ofs
A Furukawa Company

Medical Grade
Optical Fiber, Fiber Optic Cable and Assemblies

Medical Optical Fiber Solutions for your Device

OFS is a vertically integrated optical fiber manufacturer with more than 30 years' experience in the design and production of specialty optical fibers

OFS is ISO13485 certified, follows good FDA Good Manufacturing Practices, and tests fibers to USP Class VI standards and ISO10993 for biocompatibility and traceability.

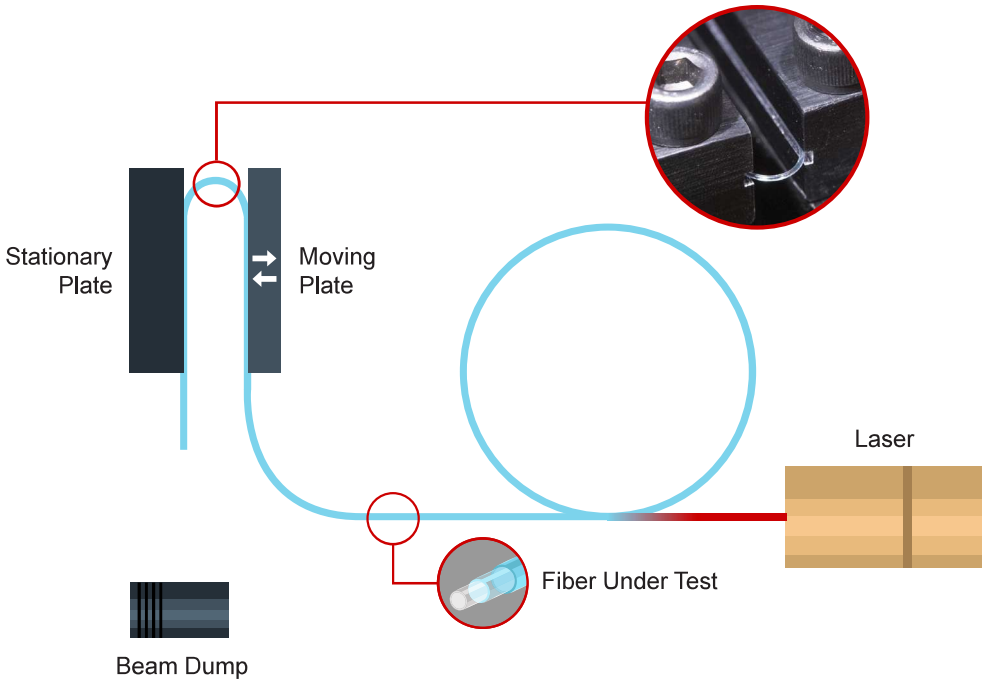
From the glass preform to the optical fiber and cable design to the finished probe assembled in a low-bioburden room, OFS' engineering and manufacturing expertise help make vision and custom design a reality.

Applications

- Imaging
- Urology
- Cosmetic Procedures
- Opthalmology
- Orthopedic
- Vascular
- General Surgery
- Sensing

HCXtreme® Optical Fiber

Delivering High Power Under Tight Bends



Experimental Setup

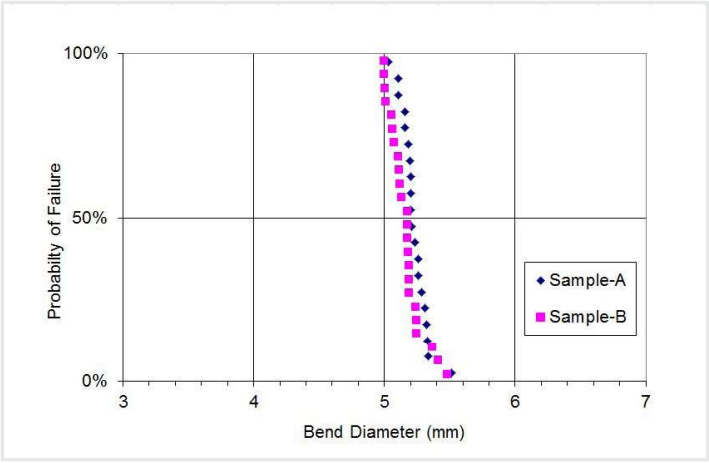
100W of laser power is launched into the fiber when bent, excess fiber was looped into a diameter of 20 cm

Laser delivery fiber without breakage up to a 5 mm bend diameter

HCXtreme Optical Fiber technology addresses the problem of fiber failure due to tight bending of optical fiber under power. In testing down to a 5 mm bend diameter, HCXtreme fibers continued to transmit power without breakage.*

This optimized fiber design reduces bend loss and offers superior performance in laser energy delivery. HCXtreme provides higher laser damage threshold improving fiber performance and overall system performance.

