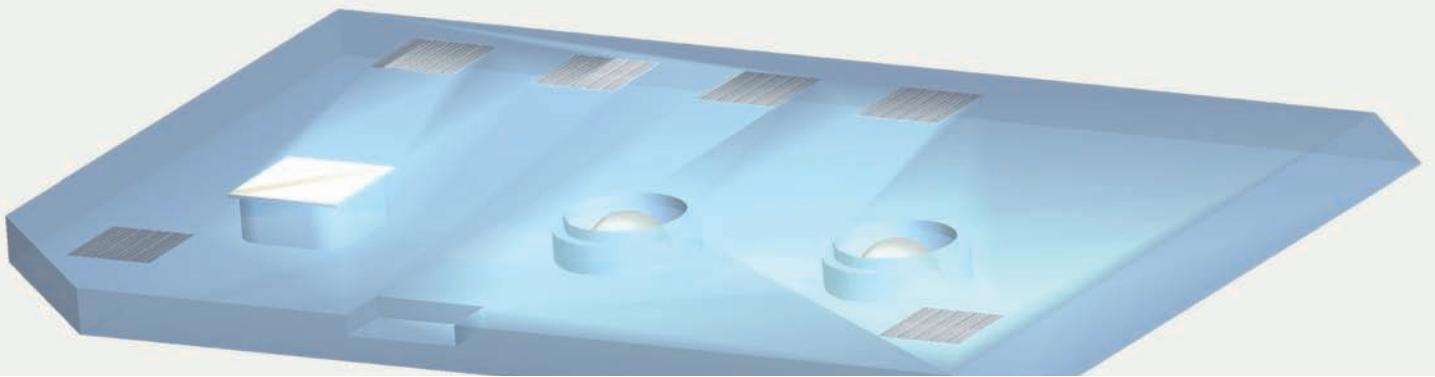




## Hybrid Microoptical Elements



Jenoptik hybrid microoptical elements combine several microoptical functions with plane optics, coating technology and precision machining. Such elements realize complex optical functionality in smallest volume and with highest precision and stability. The monolithic design of the hybrid microoptical elements avoids any issues related to mounting materials or mounting precision. Additionally, precise assemblies with further components are available for applications requiring the integration of different materials.

### Features:

- Monolithically integrated diffractive and refractive microoptics, plane optics and alignment/mounting structures
- High quality fused silica material suited for UV laser applications
- Excellent front-/reverse-side alignment of microoptical structures
- High quality metal and dielectric coatings
- Assemblies with other mechanical, optical or electric components

### Applications:

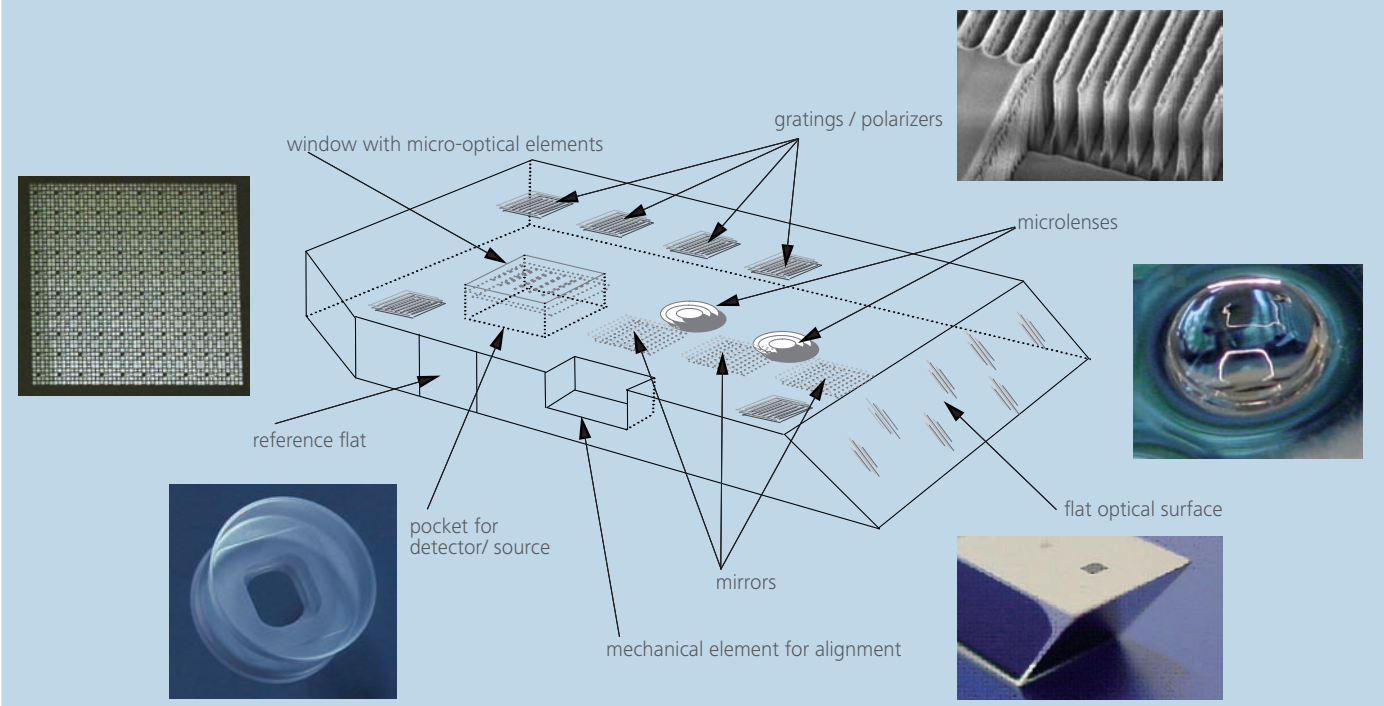
- Sensors for illumination and imaging systems
- Complex optical systems with smallest volume and weight

# Hybrid Microoptical Elements

## Specifications

Material:	UV grade Fused Silica
Wavelengths:	193 nm to 2.5 $\mu\text{m}$
Diffractive optics:	Feature size down to 0.1 $\mu\text{m}$
Refractive optics:	Aspheric microlenses with N.A. up to 0.5
Dimensions:	5 x 5 mm <sup>2</sup> to 150 x 150 mm <sup>2</sup>
Thickness:	0.7 mm to 6.35 mm
Reference flat accuracy:	5 $\mu\text{m}$
Assembly mounting precision:	1 $\mu\text{m}$
Adhesives:	UV-resistant epoxy, low outgassing
Coatings:	Metal coatings; laser resistant dielectric AR- and HR-Coatings
Product number:	029147

### Hybrid Microoptical Element



It is our policy to constantly improve the design and specifications. Accordingly, the details represented herein cannot be regarded as final and binding.



JENOPTIK | Optical Systems  
Microoptics Business Unit  
JENOPTIK Laser, Optik, Systeme GmbH  
Goeschwitzer Strasse 25 | 07745 Jena | Germany  
Phone +49 3641 65-2442 | Fax -2443  
microoptics@jenoptik.com | www.jenoptik-los.com

MEMS Optical, Inc.  
205 Import Circle | Huntsville | AL 35806 | USA  
Phone +1 256 859-1886 | Fax +1 256 859-5890  
info@memsoptical.com | www.memsoptical.com

029147-003-99-14-0908-en