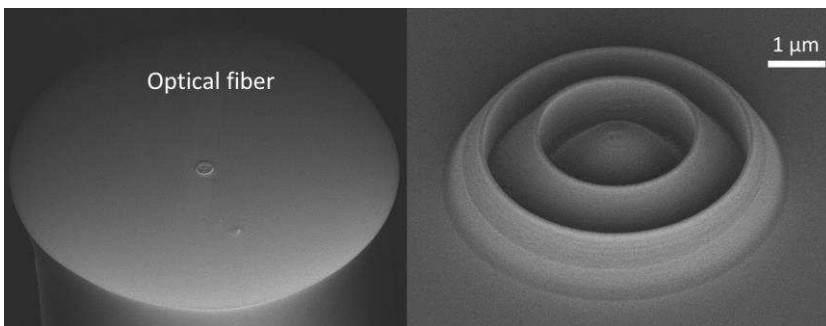


Fresnel fiber lens specification

High refractive index lens fabricated on the end of the fiber focuses light into near diffraction limited spot inside liquids or adhesive. This is the first commercial fiber lens that can be effectively used for immersion applications. This became possible through the use of our patented custom high refractive index material.

Applications:

- Immersion applications
- Integrated optics
- Optical trapping
- Biosensors
- Material processing



Advantages:

- High refractive index
- Immersion compatible
- Near diffraction limited focal spot

Figure 1. SEM images of the high refractive index (1.69) Fresnel lens imprinted on the edge of the fiber.

Table 1. Fiber Fresnel lens specification.

	Try it now	Order custom fiber lens
Focal spot size	800 nm ($\lambda=660$ nm)	$\sim 1-1.5 \lambda$
Working distance	1.5 μm	1-20 μm
Refractive index of material	1.69@590nm	1.51-1.70
Refractive index of surrounding medium	1.51	1-1.55
Fiber	630HP	Any single mode or multimode fiber. For multimode fibers the focal spot is not diffraction limited.
Central wavelength	660 nm	400-2000 nm. Optical testing is only available in 400-1100 nm spectral range.
<5% aberration wavelength range	610-695 nm	Typically, 10-15% of central wavelength.