Fiber Optics

molex®

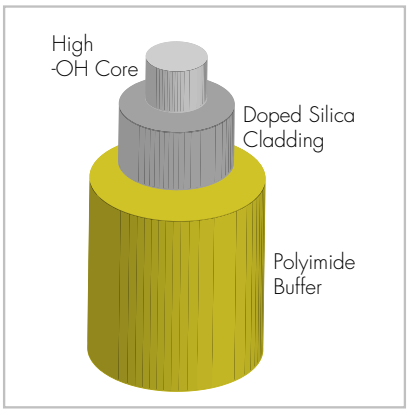
LASER COMPONENTS®

Silica/Silica Optical Fiber FV-High-OH

High-OH Quartz Fibers

FFV fibers are suited for transmissions of 180 -1150 nm and are used in sensor technology, UV spectroscopy, power transmission, or fluorescence measurements.

The core and cladding consist of quartz glass. At core diameters < 800 µm, the buffer is made of polyimide; whereas at larger core diameters, acrylate is normally used.



Characteristics

- Step index
- Numerical aperture: 0.22 ± 0.02
  full acceptance cone: 25.4 degrees
- UV-Vis-NIR transmission, 180 nm to 1.150 nm
- Superior radiation resistance
- High laser damage threshold
- Sterilizable and bio-compatible – USP class VI*
- High -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
- Temperature: operating -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
Laser Components Germany GmbH
Tel: +49 8142 2864–0
Fax: +49 8142 2864–11
info@lasercomponents.com
www.lasercomponents.com

France
Laser Components S.A.S.
Tel: +33 1 39 59 52 25
Fax: +33 1 39 59 53 50
info@lasercomponents.fr
www.lasercomponents.fr

United Kingdom
Laser Components (UK) Ltd.
Tel: +44 1245 491 499
Fax: +44 1245 491 801
info@lasercomponents.co.uk
www.lasercomponents.co.uk

Nordic Countries
Laser Components Nordic AB
Tel: +46 31 703 71 73
Fax: +46 31 703 71 01
info@lasercomponents.se
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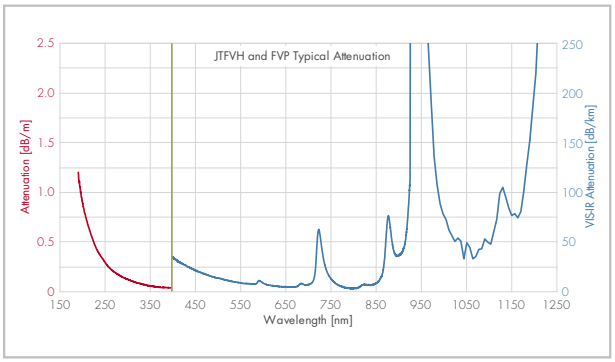

Typical Attenuation of the FV Series

Specifications

Fiber Type	FVP050	FVP100	FVP150	FVP200	FVP300	FVP400	FVP500
Core diameter [µm]	50 ± 2	100 ± 3	150 ± 3	200 ± 4	300 ± 6	400 ± 8	500 ± 10
Cladding diameter [µm]	55 ± 2	110 ± 3	165 ± 3	220 ± 4	330 ± 7	440 ± 9	550 ± 10
Coating diameter [µm]	65 ± 2	124 ± 3	195 ± 5	239 ± 5	370 ± 7	480 ± 7	590 ± 10
Temperature area [°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	3002111	3002950	3002113	3001447	3003132	3001489	3002116

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Silica/Silica Optical Fiber FV-High-OH

Fiber Type	FVP600	FVA800	FVA1000	FVP100*	FVP200*	FVP320*
Core diameter [µm]	600 ± 10	800 ± 20	1000 ± 20	100 ± 3	200 ± 4	320 ± 8
Cladding diameter [µm]	660 ± 10	880 ± 15	1050 ± 15	120 ± 3	240 ± 4	385 ± 8
Coating diameter [µm]	710 ± 10	1100 ± 30	1250 ± 40	140 ± 4	275 ± 5	415 ± 10
Temperature area [°C]	-65 – +300	-65 – +125	-65 – +125	-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
Coating material	Polyimide	Acrylate	Acrylate	Polyimide	Polyimide	Polyimide
Part number	3002099	3002117	3002118	3002112	3002114	3002115

*) 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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