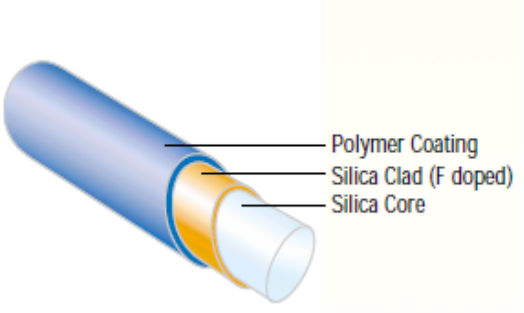
All Silica Fiber
(Low & High OH)
Anhydroguide™ (AFS) & Superguide™ (SFS)

Fiber Type:
Step Index
Multimode

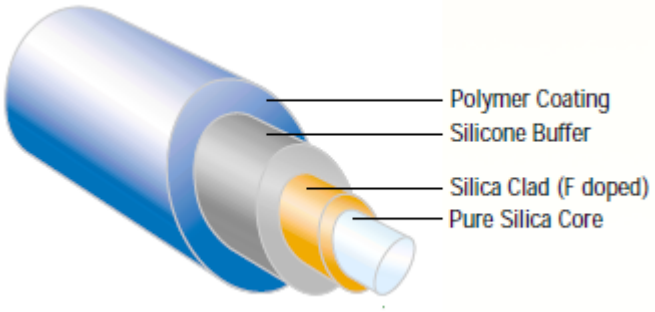
Fiber Construction:
Silica Core/
Silica Clad/
Polymer Coated

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

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



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 NAMSA Class VI

APPLICATIONS

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

Headquarters & Fiber Manufacturing
1 Bay Street, Stirling, New Jersey 07980
Phone: (908) 647-6601

Assembly & Manufacturing Facility
3409 E. Linden St., Caldwell, Idaho 83605
Phone: (208) 454-1988

