

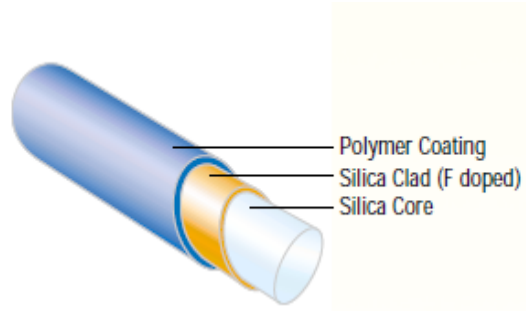
Fiber Type:
Step Index
Multimode

Fiber

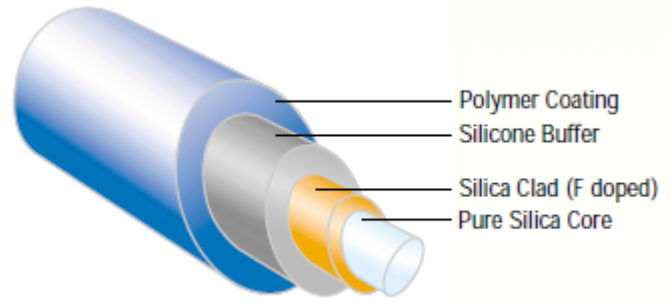
Construction:
Silica Core/
Silica Clad/
Polymer Coated

Trade Name:
Anhydroguide™
VIS-IR (Low OH)
300nm – 2400nm

Superguide™
UV-VIS (High OH)
190nm – 1250nm



Polyimide or Acrylate Coated



Nylon or Tefzel Coated

Fiberguide's Silica Core/Silica Clad/Polymer Coated fibers are primarily used in photonics applications where individual or bundled large core (> 50µm) multimode fibers are needed for the transmission of optical energy. These fibers can be coated with a variety of polymers or metalized, for extreme temperature performance.

FIBER SPECIFICATIONS

- Step Index Multimode
- Pure Fused Silica Core / Fluorine Doped Silica Cladding
- Silicone Buffer Coating Layer for Nylon & Tefzel Outer Coatings
- Core / Cladding Sizes: 50/125µm to 1500/1650µm
- Numerical Aperture (NA): 0.12, 0.22, 0.26

- Recommended Bend Radius:
 - o Short Term: 100 X Clad Diameter
 - o Long Term: 200 X Clad Diameter
- Please note that these figures represent best practice recommendations. In applications where tighter bends are required, Fiberguide can assist you in estimating what impact they may have on fiber reliability.
- 100% Proof Test Using 4-Axis Bend Method
 - Standard Core/Clad Ratio: 1.1
 - Available Core/Clad Ratios: 1.2, 1.4 and 2.5
 - Thermocoat (Polyimide), Nylon, Tefzel certified to NAMS Class VI

APPLICATIONS

- Bio-Analytical Sensing
- Medical Laser
- Aerospace/Defense
- Spectroscopy
- Nuclear Plasma Sensing
- Industrial Laser Systems

