



## Diffraction Optical Elements (DOE) for laser beam shaping

DOEs are used to shape an incident laser beam and implement a desired function like homogenizing, collimating, patterning, points focusing,...SILIOS provides customized DOEs for various lasers such as Nd:Yag, CO<sub>2</sub>, Femtosecond or Laser Diode. Depending on the requirements of the application, DOEs work either as hologram or as Fresnel zone plate optics.

### Specifications\*

#### Substrate

<i>Diameter :</i>	up to 100 mm
<i>Thickness :</i>	from 0.5 mm to 9.5 mm
<i>Material :</i>	fused silica, BK7, ...
<i>Coating :</i>	AR coating (for plate) or Rmax coating (for mirror)

#### Encoded Phase Map

<i>Data :</i>	Phase Map data provided by customer.
<i>Pixel size :</i>	down to 1 x 1 microns <sup>2</sup>
<i>Encoded Phase Profile :</i>	etched multilevel profile (Up to 256 levels)
<i>Wavefront PTV :</i>	0 to 2 $\pi$

\* Please contact us for other specifications

### Examples of beam shaping

Circular or square top-hat profile,  
matrix, grid, line, circle patterning, ...

### Fields

Laser machining, medical, imaging systems, sensors

### Category

Phase component