Contact Us
Email: info@fiberguide.com
www.fiberguide.com

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

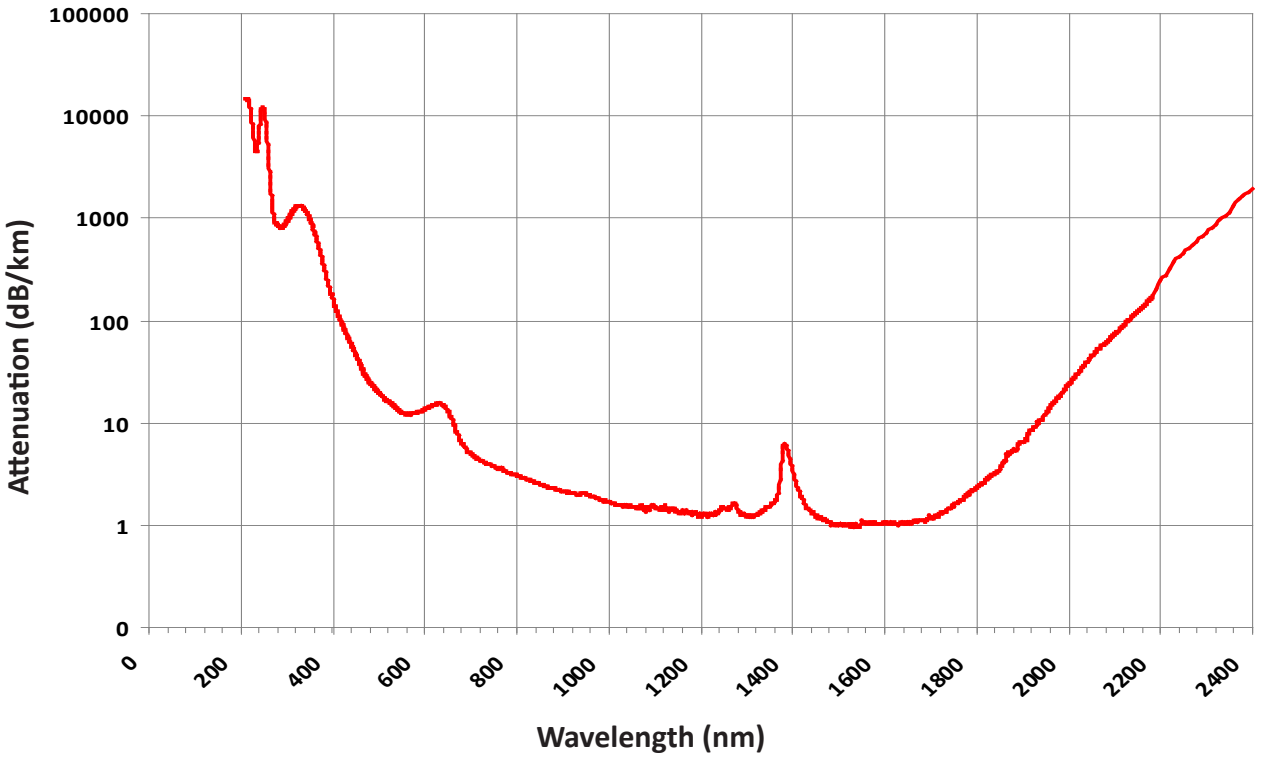
Fiber Type:
Step Index Multimode

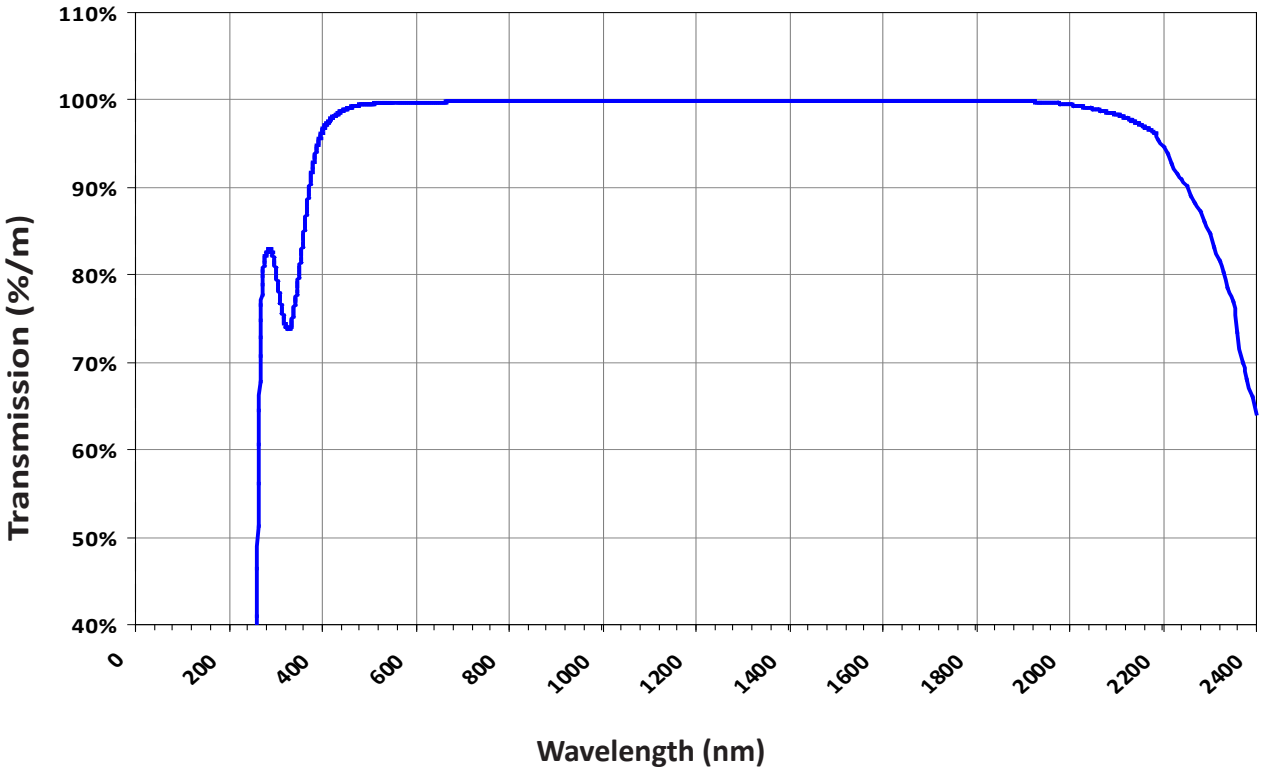
Fiber Construction:
Silica Core/ Silica Clad/ Polymer Coated

