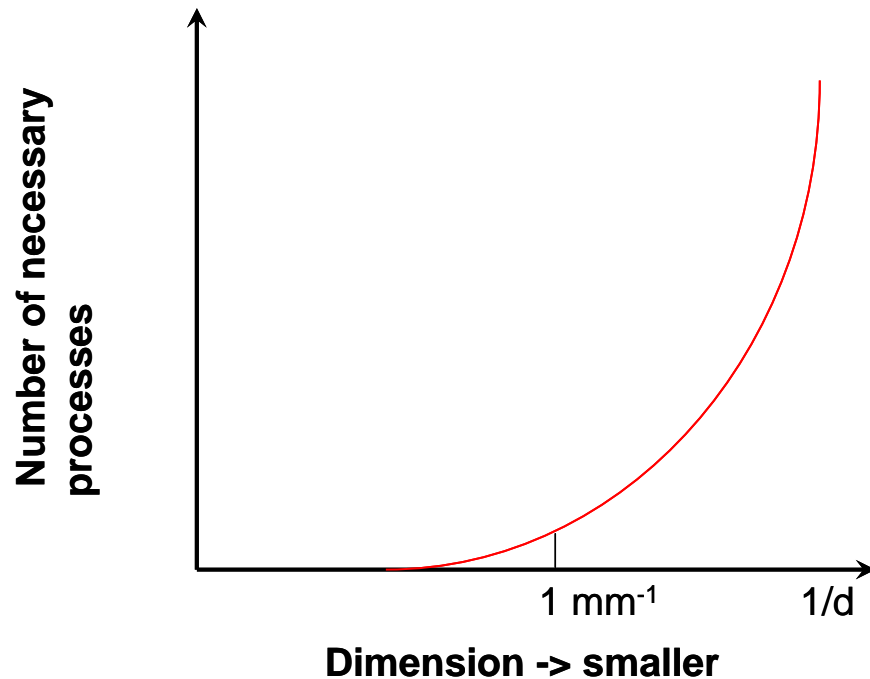


Fast-axis
collimated spot



combining additional functions with the main
function in one micro assembly

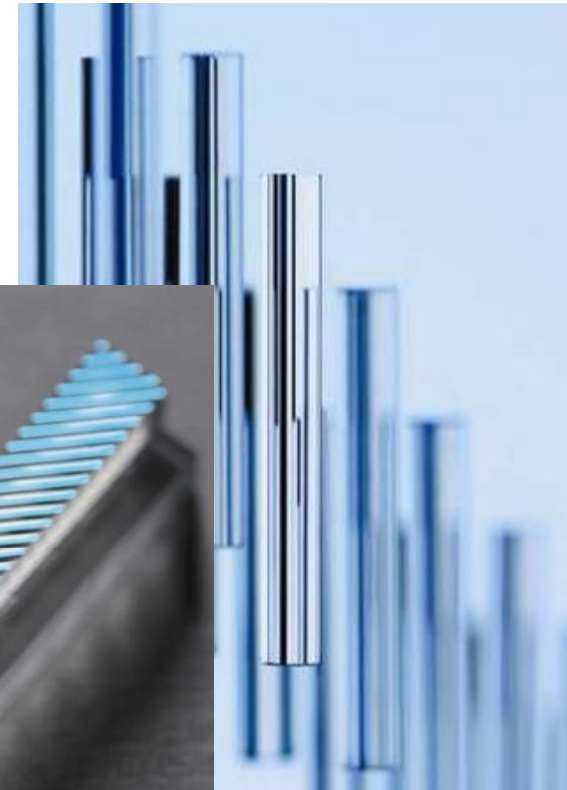
Realizing Solutions: Miniaturisation of optical systems ...



... needs precise micro assembly

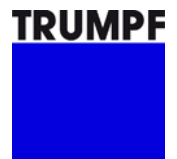
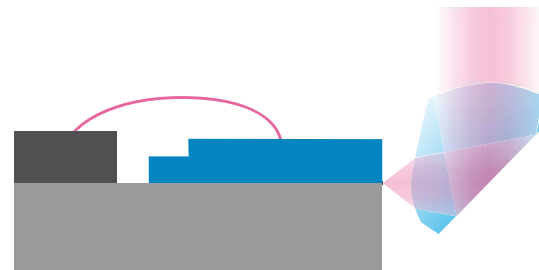
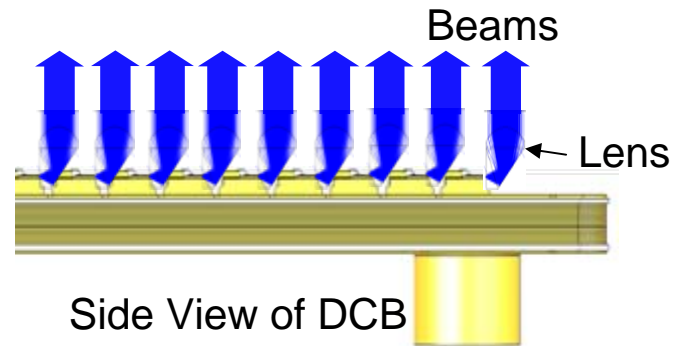
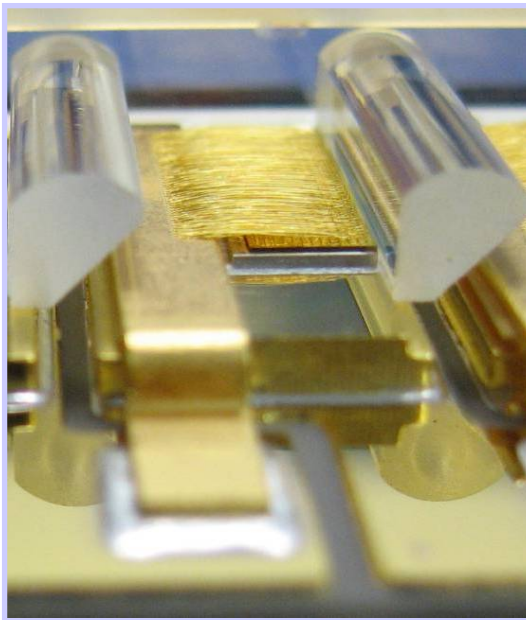
Optical Solutions that work: FAC and FBT lenses

- almost diffraction-limited collimation
- customized focal lengths
- scalable process for mass production
- quality documentation
- very high repeatability
- customized coating with highest transition

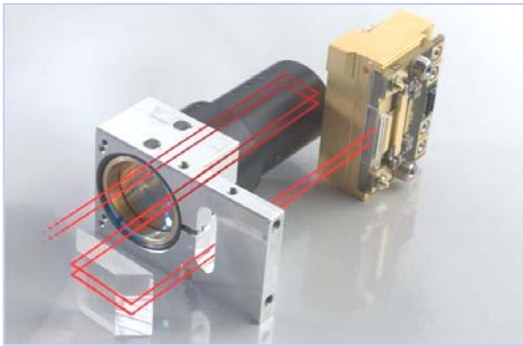


Optical Solution that work: Pump source for solid state laser

- Integrated product function with collimation and 90° deflection
- Patented and proven



Optical Solutions that work: Computer to Plate (CtP)



- High resolution due to efficient laser beam shaping (2540 or 2400 dpi, 170 μ m pitch, 10 μ m focus spot @ 1/e²)
- Patented and proven (> 8.000 installations world wide)
- Highly precise assembling (placement repeatability 1 μ m)



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The Spirit of Partnership



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