** For further details and testing methodology, request a copy of our white paper, entitled "Study of Optical Fiber Damage Under Tight Bend with High Optical Power at 2140 nm."*



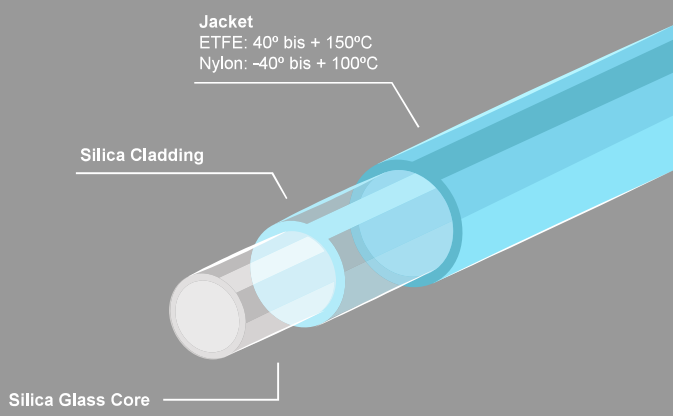
Fiber failure probability vs. bend diameter under low laser power

[Fiber tested: 365 µm core; 400 µm clad; 0.22 NA]

HCXtreme® Optical Fiber

Delivering High Power Under Tight Bends

- Reliable,
- BioCompatible
- Sterilizable



Multimode Step-Index

Product Specifications

	272-22 HCXtreme	272-29 HCXtreme	365-22 HCXtreme	550-22 HCXtreme	940-22 HCXtreme
Optical Characteristics					
Numerical aperature	0.22	.029	0.22	0.22	0.22
Attenuation @ 850 nm	≤10 dB/km	≤12 dB/km	≤10 dB/km	≤19 dB/km	≤10 dB/km
Water content	Low OH	Low OH	Low OH	Low OH	Low OH
Dimension/Geometric Properties					
Core diameter	272 ± 6 µm	272 ± 10 µm	365 ± 10 µm	550 ± 120 µm	940 ± 15 µm
Cladding diameter	299 ± 6 µm	326 ± 10 µm	400 ± 10 µm	600 ± 10 µm	1000 ± 15 µm
Hard coating diamter	330 ± 7 µm	356 ± 10 µm	430 ± 10 µm	630 ± 10 µm	1035 ± 15 µm
Buffer diameter	400 ± 30 µm	420 ± 30 µm	730 ± 30 µm	750 ± 30 µm	1400 ± 50 µm
Clad/coating offset	≤9 µm	≤10 µm	≤9 µm	≤9 µm	≤11 µm
Coating/Buffer Descriptions					
Coating material	Hard coating	Hard coating	Hard coating	Hard coating	Hard coating
Buffer material	Blue ETFE	Blue ETFE	Blue ETFE	Blue ETFE	Blue ETFE
Operating temperature	-65 to ±125 °C	-65 to ±125 °C	-65 to ±125 °C	-65 to ±125 °C	-65 to ±125 °C
Mechanical and Testing Data					
Bend radius					
Short-term	≥22 mm	≥24 mm	≥29 mm	≥58 mm	≥73 mm
Long-term	≥36 mm	≥40 mm	≥47 mm	≥94 mm	≥118 mm
Proof test level	≥100 kpsi (0.689 GPa)	≥100 kpsi (0.689 GPa)	≥100 kpsi (0.689 GPa)	≥100 kpsi (0.689 GPa)	≥100 kpsi (0.689 GPa)
Product Description Code	272-22 HCXtreme	272-29 HCXtreme	365-22 HCXtreme	550-22 HCXtreme	940-22 HCXtreme
Order by Part Number:	**F24748**	**F18939**	**F18940**	**F18941**	**F18942**
Typical Applications	Options: Core Diameter, Clad Diameter, Numerical Aperture, Proof Test, Cabling, Connectorization, Metalization, Additional Coatings, other Buffer Colors, Low Bioburden Packaging and Manufacturing.				

Note: The operating temperature ranges are general guidelines. Consult with our Technical Sales department to determine the optimal coating and jacketing material for your specific application. 1.860.678.6636