

Gold Coated Fiber

Fiber Type:

Step Index
Multimode

Graded Index
Multimode

Single Mode

Fiber

Construction:

Gold Coated Fiber

Trade Name:

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

Superguide™

UV-VIS (High OH)
190nm – 1250nm

AGI™ Series

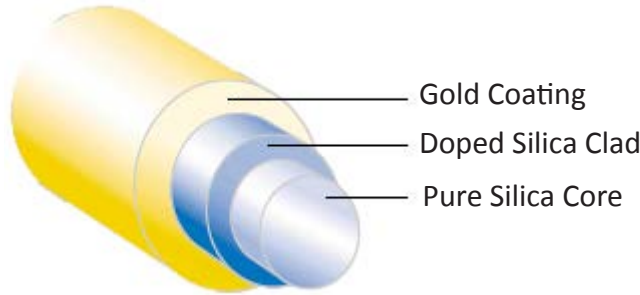
(850nm, 1300nm)

ASI™ 633 Series

(633nm – 680nm)

ASI™ 1500 Series

(1310nm)



Gold Coated Fiber

Fiberguide's Gold Coated Fibers are designed to achieve the widest temperature range (-269°C to +700°C) of any optical fiber on the market. This, combined with excellent corrosion resistance, and the fiber's ability to be soldered or brazed, makes it the ideal fiber for many high temperature applications such as turbine flame monitoring, oil and gas down-hole sensing, and high vacuum or pressure applications.

FIBER SPECIFICATIONS

STEP INDEX MULTIMODE

- o Pure Fused Silica Core / Fluorine Doped Silica Cladding
- o Core / Cladding Sizes: 50/125µm to 400/440µm
- o Numerical Aperture (NA): 0.12, 0.22, 0.26
- o Standard Core/Clad Ratio: 1.1
- o Available Core/Clad Ratios: 1.2, 1.4 and 2.5

COMMON SPECIFICATIONS

- 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

GRADED INDEX MULTIMODE

- o Germanium Doped Fused Silica Core / Pure Fused Silica Cladding
- o Core / Cladding Sizes: 50/125µm, 62.5/125µm
- o Numerical Aperture (NA): 50µm: 0.200 / 62.5µm: 0.275

SINGLE MODE

- o Germanium Doped Fused Silica Core / Pure Fused Silica Cladding
- o Mode Field Diameter / Cladding Sizes: 4.3/125µm, 9.0/125µm
- o Numerical Aperture (NA): 0.12

Applications:

- High temperature and cryogenic temperature sensing
- Down-hole sensing for oil and gas industry
- Corrosive and caustic environments
- Ultra high vacuum devices
- Radiation resistant sensors
- Rocket, turbine and jet engine monitoring

