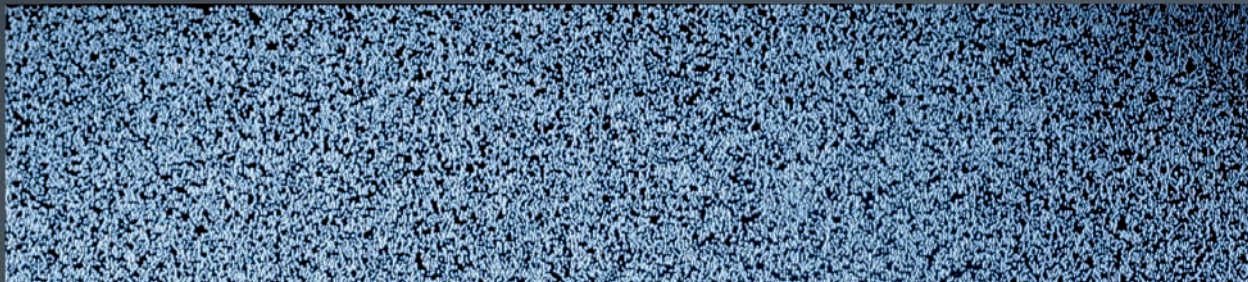




Diffraction Gaussian Generators

JENOPTIK

7mrad



Gaussian intensity profiles are well-defined, continuous and exhibit smooth edges. They are well suited for overlapping laser processing. Many high-power lasers, such as excimer lasers, nitrogen lasers or diode lasers do not have Gaussian profiles. Moreover, their profiles may be not stable and depend on the condition of the laser. Jenoptik Diffraction Gaussian Generators transform non-Gaussian laser beams into well-defined, reproducible Gaussian far-field profiles.

Together with a focusing lens, a Gaussian spot is generated at the focal plane with a diameter to be calculated as Gaussian divergence times focal length of the lens.

Features:

- Reproducible Gaussian profile
- Low deviation from perfect Gaussian
- High efficiency
- UV to NIR wavelengths available
- High damage threshold
- Single optical element
- Insensitive to input beam shape and misalignment
- Custom design with short delivery time

Applications:

- Medical laser treatment, e.g. with excimer lasers
- Laser materials processing
- Printing technology
- Measuring systems

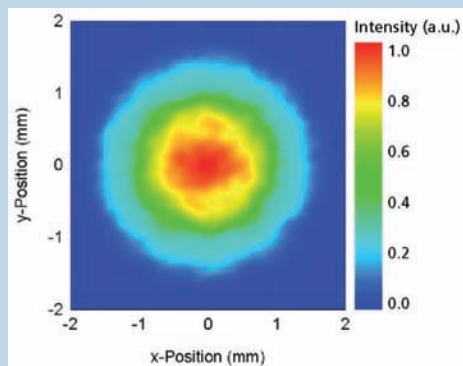
Microoptics

Diffractive Gaussian Generators

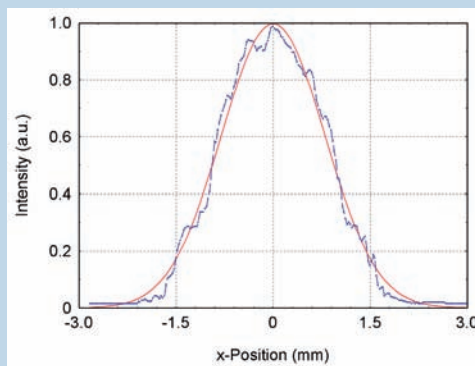
Specifications

Efficiency:	80 to 90 % for different grades
Deviation from Gaussian profile:	< 10 % within FWHM
Output NA:	0.001 to 0.5
Clear aperture:	5 to 120 mm
Laser wavelengths:	193 nm to 2.5 μm
Material:	Fused Silica, UV grade
AR-Coating:	Laser line or broadband
Product number:	029116

Typical intensity profile after Gaussian generator @ 193nm



CCD camera image



Intensity profile

Setup

Laser beam size:	3 x 6 mm ²
Laser divergence:	2x1 mrad

Results

Deviation from Gaussian profile within FWHM	< 10%
Efficiency	85 %
Circularity	1: 1.1
Output divergence:	4 mrad

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

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