



## Diffraction Beam Shapers

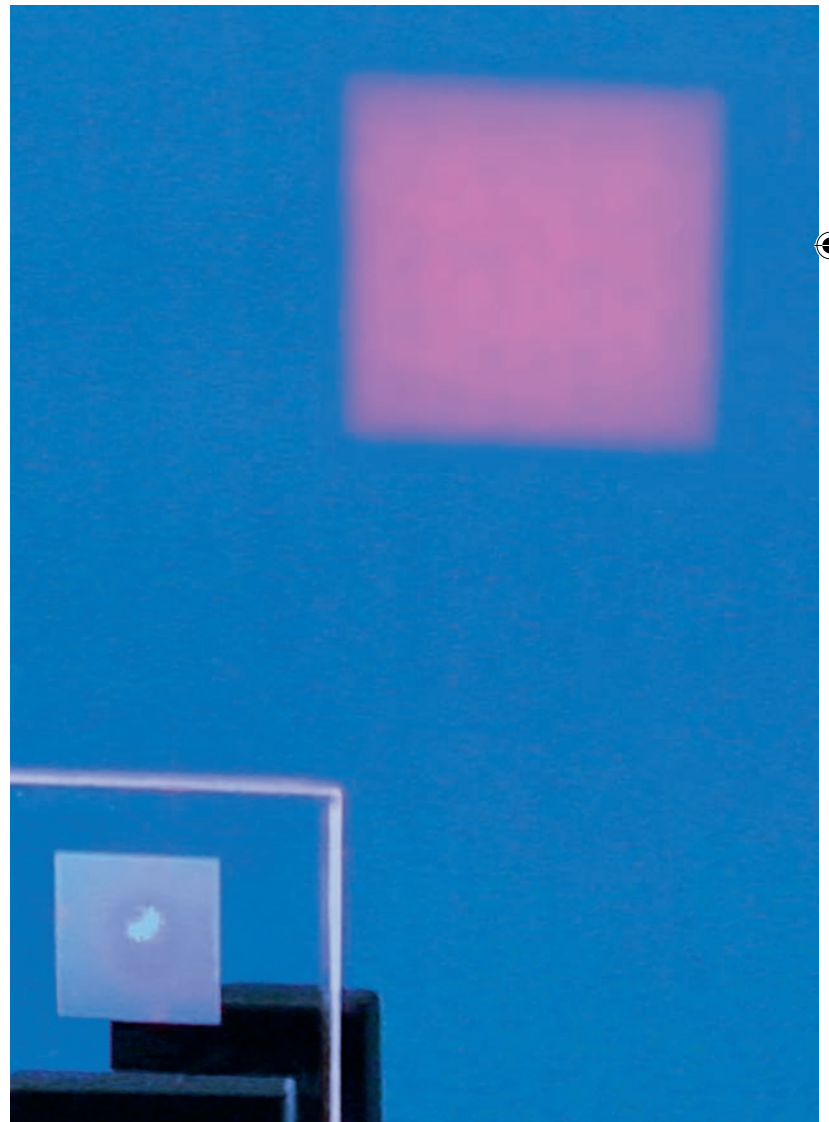
Diffraction beam shapers are used to modify the intensity and phase profile of spatially coherent lasers, allowing a better control of the output beam. These optical elements are most commonly used for the optimization of energy distribution in laser applications where the correction of non-uniform and Gaussian beam profiles can lead to better overall efficiency and performance. Jenoptik designs high performance beam shapers to create uniform top-hat, circular, or rectangular profiles, as well as custom geometries. These beam shapers are designed to work with single spatial mode input beams. For multimode laser beams, refractive or diffraction diffusers and homogenizers can also be designed.

