

Optran® NCC UV, Optran® NCC WF

Silica / silica non-circular core fiber

These fibers are ideal for laser applications, among others, where the geometry of the output beam is decisive. CeramOptec® offers these fibers in rectangular, square, octagonal and other core / cladding geometries for additional advantages compared to our UV / WV range.

Wavelength

Optran® NCC UV	190–1200 nm
Optran® NCC WF	300–2400 nm

Numerical aperture (NA)

Low	0,16 ± 0,02
Standard	0,22 ± 0,02
High	0,28 ± 0,02



Sample rectangular-core fiber

Advantages

- Wide range of core and cladding geometries, e.g. square, rectangular or octagonal
- Homogeneous power distribution
- Very low NA expansion
- Excellent image scrambling characteristics
- No need for laser beam-shaping optics
- High resistance against laser damage
- Step-index profile
- Biocompatible material
- Sterilisable using ETO and other methods



Sample octagonal-core fiber



Sample square-core fiber

Technical data

Wavelength / spectral range	Optran® NCC UV: 190–1200 nm Optran® NCC WF: 300–2400 nm
Numerical aperture (NA)	0,16 ± 0,02 0,22 ± 0,02 0,28 ± 0,02 or customised
Operating temperature	-190 to +350 °C
Core diameter	Geometries and diameters upon request
OH content	Optran® NCC UV: high (> 1000 ppm) Optran® NCC WF: low (< 1 ppm) Fibers with OH contents < 0,25 and < 0,1 ppm are available upon request
Standard proof test	100 kpsi (nylon, ETFE, acrylate cladding) 70 kpsi (polyimide cladding)
Minimum bending radius	50 × cladding diameter (short-term mechanical stress) 150 × core diameter (during use with high laser power)

Applications

First choice for applications including laser surface treatments, astronomy applications and many more.