

**Fiber Type:**

Step Index  
Multimode

**Fiber**

**Construction:**

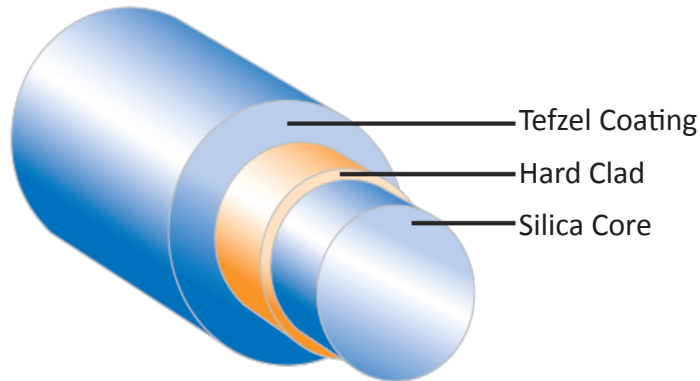
Hard Clad Silica

**Trade Name:**

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

Superguide™

UV-VIS (High OH)  
190nm – 1250nm



**Hard Clad Fiber**

Fiberguide's SPCH & APCH fibers feature a hard polymer cladding instead of a silica cladding. The hard cladding enables a higher NA (0.37) than a silica cladding, and reduces cost. Hard Clad fibers are the ideal choice for disposable medical products.

**FIBER SPECIFICATIONS**

- Step Index Multimode
  - Pure Fused Silica Core / Hard Polymer Cladding
  - Core / Cladding Sizes: 200/300µm to 1500/1550µm
  - Numerical Aperture (NA): 0.37  
See Note
  - Recommended Bend Radius:
    - o Short Term: 100 X Core Diameter
    - o Long Term: 200 X Core 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
  - Tefzel certified to NAMS Class VI

**Applications:**

- Bio-Analytical Sensing
- Medical Laser
- Dental Curing
- Spectroscopy
- Nuclear Plasma Sensing
- Photodynamic Therapy