### Features:

- Excellent uniformity
- High efficiency
- Any output beam profile
- Wavelengths from deep UV to long-wave infrared
- Wide range of materials
- Lens function possible

### Applications:

- Illumination
- Laser materials processing, e.g. welding, cutting, scribing, soldering, drilling
- Marking, printing
- Lithography and holographic exposure
- Biomedical devices
- Optical sensors
- Communications



Microoptics

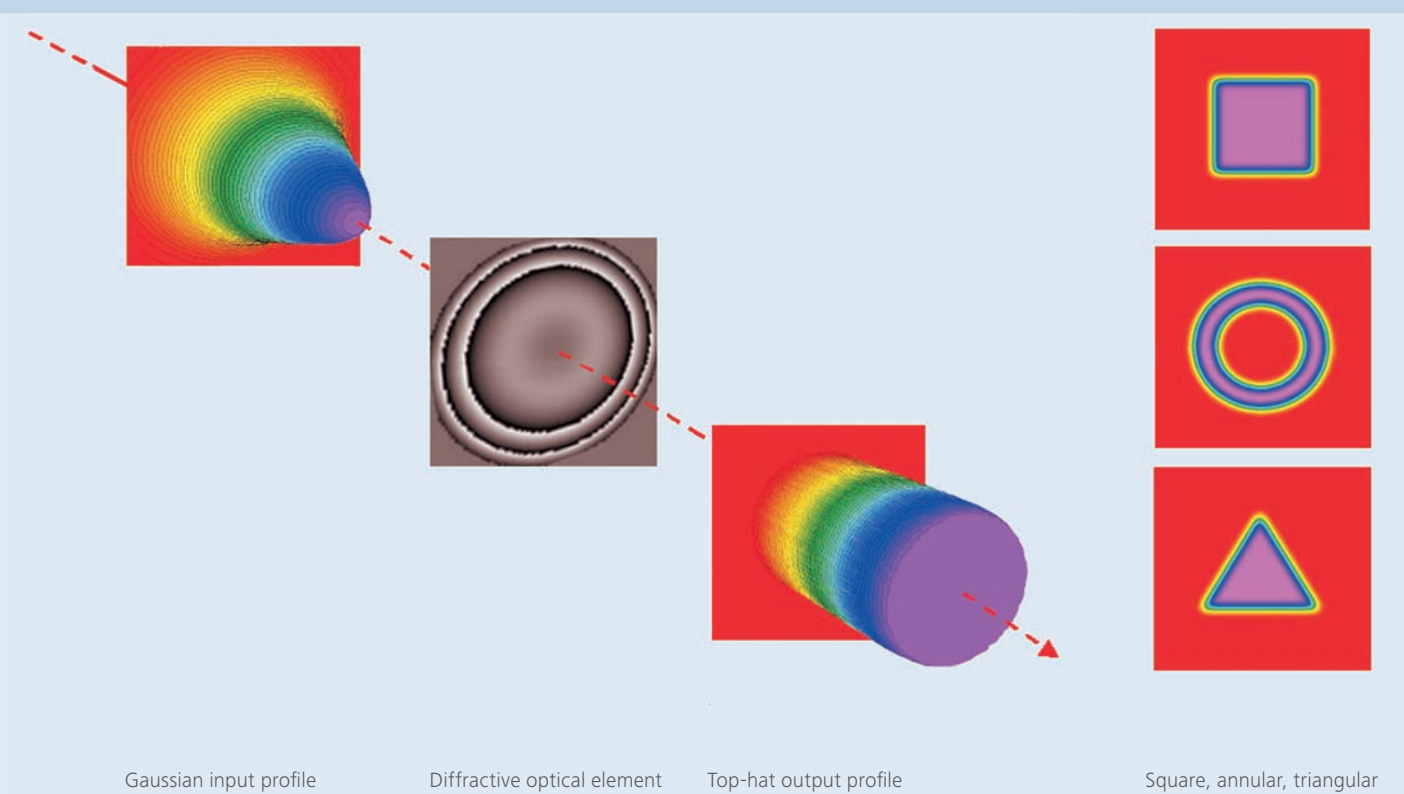
# Diffractive Beam Shapers

## Specifications

Efficiency:	up to 95 % *
Uniformity:	Typical $\pm 2.5$ %
Input parameters:	UV to IR, TEM <sub>00</sub>
Materials:	Fused Silica, Si, Ge, ZnS, ZnSe, GaP
AR-Coating:	Laser line or broadband
Light sources:	Diode, solid-state, gas and fiber lasers
Beam shapes:	Top-hat, round, square, rectangular, annular, or any other geometry
Product number:	029115

\* AR-Coated

### Diffractive beam shaping principle



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

029115-003-99-14-0908-en