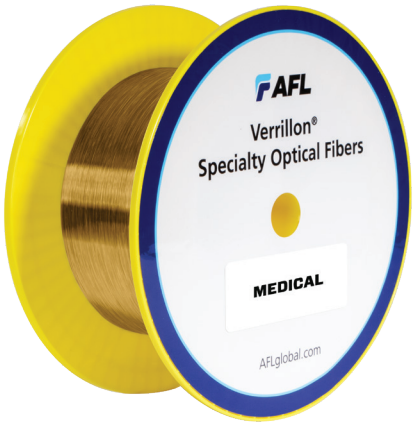


Verrillon®

UV-Visible (UV-Vis) Medical Laser Delivery Fibers

Verrillon® UV-Vis Medical Laser Delivery Fibers are designed with high-OH pure-silica core multimode waveguides for applications requiring the transmission of laser energy in the Ultra-Violet and Visible spectral regions. This family of fibers is suitable for coupling with typical medical lasers operating in the 300 to 1150 nm, such as KTP, Argon and Excimer lasers.

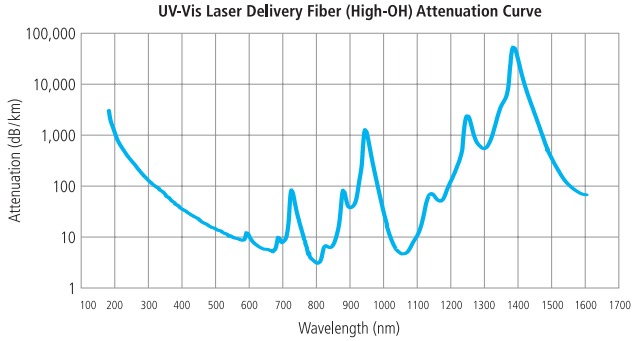
In addition to the typical UV lasers, Verrillon also offers a suite of Solarization-Resistant Fibers (SRF) with high transmission in the Deep UV (DUV) spectrum for applications requiring low optical absorption in the 190 to 300 nm. The optical attenuation chart below shows that Verrillon's SRF is completely immune to DUV radiation even at the ArF laser wavelength of 193 nm.

Features

- Step-Index multimode high-OH pure silica core designs
- Core diameters from 50 µm to 2000 µm available
- Biocompatible coating make these fibers suitable for laser surgery and other medical procedures
- Available for typical UV-Visible lasers as well as DUV applications

Specifications

	LARGE DIAMETER MEDICAL LASER DELIVERY OPTICAL FIBERS - POLYIMIDE - UV-VIS MEDICAL (HOH)		
PART NO.	**MMF-100-110-P-135-22**	**MMF-200-5-P-220-22**	**M400440P470H22-1**
Description	100/110/135 High OH, Pure Silica Core, Polyimide coated, Multimode Fiber, 0.22 NA, 100 kpsi Proof Test	200/220/245 High OH, Pure Silica Core, Polyimide coated, Multimode Fiber, 0.22 NA, 100 kpsi Proof Test	400/440/470 High OH, Pure Silica Core, Polyimide coated, Multimode Fiber, 0.22 NA, 100 kpsi Proof Test
PARAMETER			
Material			
Core	High-OH Pure Silica	High-OH Pure Silica	High-OH Pure Silica
Cladding	F-doped Silica	F-doped Silica	F-doped Silica
Coating	Polyimide	Polyimide	Polyimide
Geometry			
Core Diameter (µm)	100 ± 4	200 ± 4	400 ± 10
Clad Diameter (µm)	110 ± 3	220 ± 5	440 ± 10
Core/Clad Offset (µm)	≤ 3.0	≤ 3.0	≤ 3.0
Coat Diameter (µm)	135 ± 5	245 ± 5	470 ± 10
Coating Concentricity (%)	≥ 80	≥ 75	-
Optical			
NA (nominal)	0.22	0.22	0.22
Attenuation	See High-OH full preform spectrum below		
Mechanical			
Prooftest (kpsi)	≥ 100	≥ 100	≥ 100
Operating Temperature (°C)	-65 to +300	-65 to +300	-65 to +300



Verrillon®

UV-Visible (UV-Vis) Medical Laser Delivery Fibers

Specifications

	DEEP UV (DUV) LASER DELIVERY OPTICAL FIBERS	
PART NO.	**M100110CP140SR22-1**	**M400440CP465SR22-1**
Description	100/110 Ultra-High Solarization-Resistant Step-Index Multimode, Carbon-Polyimide coated fiber designed for Low-Loss Deep UV (DUV) applications.	400/440 Ultra-High Solarization-Resistant Step-Index Multimode, Carbon-Polyimide coated fiber designed for Low-Loss Deep UV (DUV) applications.
PARAMETER		
Material		
Core	Pure Silica	Pure Silica
Cladding	F-doped Silica	F-doped Silica
Coating	Carbon / Polyimide	Carbon / Polyimide
Geometry		
Core Diameter (µm)	100 ± 3	400 ± 8
Clad Diameter (µm)	110 ± 3	440 ± 9
Core/Clad Offset (µm)	≤ 3.0	≤ 3.0
Coat Diameter (µm)	140 ± 5	465 ± 7
Polyimide Coating Concentricity (%)	≥ 80%	≥ 80%
Optical		
NA (nominal)	0.22	0.22
Operating Wavelength (nm)	180nm - 850 nm	180nm - 850 nm
Mechanical		
Prooftest (kpsi)	≥ 100	≥ 100
Operating Temperature (°C)	-65 to +300	-65 to +300

Verrillon Ultra Solarization-Resistant Fiber vs. Standard Solarization-Resistant Fiber
Attenuation @ Different Deuterium Lamp Exposure Times