**Hard Clad Fiber  
(Low & High OH)  
Anhydroguide™ (APCH) & Superguide™ (SPCH)**

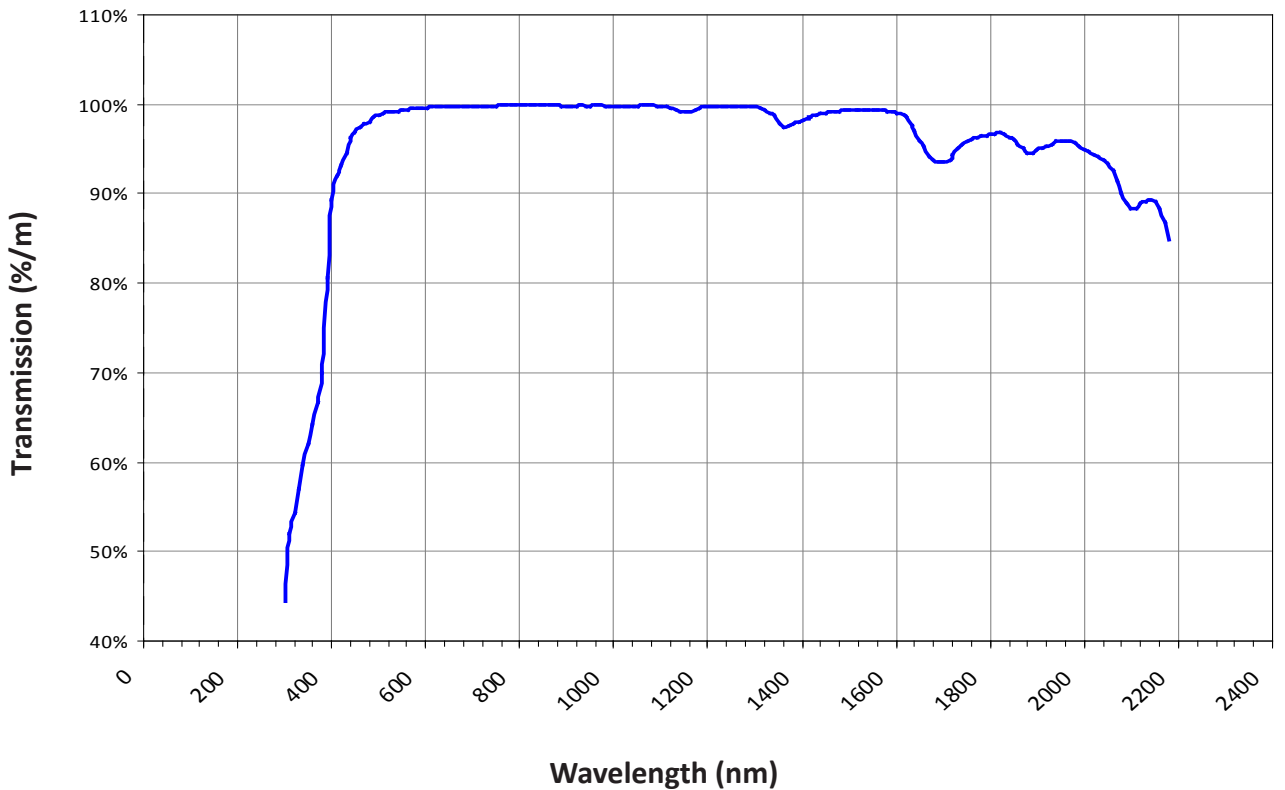
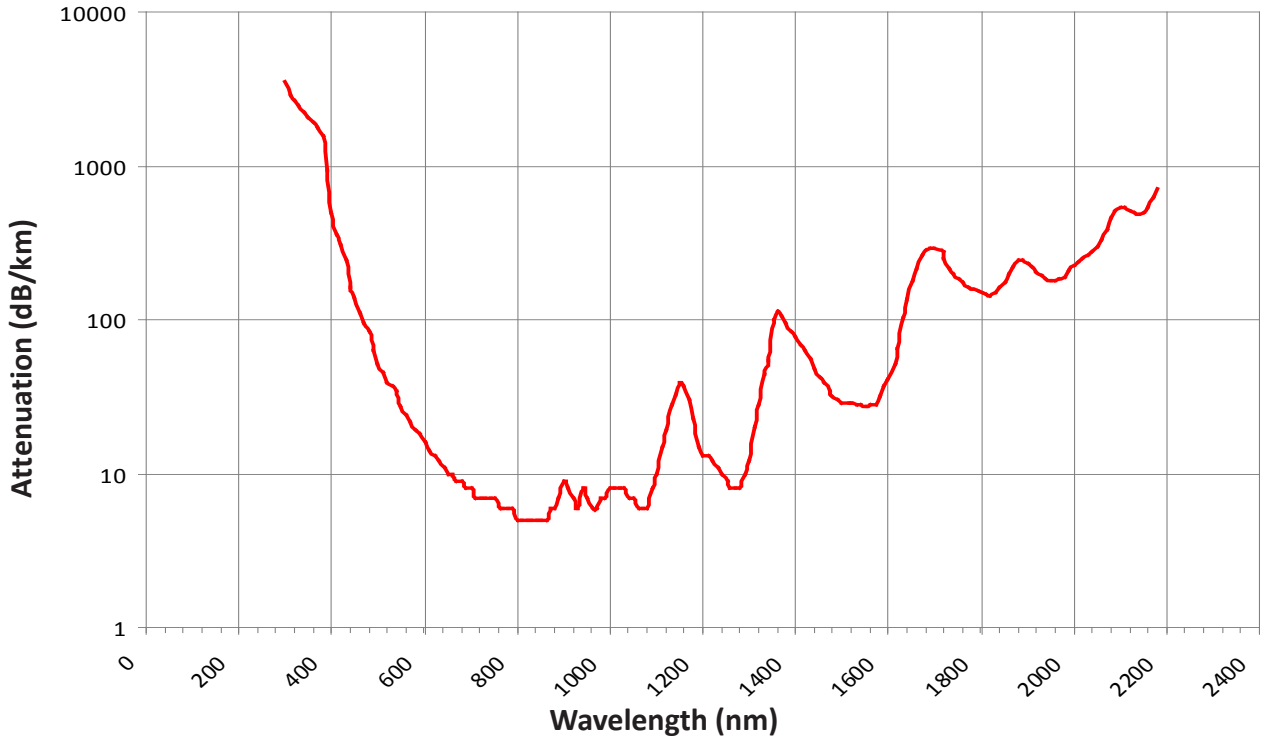
**Fiber Type:**  
Step Index  
Multimode

