Bessel beam shaper

~Ø3~8mm
Gaussuan imput

~few micron

Specifications:

Wavelength	343; 515; 1030 nm
Incoming beam diameter	3~8 mm
Outgoing beam (Bessel peak) diameter	3 µm
Outgoing beam (Bessel peak) length	450µm
Number of lenses	3
Transmittance	>98%
LIDT	>25 J/cm² @ 1064 nm; 10 ns; 100 Hz >3.6 J/cm² @ 1064 nm; 10 ps; 10 kHz
Mounting	SM1 thread at input and output

Notes

- Gaussian beam in - Bessel beam out
- Negative Bessel-Gauss zone
- Positive or double Bessel-Gauss zones upon request
- Near-ideal Bessel-Gauss beam form
- Length of Bessel zone depends on input beam diameter
- Mounts into standard cage systems
- Easy to adjust in optical system
- Gauss-Bessel conversion efficiency ~95%
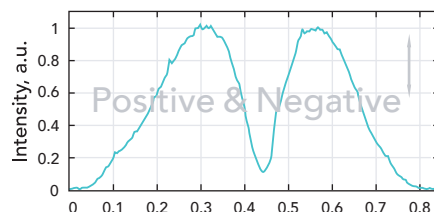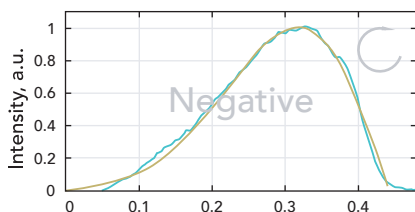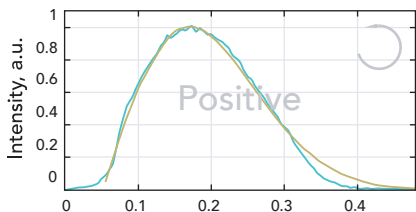- Requires circularly polarized input beam

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Beamera, UAB
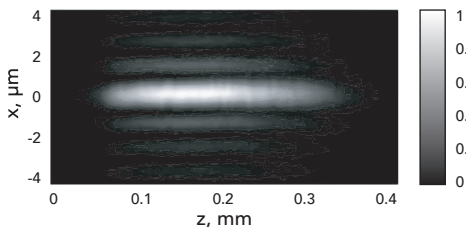Sauletekio al. 15a-218
Vilnius, Lithuania

Bessel beam shaper

3 types of Bessel-Gauss zones - Positive or Negative or Both depending on input polarization
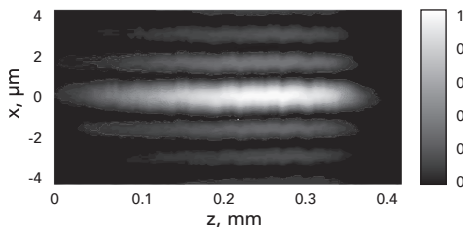
Yellow - simulated curve   Green - measurement

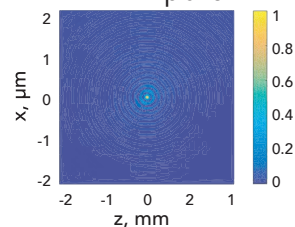

Positive

Negative

Positive & Negative
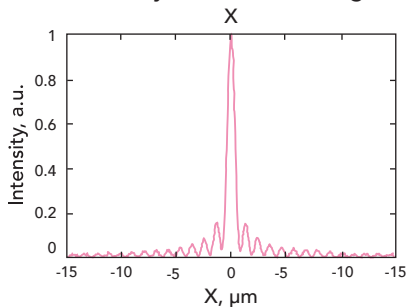
Intensity distribution in XZ plane
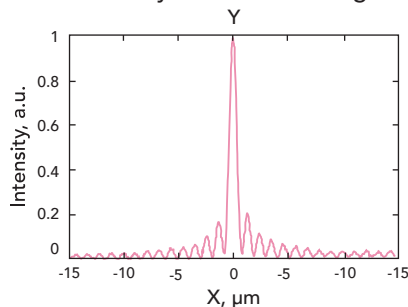
Intensity distribution in XZ plane

Intensity distribution in XY plane

Intensity distribution along X

Intensity distribution along Y

Intensity along Y at different plane along Z