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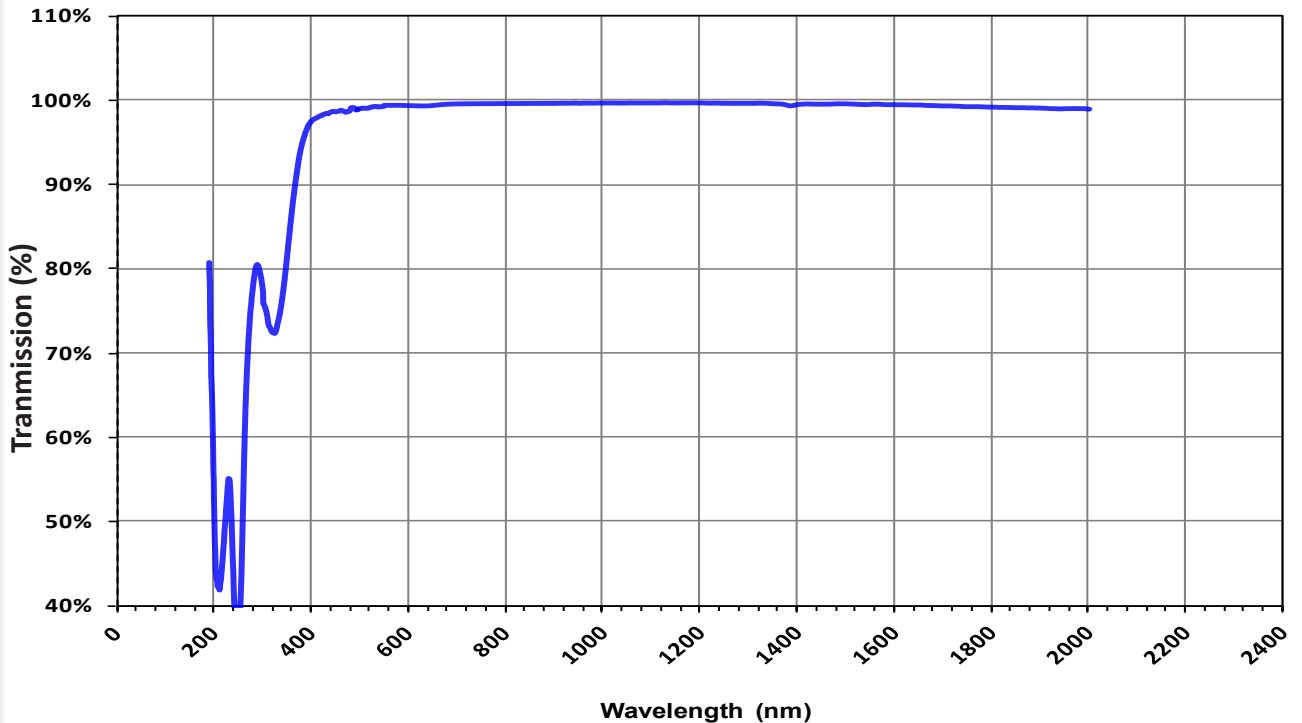
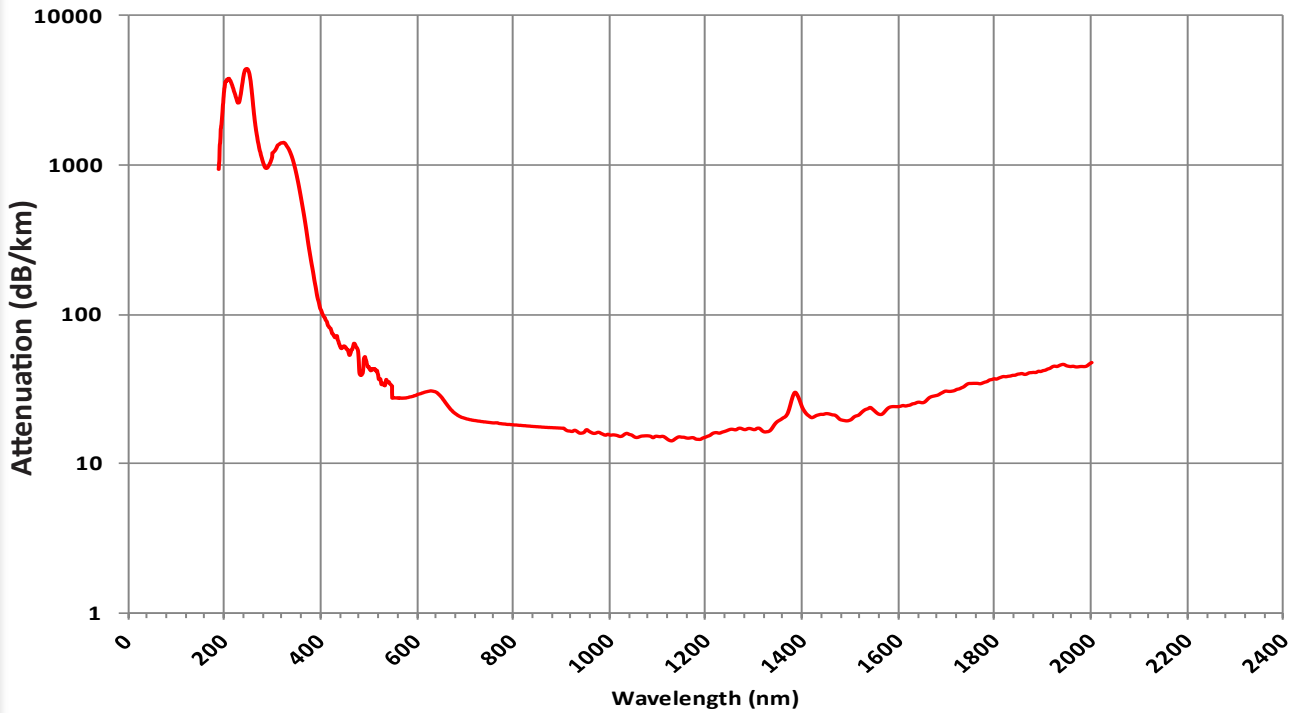
Superguide™
UV-VIS (High OH)
190nm – 1250nm

AGI™ Series
(850nm, 1300nm)

ASI™ 633 Series
(633nm – 680nm)

ASI™ 1500 Series
(1310nm)

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



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(850nm, 1300nm)

