

Elongated Focus

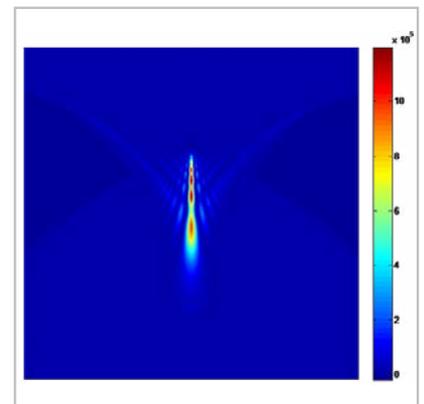
Holo/Or introduces a new diffractive solution achieving long focal depth as well as high lateral resolution.

Optical elements that present these two different characteristics are needed for a variety of applications, including precision alignment and profile measurements.

Conventional optical elements (spherical lenses, mirrors, etc.) cannot achieve these two goals simultaneously; high lateral resolution requires high numerical apertures (NA), whereas long depth of focus requires low NA.

Our novel method achieves a focal „cylinder“ with sharp edges and elongated depth of focus, while keeping laser spot size very small.

The new solution completes the existing family of multifocal (MF) products. The benefit of the elongated focus, vs. MF, is that it doesn't suffer from areas with low energy between neighboring spots.



Features

- High efficiency > 95%
- Depth of focus – customizable
- Spot size along focal „cylinder“ – close to diffraction limit
- High damage threshold (Fused Silica)
- Optional Ar/Ar coating
- Available for different wavelength

Applications

- Cutting
- Drilling
- Microscopy

Requirements

- Single mode laser ($M^2 < 1.5$)
- Collimated beam