

Medical Laser Power Delivery Fibers



Medical Laser Power Delivery fibers include pure silica core step-index waveguides supporting a broad range of wavelengths from visible to 2.2 μm . Core sizes range from 200 μm to 550 μm with numeric apertures up to 0.24. For laser surgery applications where beam homogeneity is critical, Flat-Top™ technology can be incorporated. A range of biocompatible coatings and buffers offered including polyimide, acrylate, silicone and Tefzel®. Sterilization by radiation or ETO; supported by radiation resistant pure silica core fiber and coating material choice.

Typical Applications

- Endoscopy
- Dentistry
- Ophthalmology
- Photodynamic Therapy
- Surgical Procedures

Features & Benefits

- Step Index Core diameters ranging from 200 μm – 550 μm
- High numeric apertures up to 0.24
- Cladding diameters from 240 μm to 600 μm
- Biocompatible coatings: polyimide, acrylate, silicone
- Buffers include Hytrel®, Tefzel®

Optical Specifications

Operating Wavelength
Core NA
OH Level

MM-S200/240-FTB 1404842

375 – 2200 nm
0.220 \pm 0.020
low

MM-S272/300-FTB 1404843

375 – 2200 nm
0.220 \pm 0.020
low

MM-S365/400-FTB 1404844

375 – 2200 nm
0.220 \pm 0.020
low

MM-S550/600-FTB 1404845

375 – 2200 nm
0.220 \pm 0.020
low

Geometrical & Mechanical Specifications

Cladding Diameter
Core Diameter
Coating Diameter
Core/Clad Offset
Coating Material
First Buffer Diameter
Second Buffer Material
Operating Temperature Range
Prooftest Level

240.0 \pm 3.0 μm
200.0 \pm 4.0 μm
270.0 \pm 8.0 μm
 \leq 5.00 μm

Low Index Acrylate

335 \pm 30 μm

Tefzel®: Blue

-55 to 85 °C

\geq 100 kpsi (0.7 GN/m²)

300.0 \pm 6.0 μm
272.0 \pm 10.0 μm
330.0 \pm 8.0 μm
 \leq 5.00 μm

Low Index Acrylate

370.0 \pm 30.0 μm

Tefzel®: Blue

-55 to 85 °C

\geq 100 kpsi (0.7 GN/m²)

400.0 \pm 8.0 μm
365.0 \pm 8.0 μm
440.0 \pm 10.0 μm
 \leq 5.00 μm

Low Index Acrylate

520.0 \pm 30.0 μm

Tefzel®: Blue

-55 to 85 °C

\geq 100 kpsi (0.7 GN/m²)

600.0 \pm 10.0 μm
550.0 \pm 12.0 μm
640.0 \pm 10.0 μm
 \leq 7.00 μm

Low Index Acrylate

730.0 \pm 30.0 μm

Tefzel®: Blue

-55 to 85 °C

\geq 100 kpsi (0.7 GN/m²)

Instrumentation grade versions for each fiber are also available.



7 Airport Park Road, East Granby, CT 06026 • 860.408.5000 • E-mail eby_info@coherent.com • www.nufern.com • Products are manufactured under an ISO 9001:2008 certified quality management system.



Custom developed fiber (FUD) specifications are subject to change without notice. Other configurations such as alternative form factors, optimized cut-off and UV cured color coating may be available. Let us know how Nufern can assist with your requirements.

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