

Silica/Silica Optical Fiber FI-Ultra-Low-OH

Ultra-low-OH Quartz Fibers

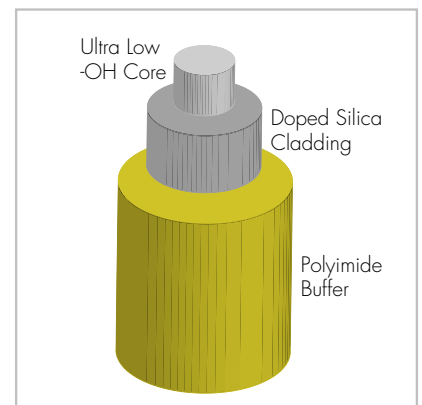
Both the fiber core and cladding of FIP fibers are made of quartz glass – for the highest damage thresholds possible. At core diameters of < 800 µm, the buffer normally consists of polyimides; otherwise, acrylate is used. Silicon buffers are also available upon request.

The fiber is intended for use in Vis-NIR spectroscopy, sensor technology, and power transmission in particular.

Characteristics

- Step index
- Numerical aperture: 0.22 ± 0.02
- Full acceptance cone: 25.4 degrees
- Vis-NIR transmission, 380 nm to 2.200 nm
- Radiation resistant
- High laser damage threshold
- Sterilizable and bio-compatible – USP class VI*
- Low loss broad spectrum fiber, 275 – 2100 nm
- Excellent focal ratio degradation characteristics
- Low -OH silica core, doped silica clad
- Polyimide buffer standard; silicone, acrylate, high-temperature acrylate also available
- Polyimide concentricity < 3 µm
- Sizes for bundling
- Tighter tolerances available
- Operating temperature: -65 °C to +300 °C
- Intermittent, up to 400 °C
- Proof tested to 100 kpsi

* The end manufacturer is responsible for bio-compatibility and sterilization testing and validation studies.

**Germany and Other Countries**

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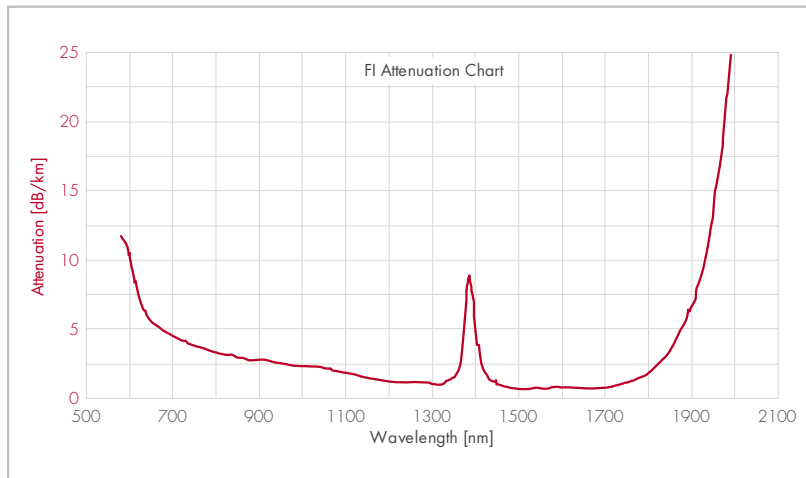
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Typical Attenuation of the FI Series

Specifications

Fiber Type	FIP100	FIP150	FIP200	FIP300	FIP400	FIP500	FIP600
Core diameter [μm]	100 ± 3	150 ± 3	200 ± 4	300 ± 6	400 ± 8	500 ± 10	600 ± 10
Cladding diameter [μm]	110 ± 3	165 ± 3	220 ± 4	330 ± 7	440 ± 9	550 ± 10	660 ± 10
Coating diameter [μm]	124 ± 3	195 ± 5	239 ± 5	370 ± 7	480 ± 7	590 ± 10	710 ± 10
Temperature area [$^{\circ}\text{C}$]	-65... +300	-65... +300	-65... +300	-65... +300	-65... +300	-65... +300	-65... +300
Numerical aperture	0.22 ± 0.02	0.22 ± 0.02	0.22 ± 0.02	0.22 ± 0.02	0.22 ± 0.02	0.22 ± 0.02	0.22 ± 0.02
Coating material	Polyimide	Polyimide	Polyimide	Polyimide	Polyimide	Polyimide	Polyimide
Part number	3002336	3002339	3001446	3001236	3002342	3002343	3002344

Fiber Type	FIA800	FIA1000	FIP100*	FIP200	FIP320	FIP050*	FIP100*
Core diameter [μm]	800 ± 20	1000 ± 20	100 ± 3	200 ± 4	320 ± 8	50 ± 10	100 ± 3
Cladding diameter [μm]	880 ± 15	1100 ± 15	120 ± 3	240 ± 4	385 ± 8	70 ± 2	140 ± 3
Coating diameter [μm]	1100 ± 30	1300 ± 40	140 ± 4	275 ± 5	415 ± 10	85 ± 3	170 ± 5
Temperature area [$^{\circ}\text{C}$]	-65 – +125	-65 – +125	-65 – +300	-65 – +300	-65 – +300	-65 – +300	-65 – +300
Numerical aperture	0.22 ± 0.02	0.22 ± 0.02	0.22 ± 0.02	0.22 ± 0.02	0.22 ± 0.02	0.22 ± 0.02	0.22 ± 0.02
Coating material	Acrylate	Acrylate	Polyimide	Polyimide	Polyimide	Polyimide	Polyimide
Part number	3001984	3002345	3002338	3002340	3002341	3002335	3003388

*) Special diameter for this type of fiber

Note:

The items listed in this table are standard configurations and sizes.
Other configurations may be available on request.

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