

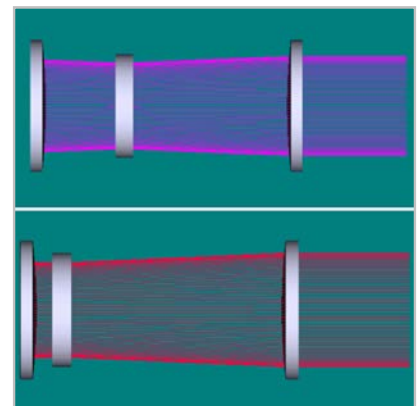
DOE TUNER for Wavelengths Range from 266nm to 1064nm

A variable DOE TUNER for fine tuning of input and / or output parameters in the application with using a DOE e.g. shape, spot size and divergence angle.

The DOE TUNER Presents the Following Features:

- Very low wavefront error
- Beam expander x0.8-x1.2
- No need to change module direction
- Sliding lenses
- Constant mechanical size
- Fused Silica lens material
- Input and output clear aperture = 23 [mm]
- Module length = 120 [mm]
- Max. input beam size = 7 [mm]
- Max. output beam size = 8.4 [mm]
- *Max. incident angle = 0.5°
- Wavelength range = 266-1064 [nm]
- Other wavelengths and expansion factor upon request

*Defines angular limitation for Top Hat Beam Shaper or Beam Splitter usage.



DOE TUNER:
Top picture - Configuration x1.1,
Down picture - Configuration x1.2

Different Configurations for Using the DOE-TUNER Module:

1. Placing the DOE-TUNER before a DOE

The main purpose to place the DOE TUNER before the DOE is for fine-tuning to achieve the requested input beam to reach a good TopHat beam profile. Additionally to this, the spot size can be adjusted by changing the input beam diameter, if this is not fixed by the DOE design. For multispot DOEs the spot size can be increased with a magnification < 1 and vice versa the separation angle is not influenced.

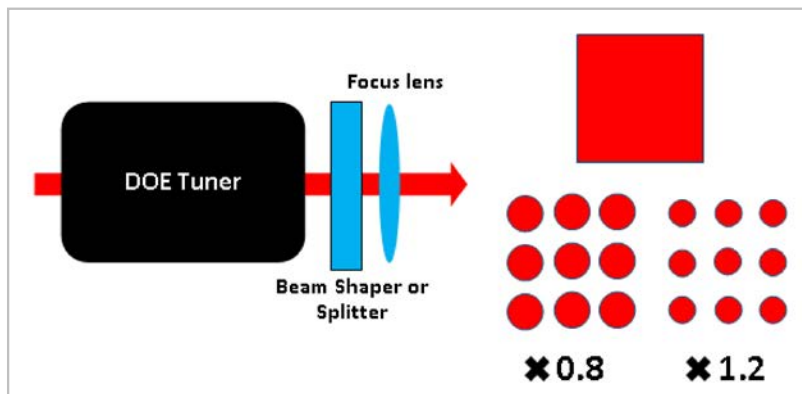


Figure 1: DOE-TUNER module placed before DOE

2. Placing the DOE-TUNER after a DOE

The main purpose in this set up is to control the divergence of the output beam, which allows to vary key parameters of DOE in range of 80-120 %. For multispot DOEs the separation angle can be controlled, for multifocal DOEs the separation between foci can be adjusted and for beam shaper DOEs the image size can be aligned. A magnification of < 1 will increase spot size and separation angle and vice versa.

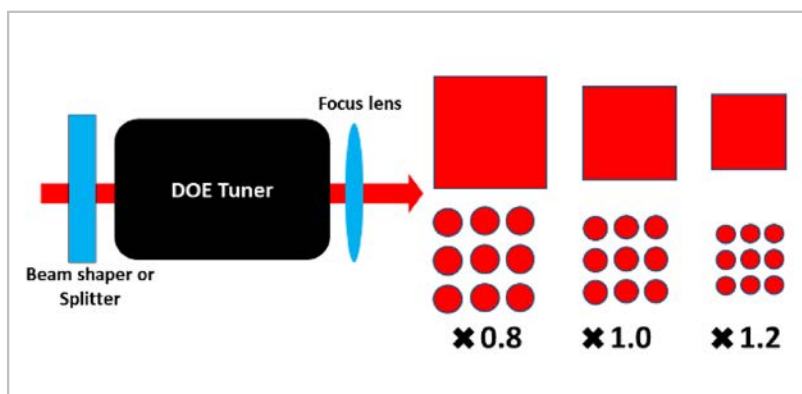


Figure 2: DOE-TUNER module placed after DOE and before focus lens (or objective)