**All Silica Fiber
 (Low & High OH)
 Anhydroguide™ (AFS) & Superguide™ (SFS)**

Fiber Type:
 Step Index
 Multimode

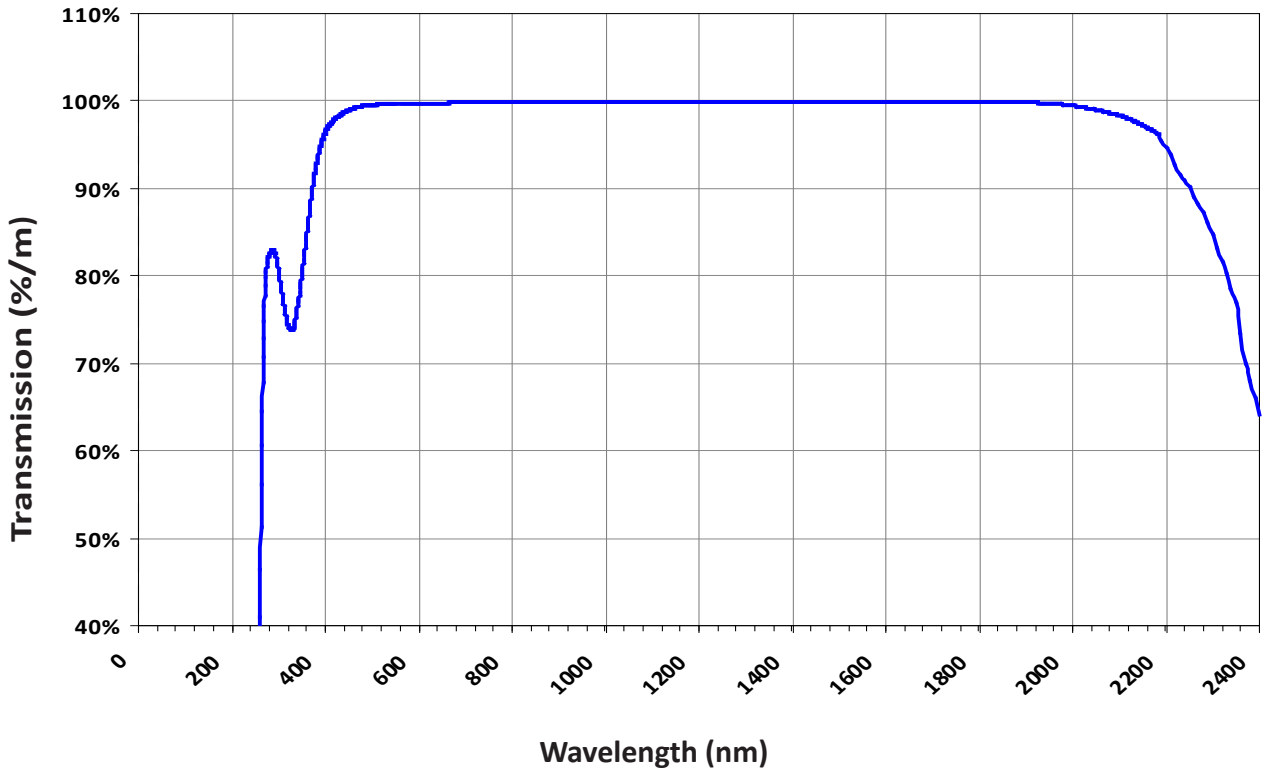
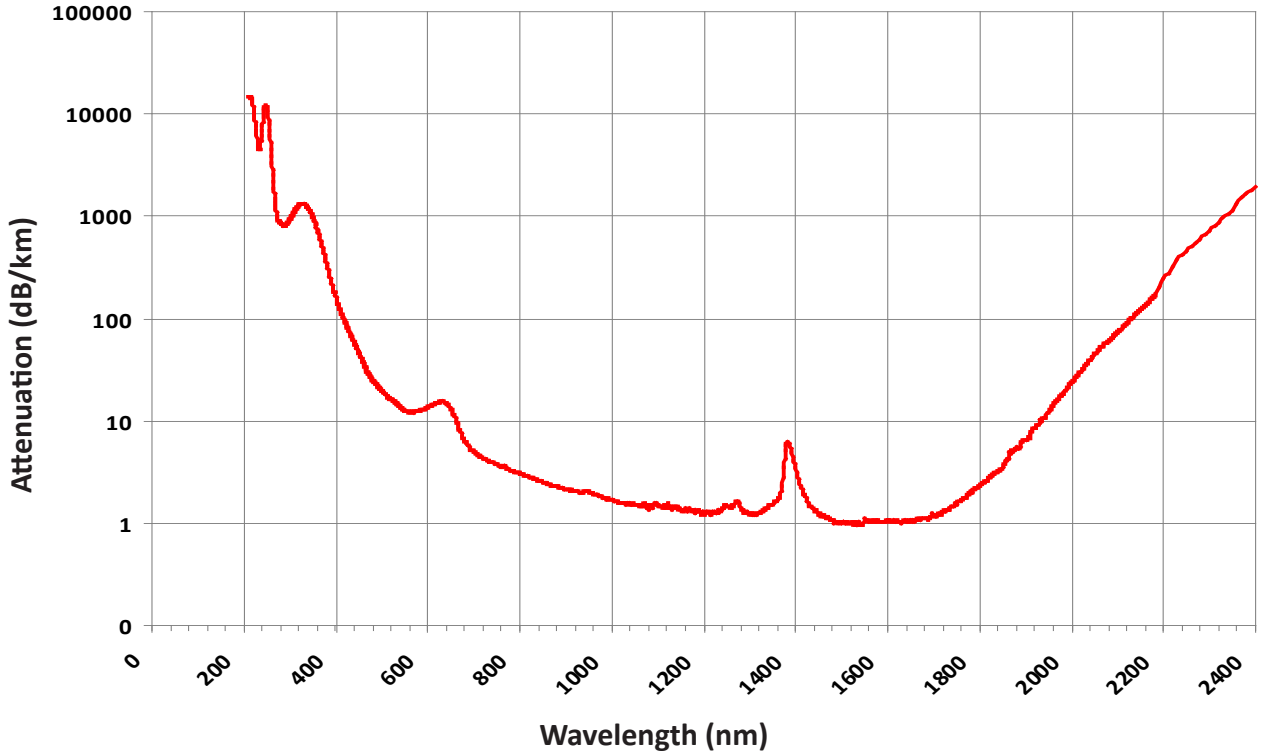
Fiber Type: Anhydroguide™ Pure Fused Silica Core/ Fluorine Doped Silica Cladding - Step Index Multimode
Wavelength: VIS-IR (Low OH): 300 nm - 2400 nm

