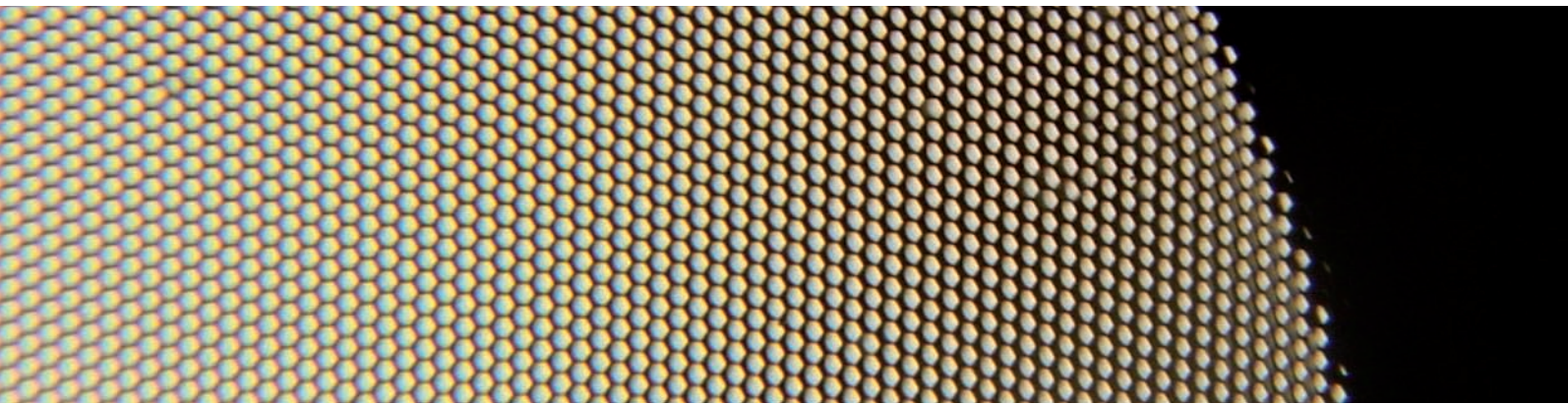




## Refractive Homogenizers



Refractive homogenizers are lenslet arrays that mix a large number of portions of an inhomogeneous multimode light beam to give a well-defined uniform illumination with the desired beam shape. Homogenizers are especially useful for laser applications that require the laser beam to maintain a controlled shape and uniform power across a specific area at some distance from the source. Refractive homogenizers have excellent efficiency and can also be used for broadband sources. Jenoptik designs and manufactures refractive homogenizers that produce square, circular, rectangular, or hexagonal beam shapes.

### Features:

- High uniformity
- High efficiency
- Broadband designs available
- Extended source
- Double side design available

### Applications:

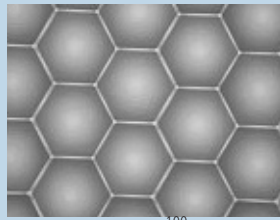
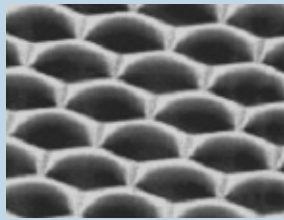
- Mask illumination & laser lithography
- Laser material processing, eg. welding, cutting, scribing, soldering, drilling
- Laser sensors
- Communications
- Targeting systems
- Marking, printing
- Machine vision

# Refractive Homogenizers

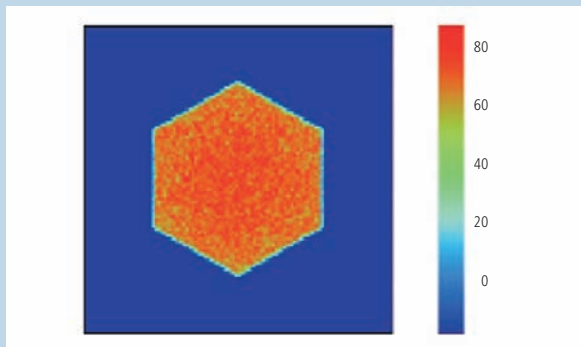
## Specifications

Efficiency:	> 95%
Uniformity:	< 5 %
Font to back alignment accuracy:	1 to 2 $\mu\text{m}$
Wavelengths:	193 nm to 14 $\mu\text{m}$
Materials:	CaF <sub>2</sub> , Fused Silica, Si, Ge, ZnS, ZnSe, GaP
Shapes:	Square, round, rectangular, hexagonal, or any geometrical shape
AR-Coating:	Laser line or broadband
Clear aperture:	< 150 mm
Numerical aperture:	< 0.3
Thickness:	0.5 to 6 mm
Product number:	029143

### Hexagonal refractive homogenizer



Lens structure of a hexagonal refractive homogenizer



Output of a hexagonal refractive homogenizer  
The half angle divergence is 9.2°.

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



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