



SURGICAL LASER DELIVERY SYSTEM TECHNICAL DESCRIPTION

Product Description

MED-Fibers Surgical laser fibers are designed for excellent transmission of strong laser energy's in a wide wavelength range. All of our medical devices meet the applicable requirements of FDA's GMP and approved under the 510k application: 124003 and USP Class VI standards for biological assessments of medical devices. The devices are available for broad diameter ranges from 200 to 1000µm fiber core diameter, customer-optimized design are possible on request.

Product Features

- Low losses, excellent transmission
- Low OH Silica
- Excellent repeatability
- Broad spectral range
- Standard Damage Resistant, HHz (High Hertz), and Absorbing Dark Hole SMA 905 connectors are available
- Polished or cleaved connectors and or polished or cleaved distal tip configuration
- Extension sleeves in different colors available; laser engraving can be requested
- Can be used on all approved Lasers in the Wavelength of 532nm – 2200nm

Packaging Highlights

- 5 fibers per single box
- 50 fibers per delivery box
- Double bagged in sterile pouches on an easy to use tray or in coil single pack
- Customized labels up on request
- Shelf life: Validated up to 5 years

Reliability

- Reuse of fiber up to 5 times guaranteed
- Single use also available

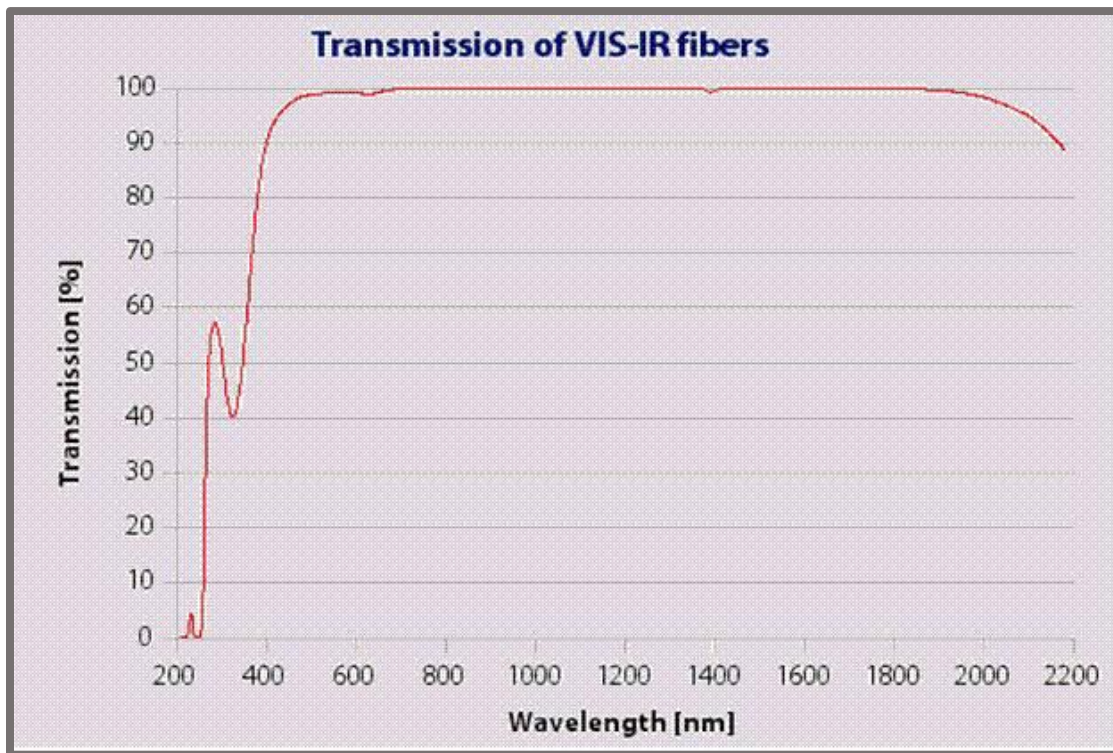
Measurements and tolerances

- Fibers total length 3m ± 0,2m
- Distal tip length Depends on fiber diameter- see specifications on page 5
- Core diameter ± 2%
- Cladding diameter ± 2%
- Coating diameter ± 3%
- Buffer diameter ± 5%
- Coating material Silicone, Polyimide, Hard Clad
- Buffer material Tefzel®
- Extension sleeve colors: multiple colors available; standard extension sleeve is in silver

Optical properties

Attenuation of fiber Transmission, length 3m - including coupling losses

- Attenuation @ 850 nm < 5 dB/km \cong Transmission 90%
- Attenuation @ 1064 nm < 3 dB/km \cong Transmission 90%
- Attenuation @ 1385 nm < 12 dB/km \cong Transmission 85%
- Attenuation @ 2100 nm < 120 dB/km \cong Transmission 80%



Numerical Aperture 0.22 ± 0.02 or 0.37±0.02 (depending on application)

Additional features

- Operating temperature - 40°C to + 140°C

Tensile strength bond, fiber / connector

- Fiber diameter = 399µm: \geq 20N / 60 seconds
- Fiber diameter = 400µm: \geq 40N / 60 seconds
- Proof-test (100 %) \cong 100 kpsi



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MINIMUM BENDING RADIUS

DEVICE TYPE	SHORT-TERM BENDING RADIUS IN MM 100 X CLADDING RADIUS	LONG TERM BENDING RADIUS IN MM 600 X CLADDING RADIUS
	MAX. 5 SEC. DURING INSTALLATION	UP TO 5 YEARS DURING STORAGE AND APPLICATION
MF 200/240SBT MF 200/240SBT-EF	11	66
MF 272/300SBT MF 272/300SBT-EF	12	72
MF 365/400SBT MF 365/400SBT-EF	20	120
MF 550/605HCBT MF 550/605HCBT-EF	30.25	181.5
MF 550/605SBT MF 550/605SBT-EF	30.25	181.5
MF 550/605PBT MF 550/605PBT-EF	30.25	181.5
MF 800/880SBT MF 800/880SBT-EF	44	264
MF 1000/1100SBT MF 1000/1100SBT-EF	55	330



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SURGICAL FIBER SPECIFICATIONS

DEVICE TYPE	CORE Ø [MM]	FIBER Ø [MM]	DISTAL TIP LENGTH [MM]	NA	COLOR **	OPERATING WAVELENGTH [NM]	OPERATING POWER MAX. [W]
MF 200/240SBT MF 200/240SBT-EF	200	400	3-5	0.22	Blue	532-2250	20
MF 272/300SBT MF 272/300SBT-EF	272	450	3-5	0.22	Blue	532-2250	20
MF 365/400SBT MF 365/400SBT-EF	365	580	3-5	0.22	Blue	532-2250	60
MF 550/605HCBT MF 550/605HCBT-EF	550	780	3-5	0.22	Blue	532-2250	100
MF 550/605SBT MF 550/605SBT-EF	550	880	3-5	0.22	Blue	532-2250	100
MF 550/605PBT MF 550/605PBT-EF	550	780	3-5	0.22	Blue	532-2250	100
MF 550/605PBT MF 550/605PBT-EF	550	980	3-5	0.22	Blue	532-2250	100
MF 800/880SBT MF 800/880SBT-EF	800	1180	5-7	0.22	Blue	532-2250	300
MF 1000/1100SBT MF 1000/1100SBT-EF	1000	1500	5-7	0.22	Blue	532-2250	300