Fiber

Construction:
 Silica Core/
 Silica Clad/
 Polymer Coated

Trade Name:
 Anhydroguide™
 VIS-IR (Low OH)
 300nm – 2400nm

Superguide™
 UV-VIS (High OH)
 190nm – 1250nm



**All Silica Fiber
(Low & High OH)
Anhydroguide™ (AFS) & Superguide™ (SFS)**

Fiber Type:
Step Index
Multimode

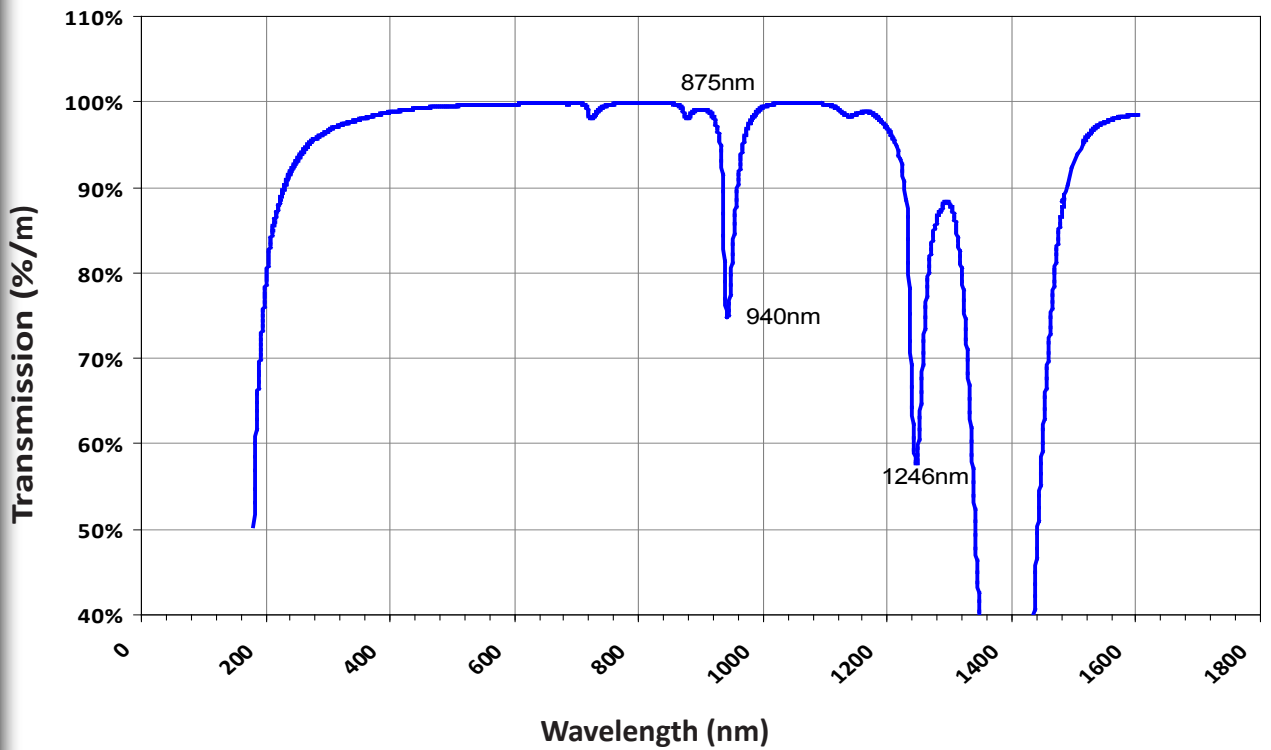
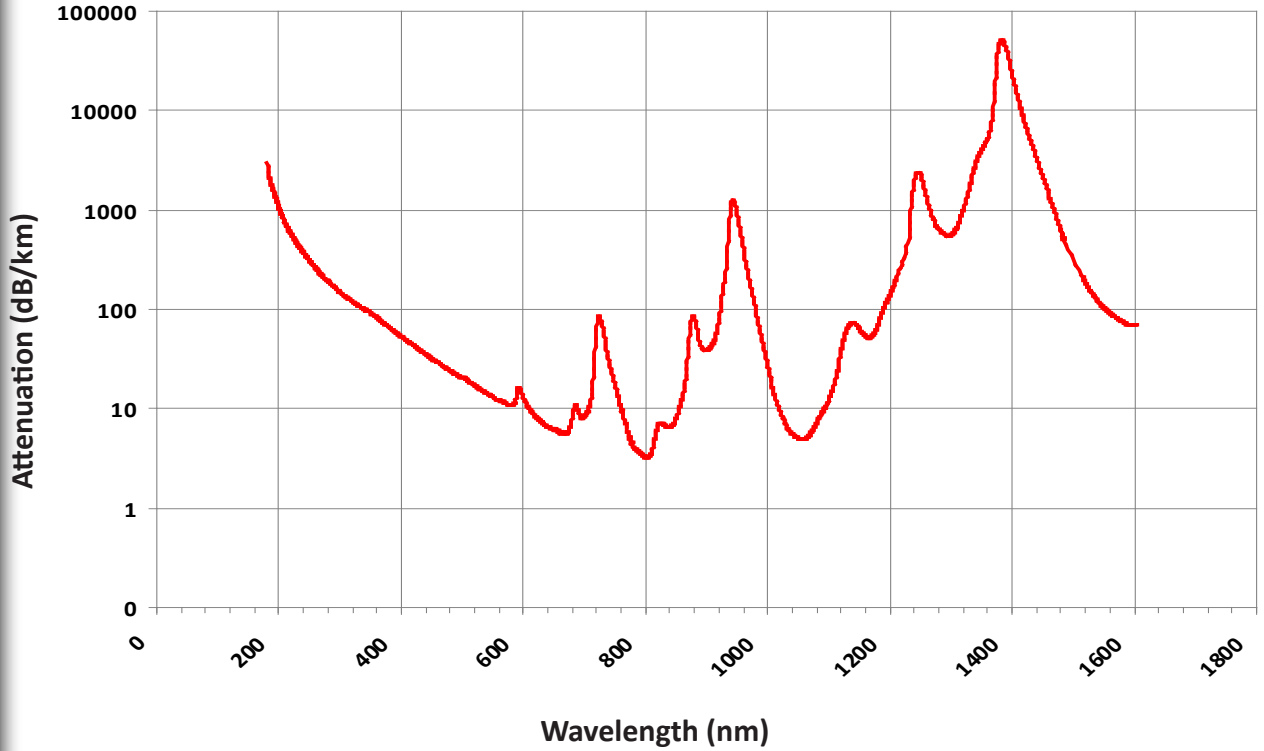
Fiber Type: Superguide™ Pure Fused Silica Core/ Fluorine Doped Silica Cladding - Step Index Multimode
Wavelength: UV-VIS (High OH): 190 nm - 1250 nm

Fiber

Construction:
Silica Core/
Silica Clad/
Polymer Coated

Trade Name:
Anhydroguide™
VIS-IR (Low OH)
300nm – 2400nm

Superguide™
UV-VIS (High OH)
190nm – 1250nm



Fiber Type:
Step Index
Multimode

Fiber

Construction:
Silica Core/
Silica Clad/
Polymer Coated

Trade Name:
Anhydroguide™
VIS-IR (Low OH)
300nm – 2400nm

Superguide™
UV-VIS (High OH)
190nm – 1250nm

Index of Refraction (IOR) @ 633 nm

Fiber Type	Layer	Numerical Aperature (NA)		
		0.12	0.22	0.26
Anhydroguide™ Pure Fused Silica Core/ Fluorine Doped Silica Cladding - Step Index Multimode	Core	1.457	1.457	1.457
	Cladding	1.452	1.440	1.434
Superguide™ Pure Fused Silica Core/ Fluorine Doped Silica Cladding - Step Index Multimode	Core	1.457	1.457	1.457
	Cladding	1.452	1.439	1.434

