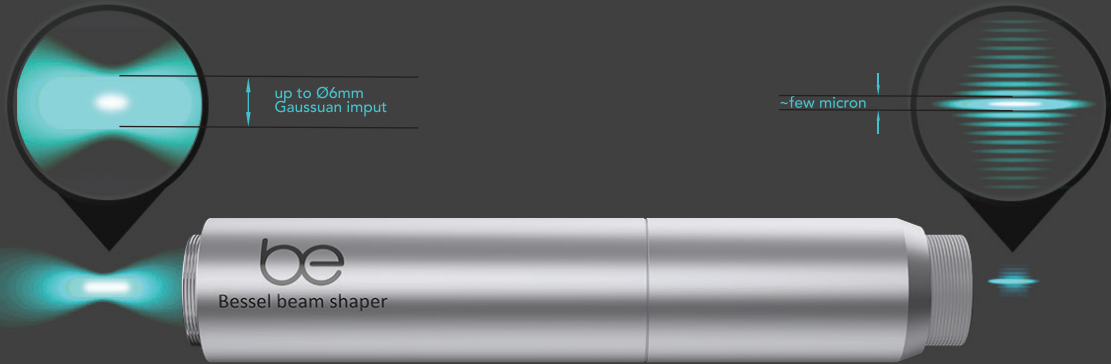


# Bessel beam shaper

## be DATA SHEET



### Specifications:

Wavelength	343; 515; 1030 nm
Incoming beam diameter	up to Ø6mm
Outgoing beam (Bessel peak) diameter	3 µm
Outgoing beam (Bessel peak) length	800 µm
Number of lenses	3
Transmittance	>98%
LIDT	>25 J/cm <sup>2</sup> @ 1064 nm; 10 ns; 100 Hz >3.6 J/cm <sup>2</sup> @ 1064 nm; 10 ps; 10 kHz
Mounting	SM1 thread at input and output

### Notes

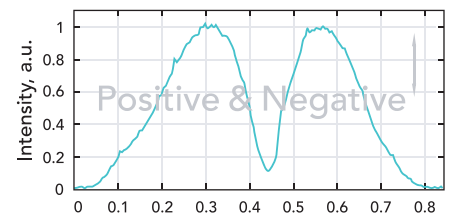
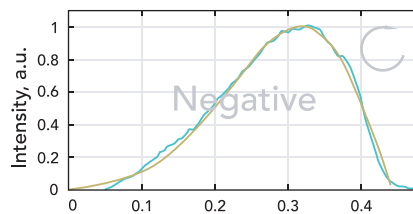
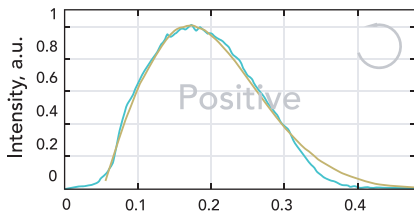
- Gaussian beam in - Bessel beam out
- Negative or Positive Bessel-Gauss zones for  $\nabla/\nabla$  polarizations
- Double Bessel-Gauss zone for  $\downarrow$  input polarization
- Near-ideal Bessel-Gauss beam form
- Length of Bessel zone depends on input beam diameter
- Mounts into standard cage systems
- Easy to adjust in optical system
- Gauss-Bessel conversion efficiency ~95%
- Requires circularly polarized input beam

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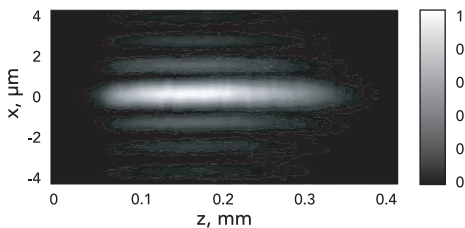
# Bessel beam shaper

3 types of Bessel-Gauss zones - Positive or Negative or Both depending on input polarization

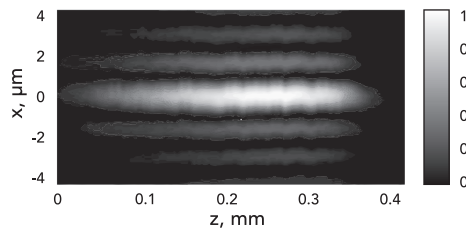
Yellow - simulated curve Green - measurement



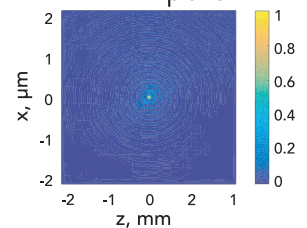
Intensity distribution in XZ plane



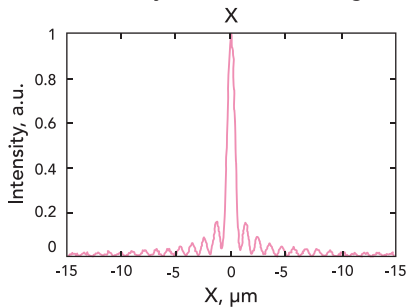
Intensity distribution in XZ plane



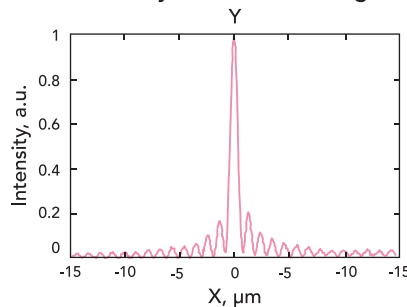
Intensity distribution in XY plane



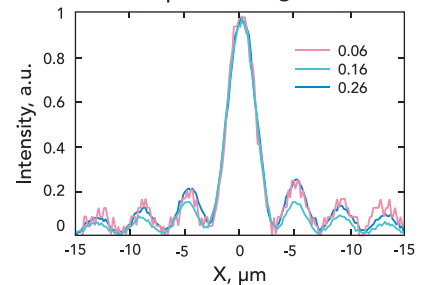
Intensity distribution along X



Intensity distribution along Y



Intensity along Y at different plane along Z



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