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

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

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





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

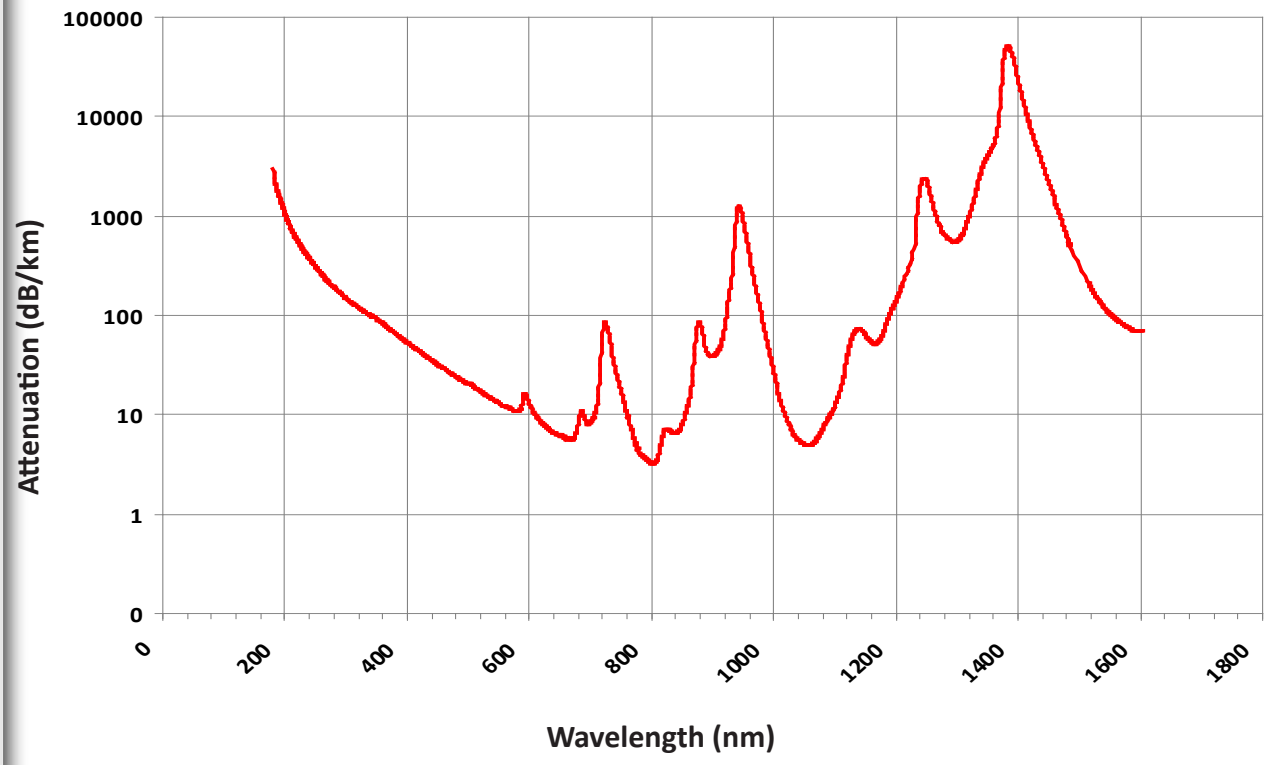
Fiber Type:
Step Index Multimode

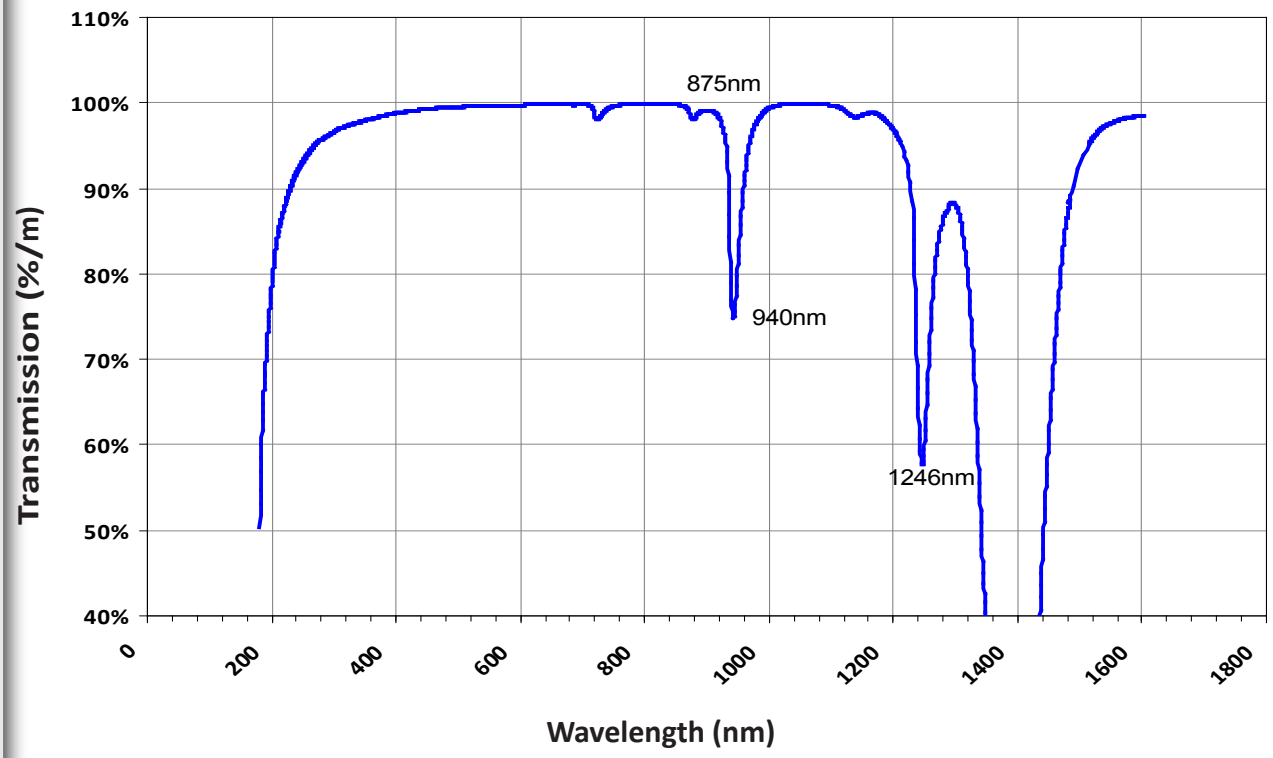
Fiber Construction:
Silica Core/ Silica Clad/ Polymer Coated

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

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

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





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

Index of Refraction (IOR) @ 633 nm				
Fiber Type	Layer	Numerical Aperture (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