Acrylate Coating

Temperature: -40°C to +85°C / -40°F to + 185°F

Fiber Type: Anhydroguide™ Pure Fused Silica Core/ Fluorine Doped Silica Cladding - Step Index Multimode

Wavelength: VIS-IR (Low OH): 300 nm - 2400 nm

Numerical Aperture (NA):

Standard: 0.22 ± 0.02 (Full acceptance Angle 25°) - Prefix AFS (Shown Below)

Low: 0.12 ± 0.02 (Full Acceptance Angle 14°) - Prefix AFM

High: 0.26 ± 0.02 (Full Acceptance Angle 30°) - Prefix AFH

Proof Test: 100 KPSI 4-Axis Bend Test

Product Code	Core Diameter (µm)	Cladding Diameter (µm)	Silicone Buffer Diameter (µm)	Coating Diameter (µm)	Bend Radius Short Term/ Long Term (mm)
AFS50/125/250Y	50 ± 2	125 + 1/-3	N/A	250 ± 12.5	≥ 13/25
AFS100/140/250Y	100 ± 2	140 + 1/-3	N/A	250 ± 12.5	≥ 14/28
AFS105/125/250Y	105 ± 2	125 + 1/-3	N/A	250 ± 12.5	≥ 13/25
AFS200/220/320Y	200 ± 4	220 ± 4	N/A	320 ± 16	≥ 22/44

Acrylate Coating

Temperature: -40°C to +85°C / -40°F to + 185°F

Fiber Type: Superguide™ Pure Fused Silica Core/ Fluorine Doped Silica Cladding - Step Index Multimode

Wavelength: UV-VIS (High OH): 190 nm - 1250 nm

Numerical Aperture (NA):

Standard: 0.22 ± 0.02 (Full acceptance Angle 25°) - Prefix SFS (Shown Below)

Low: 0.12 ± 0.02 (Full Acceptance Angle 14°) - Prefix SFM

High: 0.26 ± 0.02 (Full Acceptance Angle 30°) - Prefix SFH

Proof Test: 100 KPSI 4-Axis Bend Test

Product Code	Core Diameter (µm)	Cladding Diameter (µm)	Silicone Buffer Diameter (µm)	Coating Diameter (µm)	Bend Radius Short Term/ Long Term (mm)
SFS50/125/250Y	50 ± 2	125 + 1/-3	N/A	250 ± 12.5	≥ 13/25
SFS100/140/250Y	100 ± 2	140 + 1/-3	N/A	250 ± 12.5	≥ 14/28
SFS105/125/250Y	105 ± 2	125 + 1/-3	N/A	250 ± 12.5	≥ 13/25
SFS200/220/320Y	200 ± 4	220 ± 4	N/A	320 ± 16	≥ 22/44

All Silica Fiber (Low & High OH) Anhydroguide™ (AFS) & Superguide™ (SFS)

Fiber Type:
Step Index
Multimode

Fiber

Construction:
Silica Core/
Silica Clad/
Polymer Coated

Trade Name:
Anhydroguide™
VIS-IR (Low OH)
300nm – 2400nm

Superguide™
UV-VIS (High OH)
190nm – 1250nm

Thermocoat Coating (Polyimide)

Temperature: -190°C to +350°C / -310°F to + 662°F

Fiber Type: Anhydroguide™ Pure Fused Silica Core/ Fluorine Doped Silica Cladding - Step Index Multimode

Wavelength: VIS-IR (Low OH): 300 nm - 2400 nm

Numerical Aperture (NA):

Standard: 0.22 ± 0.02 (Full acceptance Angle 25°) - Prefix AFS (Shown Below)

