

SPECIALTY MULTIMODE STEP-INDEX FIBER

Specification Sheet

All Silica High OH

0.22 NA FIBERS



Multimode Step-Index

Product Description

Exceptional strength and fatigue-resistance properties for these fibers come from their hard clad silica (HCS) coating. High OH concentration results in efficient power transmission in the high UV range through visible light. The all-silica base construction also creates a high damage threshold and high-performance optical properties.

When these fiber features are necessary in a high-temperature environment, we also offer all silica high OH fiber with PYROCOAT, our proprietary high-temperature coating.

Typical Applications

- Laser surgery
- Sensors
- Industrial sensors
- UV spectroscopy
- UV fluorescence
- Radiation analysis
- Illumination
- Laser welding and cutting

Features and Benefits

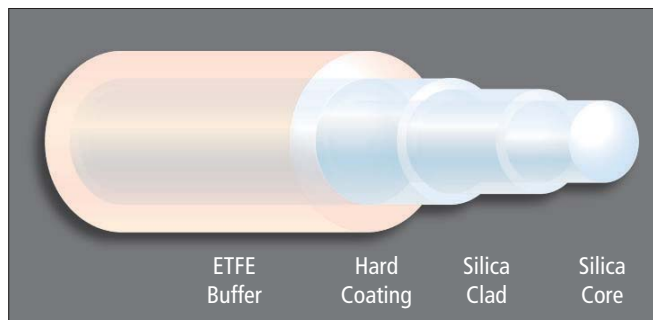
- Efficient, low-loss power transmission from UV through visible wavelengths
- High tensile strength
- Fatigue resistant
- Handles peak power delivery approaching 1 GW/cm²
- USP Class VI, nontoxic, and biocompatible
- Sterilizable

Related Products & Capabilities

- Multimode fibers are available in High or Low OH content formulas, graded or step-index, various NAs, and with a variety of cladding/buffer sizes and types.

Ask us about options available for these fibers:

- Cabling**
- Connectorization**
- Metalization**
- Additional Coatings**
- Other Upgrades**



Drawing not to scale

Fiber Specifications

Optical Properties	All Silica High OH 200	All Silica High OH 365	All Silica High OH 550	All Silica High OH 940
Numerical aperture	0.22	0.22	0.22	0.22
Attenuation @ 820 nm	≤10 dB/km	≤10 dB/km	≤10 dB/km	≤10 dB/km
Water content	High OH	High OH	High OH	High OH
Dimensions/Geometric Properties				
Core diameter	200 ± 5 μm	365 ± 10 μm	550 ± 12 μm	940 ± 15 μm
Clad diameter	240 ± 5 μm	400 ± 10 μm	600 ± 10 μm	1000 ± 15 μm
Hard coating diameter	260 ± 5 μm	430 +5/-10 μm	630 ± 10 μm	1035 ± 15 μm
Buffer diameter	375 ± 30 μm	730 ± 30 μm	750 ± 30 μm	1400 ± 50 μm
Clad/coating offset	≤7 μm	≤9 μm	≤9 μm	≤11 μm
Buffer/Coating Descriptions				
Coating material	Hard coating	Hard coating	Hard coating	Hard coating
Buffer material	ETFE	ETFE	ETFE	ETFE
Operating temperature	-65 to +135°C	-65 to +135°C	-65 to +135°C	-65 to +135°C
Mechanical and Testing Data				
Short-term bend radius	≥9 mm	≥29 mm	≥58 mm	≥73 mm
Long-term bend radius	≥14 mm	≥47 mm	≥94 mm	≥118 mm
Proof test level	≥200 kpsi (1.378 GPa)	≥100 kpsi (0.689 GPa)	≥75 kpsi (0.517 GPa)	≥100 kpsi* (0.689 GPa)
Product Description Code	HCG-M0200T	HCG-M0365T	HCG-M0550T	HCG-M0940T
Order by Part Number	CF01493-41	CF01493-42	CF01493-43	CF01493-44

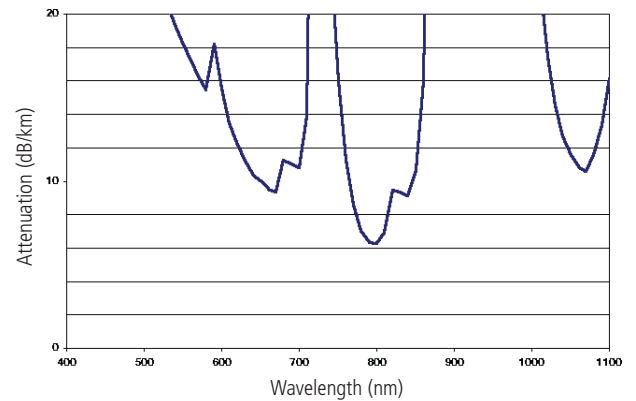
* By radius bend method

Multimode Step-Index

Attenuation at Key Wavelengths

Wavelength	Typical Use	Attenuation
248 nm	Krypton Fluoride	1.1 dB/m
308 nm	Excimer	0.27 dB/m
488 nm	Argon Blue	13 dB/km
515 nm	Argon Green	14 dB/km
532 nm	KTP	13 dB/km
647 nm	Krypton Red	8 dB/km
850 nm	LED	13 dB/km
1064 nm	Nd: YAG	9 dB/km

Typical Spectral Attenuation*



*Graph represents data for fiber part number CF01493-42

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