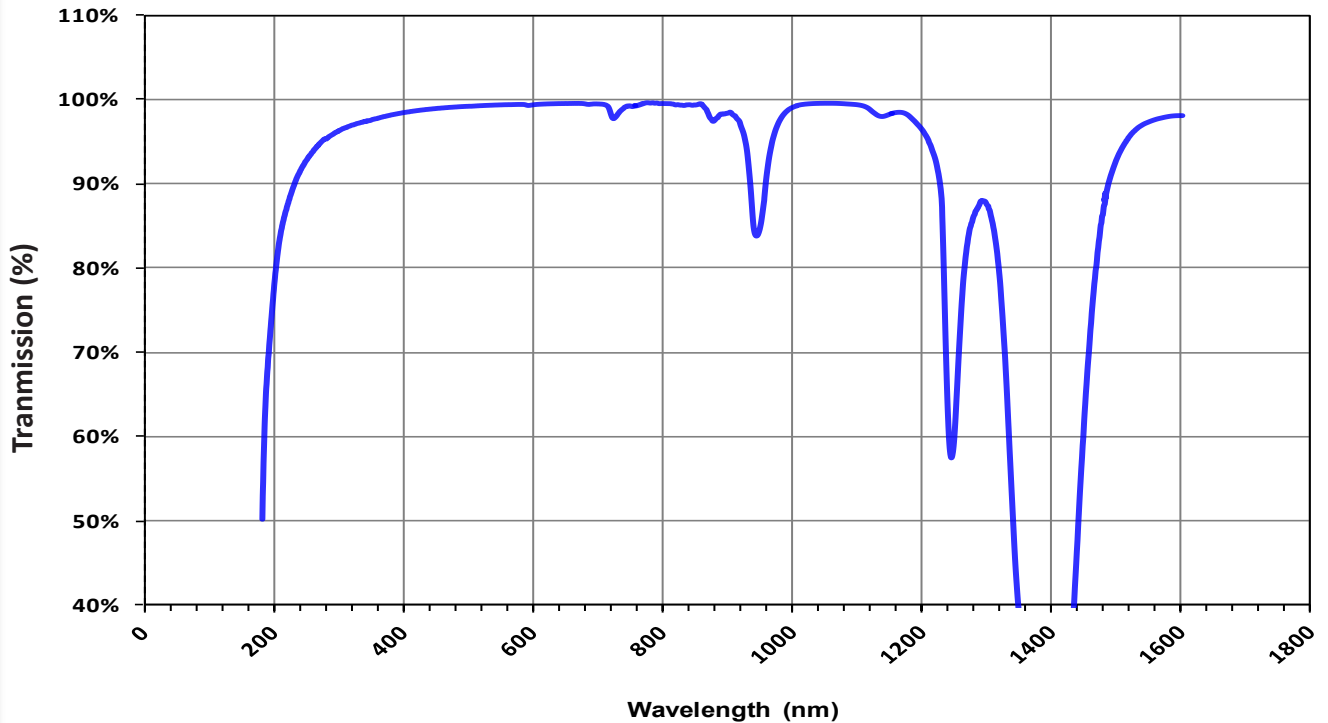
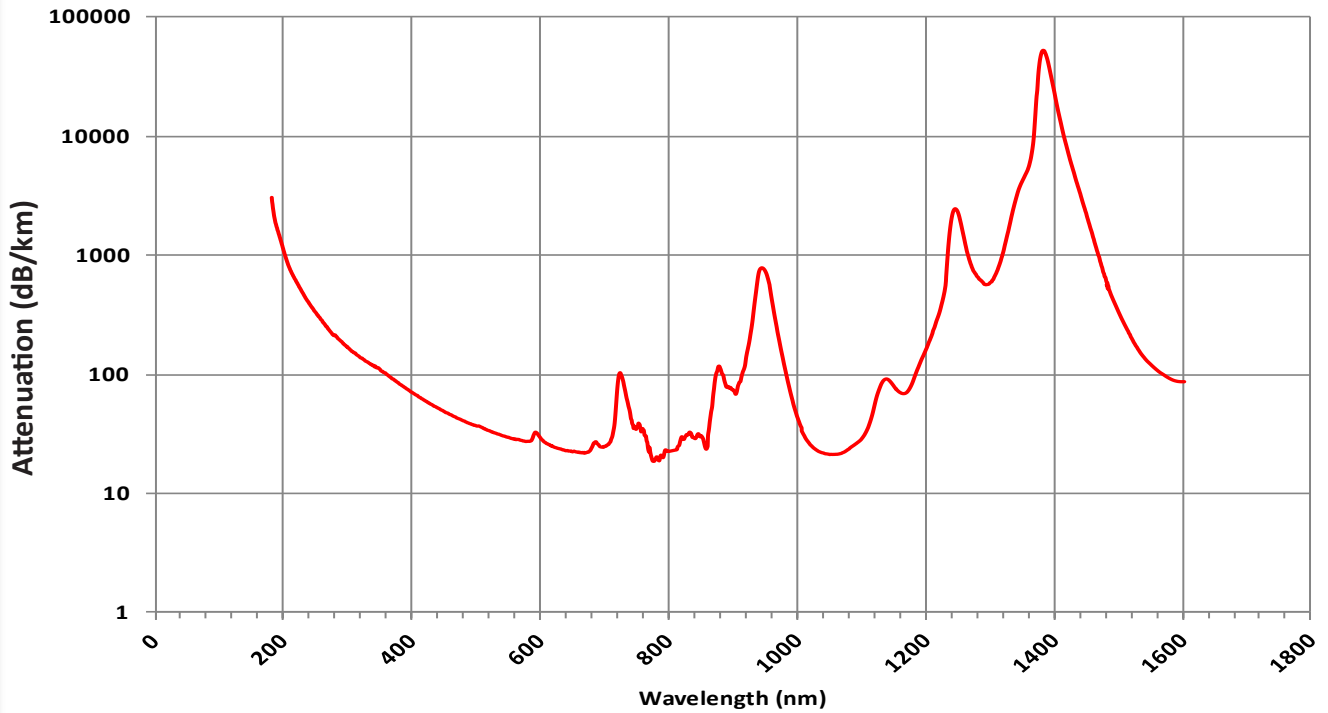
ASI™ 633 Series