Low: 0.12 ± 0.02 (Full Acceptance Angle 14°) - Prefix AFM

High: 0.26 ± 0.02 (Full Acceptance Angle 30°) - Prefix AFH

Proof Test: 50 KPSI 4-Axis Bend Test

Product Code	Core Diameter (µm)	Cladding Diameter (µm)	Silicone Buffer Diameter (µm)	Coating Diameter (µm)	Bend Radius Short Term/ Long Term (mm)
AFS50/125/145T	50 ± 2	125 + 1/-3	N/A	145 ± 5	≥ 13/25
AFS100/110/130T	100 ± 2	110 ± 2.2	N/A	130 ± 5	≥ 11/22
AFS100/120/140T	100 ± 2	120 ± 2.4	N/A	140 ± 5	≥ 12/24
AFS100/140/165T	100 ± 2	140 + 1/-3	N/A	165 ± 5	≥ 14/28
AFS105/125/145T	105 ± 2	125 + 1/-3	N/A	145 ± 5	≥ 13/25
AFS200/220/245T	200 ± 4	220 ± 4.4	N/A	245 ± 5	≥ 22/44
AFS300/330/370T	300 ± 6	330 ± 6.6	N/A	370 ± 10	≥ 33/66
AFS400/440/480T	400 ± 8	440 ± 8.8	N/A	480 ± 10	≥ 44/88
AFS600/660/710T	600 ± 12	660 ± 13.2	N/A	710 ± 15	≥ 66/132

Thermocoat Coating (Polyimide)

Temperature: -190°C to +350°C / -310°F to + 662°F

Fiber Type: Superguide™ Pure Fused Silica Core/ Fluorine Doped Silica Cladding - Step Index Multimode

Wavelength: UV-VIS (High OH): 190 nm - 1250 nm

Numerical Aperture (NA):

Standard: 0.22 ± 0.02 (Full acceptance Angle 25°) - Prefix SFS (Shown Below)

Low: 0.12 ± 0.02 (Full Acceptance Angle 14°) - Prefix SFM

High: 0.26 ± 0.02 (Full Acceptance Angle 30°) - Prefix SFH

Proof Test: 50 KPSI 4-Axis Bend Test

Product Code	Core Diameter (µm)	Cladding Diameter (µm)	Silicone Buffer Diameter (µm)	Coating Diameter (µm)	Bend Radius Short Term/ Long Term (mm)
SFS50/125/145T	50 ± 2	125 + 1/-3	N/A	145 ± 5	≥ 13/25
SFS100/110/130T	100 ± 2	110 ± 2.2	N/A	130 ± 5	≥ 11/22
SFS100/120/140T	100 ± 2	120 ± 2.4	N/A	140 ± 5	≥ 12/24
SFS100/140/165T	100 ± 2	140 + 1/-3	N/A	165 ± 5	≥ 14/28
SFS105/125/145T	105 ± 2	125 + 1/-3	N/A	145 ± 5	≥ 13/25
SFS200/220/245T	200 ± 4	220 ± 4.4	N/A	245 ± 5	≥ 22/44
SFS300/330/370T	300 ± 6	330 ± 6.6	N/A	370 ± 10	≥ 33/66
SFS400/440/480T	400 ± 8	440 ± 8.8	N/A	480 ± 10	≥ 44/88
SFS600/660/710T	600 ± 12	660 ± 13.2	N/A	710 ± 15	≥ 66/132

All Silica Fiber (Low & High OH) Anhydroguide™ (AFS) & Superguide™ (SFS)

Fiber Type:
Step Index
Multimode

Fiber

Construction:
Silica Core/
Silica Clad/
Polymer Coated

Trade Name:
Anhydroguide™
VIS-IR (Low OH)
300nm – 2400nm

Superguide™
UV-VIS (High OH)
190nm – 1250nm

Nylon Coating						
Temperature: -40°C to +100°C / -40°F to + 212°F						
Fiber Type: Anhydroguide™ Pure Fused Silica Core/ Fluorine Doped Silica Cladding - Step Index Multimode						
Wavelength: VIS-IR (Low OH): 300 nm - 2400 nm						
Numerical Aperture (NA): Standard: 0.22 ± 0.02 (Full acceptance Angle 25°) - Prefix AFS (Shown Below) Low: 0.12 ± 0.02 (Full Acceptance Angle 14°) - Prefix AFM High: 0.26 ± 0.02 (Full Acceptance Angle 30°) - Prefix AFH						
Proof Test: 100 KPSI 4-Axis Bend Test						
Product Code	Core Diameter (µm)	Cladding Diameter (µm)	Silicone Buffer Diameter (µm)	Coating Diameter (µm)	Bend Radius Short Term/ Long Term (mm)	
AFS50/125/225/295N	50 ± 2	125 + 1/-3	225 ± 6.75	295 ± 14.75	≥ 13/25	
AFS100/110/210/280N	100 ± 2	110 ± 2.2	210 ± 6.3	280 ± 14	≥ 11/22	
AFS100/140/240/310N	100 ± 2	140 + 1/-3	240 ± 7.2	310 ± 15.5	≥ 14/28	
AFS200/220/320/390N	200 ± 4	220 ± 4.4	320 ± 9.6	390 ± 19.5	≥ 22/44	
AFS300/330/430/530N	300 ± 6	330 ± 6.6	430 ± 12.9	530 ± 26.5	≥ 33/66	
AFS400/440/540/640N	400 ± 8	440 ± 8.8	540 ± 16.2	640 ± 32	≥ 44/88	
AFS600/660/760/860N	600 ± 12	660 ± 13.2	760 ± 22.8	860 ± 43	≥ 66/132	
AFS800/880/980/1080N	800 ± 16	880 ± 17.6	980 ± 29.4	1080 ± 54	≥ 88/176	
AFS1000/1100/1200/1300N	1000 ± 20	1100 ± 22	1200 ± 36	1300 ± 65	≥ 110/220	
AFS1500/1650/1800/1950N	1500 ± 30	1650 ± 33	1800 ± 54	1950 ± 97.5	≥ 165/330	

Nylon Coating						
Temperature: -40°C to +100°C / -40°F to + 212°F						
Fiber Type: Superguide™ Pure Fused Silica Core/ Fluorine Doped Silica Cladding - Step Index Multimode						
Wavelength: UV-VIS (High OH): 190 nm - 1250 nm						
Numerical Aperture (NA): Standard: 0.22 ± 0.02 (Full acceptance Angle 25°) - Prefix SFS (Shown Below) Low: 0.12 ± 0.02 (Full Acceptance Angle 14°) - Prefix SFM High: 0.26 ± 0.02 (Full Acceptance Angle 30°) - Prefix SFH						
Proof Test: 100 KPSI 4-Axis Bend Test						
Product Code	Core Diameter (µm)	Cladding Diameter (µm)	Silicone Buffer Diameter (µm)	Coating Diameter (µm)	Bend Radius Short Term/ Long Term (mm)	
SFS50/125/225/295N	50 ± 2	125 + 1/-3	225 ± 6.75	295 ± 14.75	≥ 13/25	
SFS100/110/210/280N	100 ± 2	110 ± 2.2	210 ± 6.3	280 ± 14	≥ 11/22	
SFS100/140/240/310N	100 ± 2	140 + 1/-3	240 ± 7.2	310 ± 15.5	≥ 14/28	
SFS200/220/320/390N	200 ± 4	220 ± 4.4	320 ± 9.6	390 ± 19.5	≥ 22/44	
SFS300/330/430/530N	300 ± 6	330 ± 6.6	430 ± 12.9	530 ± 26.5	≥ 33/66	
SFS400/440/540/640N	400 ± 8	440 ± 8.8	540 ± 16.2	640 ± 32	≥ 44/88	
SFS600/660/760/860N	600 ± 12	660 ± 13.2	760 ± 22.8	860 ± 43	≥ 66/132	
SFS800/880/980/1080N	800 ± 16	880 ± 17.6	980 ± 29.4	1080 ± 54	≥ 88/176	
SFS1000/1100/1200/1300N	1000 ± 20	1100 ± 22	1200 ± 36	1300 ± 65	≥ 110/220	
SFS1500/1650/1800/1950N	1500 ± 30	1650 ± 33	1800 ± 54	1950 ± 97.5	≥ 165/330	

All Silica Fiber (Low & High OH) Anhydroguide™ (AFS) & Superguide™ (SFS)

Fiber Type:
Step Index
Multimode

Fiber

Construction:
Silica Core/
Silica Clad/
Polymer Coated

Trade Name:
Anhydroguide™
VIS-IR (Low OH)
300nm – 2400nm

Superguide™
UV-VIS (High OH)
190nm – 1250nm

Tefzel Coating

Temperature: -40°C to +200°C / -40°F to + 392°F

Fiber Type: Anhydroguide™ Pure Fused Silica Core/ Fluorine Doped Silica Cladding - Step Index Multimode