(633nm – 680nm)

ASI™ 1500 Series

(1310nm)

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



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Multimode

Graded Index
Multimode

Single Mode

Fiber

Construction:

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(850nm, 1300nm)

ASI™ 633 Series
(633nm – 680nm)

ASI™ 1500 Series
(1310nm)

Gold Coating

Temperature: -269°C to +700°C / -452°F to + 1292°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

Hi: 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)	Coating Diameter (µm)	Bend Radius Short Term/ Long Term (mm)
AFS50/125/155G	50 ± 2	125 + 1/-3	155 ± 16	≥ 13/25
AFS100/140/175G	100 ± 2	140 +5/-3	175 ± 18	≥ 14/28
AFS105/125/155G	105 ± 2.1	125 + 1/-3	155 ± 16	≥ 13/25
AFS200/220/255G	200 ± 4	220 ± 4.4	255 ± 26	≥ 22/44
AFS300/330/380G	300 ± 6	330 ± 7	380 ± 38	≥ 33/66
AFS400/440/510G	400 ± 8	440 ± 9	510 ± 51	≥ 44/88

Gold Coating

Temperature: -269°C to +700°C / -452°F to + 1292°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

Hi: 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)	Coating Diameter (µm)	Bend Radius Short Term/ Long Term (mm)
SFS50/125/155G	50 ± 2	125 + 1/-3	155 ± 16	≥ 13/25
AFS100/140/175G	100 ± 2	140 +5/-3	175 ± 18	≥ 14/28
SFS105/125/155G	105 ± 2.1	125 + 1/-3	155 ± 16	≥ 13/25
SFS200/220/255G	200 ± 4	220 ± 4.4	255 ± 26	≥ 22/44
SFS300/330/380G	300 ± 6	330 ± 7	380 ± 38	≥ 33/66
SFS400/440/510G	400 ± 8	440 ± 9	510 ± 51	≥ 44/88

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AGI™ Series
(850nm, 1300nm)

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(633nm – 680nm)

ASI™ 1500 Series

Gold Coating

Temperature: -269°C to +700°C / -452°F to + 1292°F

Fiber Type: Anhydrous Graded Index (AGI™) Multimode

Wavelength: Optimized for 850nm & 1300nm

Numerical Aperture (NA):

50µm: 0.200 ± 0.02 (Full acceptance Angle 23.6°)

62.5µm: 0.275 ± 0.02 (Full acceptance Angle 33.4°)

Proof Test: 50 KPSI 4-Axis Bend Test

Product Code	Core Diameter (µm)	Cladding Diameter (µm)	Coating Diameter (µm)	Bend Radius Short Term/ Long Term (mm)
AGI50/125/155G	50 ± 2	125 + 1/-3	155 ± 16	≥ 13/25
AGI62.5/125/155G	62.5 ± 1	125 + 1/-3	155 ± 16	≥ 13/25

Gold Coating

Temperature: -269°C to +700°C / -452°F to + 1292°F

Fiber Type: Anhydrous Silica (ASI™) - Single Mode

Wavelength: 4.3/125µm: 633nm - 680nm

Numerical Aperture (NA):

0.12 ± 0.02 (Full Acceptance Angle 14°)

Proof Test: 50 KPSI 4-Axis Bend Test

Product Code	Core Diameter (µm)	Cladding Diameter (µm)	Coating Diameter (µm)	Bend Radius Short Term/ Long Term (mm)
ASI4.3/125/155G	4.3 ± 0.3	125 + 1/-3	155 ± 16	≥ 13/25
ASI9.0/125/155G	9.0 ± 0.5	125 + 1/-3	155 ± 16	≥ 13/25