Wavelength: VIS-IR (Low OH): 300 nm - 2400 nm

Numerical Aperture (NA):

Standard: 0.22 ± 0.02 (Full acceptance Angle 25°) - Prefix AFS (Shown Below)

Low: 0.12 ± 0.02 (Full Acceptance Angle 14°) - Prefix AFM

High: 0.26 ± 0.02 (Full Acceptance Angle 30°) - Prefix AFH

Proof Test: 100 KPSI 4-Axis Bend Test

Product Code	Core Diameter (µm)	Cladding Diameter (µm)	Silicone Buffer Diameter (µm)	Coating Diameter (µm)	Bend Radius Short Term/ Long Term (mm)
AFS100/110/240/310Z	100 ± 2	110 ± 2.2	240 ± 7.2	310 ± 15.5	≥ 11/22
AFS100/140/240/370Z	100 ± 2	140 ± 1/-3	240 ± 7.2	370 ± 18.5	≥ 14/28
AFS200/220/320/480Z	200 ± 4	220 ± 4.4	320 ± 9.6	480 ± 24	≥ 22/44
AFS300/330/480/720Z	300 ± 6	330 ± 6.6	480 ± 14.4	720 ± 36	≥ 33/66
AFS400/440/590/880Z	400 ± 8	440 ± 8.8	590 ± 17.7	880 ± 44	≥ 44/88
AFS600/660/810/1200Z	600 ± 12	660 ± 13.2	810 ± 24.3	1200 ± 60	≥ 66/132
AFS800/880/1030/1550Z	800 ± 16	880 ± 17.6	1030 ± 30.9	1550 ± 77.5	≥ 88/176
AFS1000/1100/1250/1850Z	1000 ± 20	1100 ± 22	1250 ± 37.5	1850 ± 92.5	≥ 110/220
AFS1500/1650/1800/2750Z	1500 ± 30	1650 ± 33	1800 ± 58.5	2750 ± 137.5	≥ 165/330

Tefzel Coating

Temperature: -40°C to +200°C / -40°F to + 392°F

Fiber Type: Superguide™ Pure Fused Silica Core/ Fluorine Doped Silica Cladding - Step Index Multimode

Wavelength: UV-VIS (High OH): 190 nm - 1250 nm

Numerical Aperture (NA):

Standard: 0.22 ± 0.02 (Full acceptance Angle 25°) - Prefix SFS (Shown Below)

Low: 0.12 ± 0.02 (Full Acceptance Angle 14°) - Prefix SFM

High: 0.26 ± 0.02 (Full Acceptance Angle 30°) - Prefix SFH

Proof Test: 100 KPSI 4-Axis Bend Test

Product Code	Core Diameter (µm)	Cladding Diameter (µm)	Silicone Buffer Diameter (µm)	Coating Diameter (µm)	Bend Radius Short Term/ Long Term (mm)
SFS100/110/240/310Z	100 ± 2	110 ± 2.2	240 ± 7.2	310 ± 15.5	≥ 11/22
SFS100/140/240/370Z	100 ± 2	140 ± 1/-3	240 ± 7.2	370 ± 18.5	≥ 14/28
SFS200/220/320/480Z	200 ± 4	220 ± 4.4	320 ± 9.6	480 ± 24	≥ 22/44
SFS300/330/480/720Z	300 ± 6	330 ± 6.6	480 ± 14.4	720 ± 36	≥ 33/66
SFS400/440/590/880Z	400 ± 8	440 ± 8.8	590 ± 17.7	880 ± 44	≥ 44/88
SFS600/660/810/1200Z	600 ± 12	660 ± 13.2	810 ± 24.3	1200 ± 60	≥ 66/132
SFS800/880/1030/1550Z	800 ± 16	880 ± 17.6	1030 ± 30.9	1550 ± 77.5	≥ 88/176
SFS1000/1100/1250/1850Z	1000 ± 20	1100 ± 22	1250 ± 37.5	1850 ± 92.5	≥ 110/220
SFS1500/1650/1800/2750Z	1500 ± 30	1650 ± 33	1800 ± 58.5	2750 ± 137.5	≥ 165/330