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

**Fiber Construction:**  
Hard Clad Silica

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

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UV-VIS (High OH)  
190nm – 1250nm



**Hard Clad Fiber  
(Low & High OH)  
Anhydroguide™ (APCH) & Superguide™ (SPCH)**

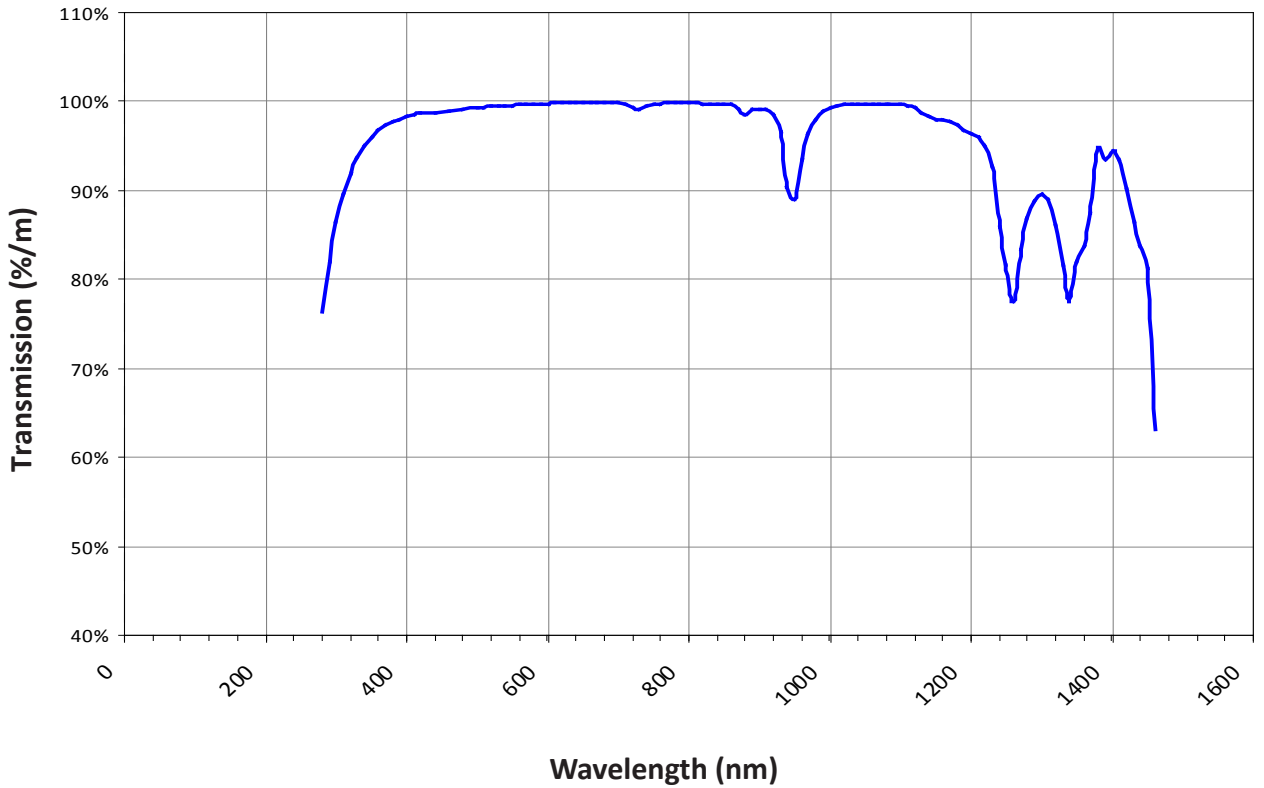
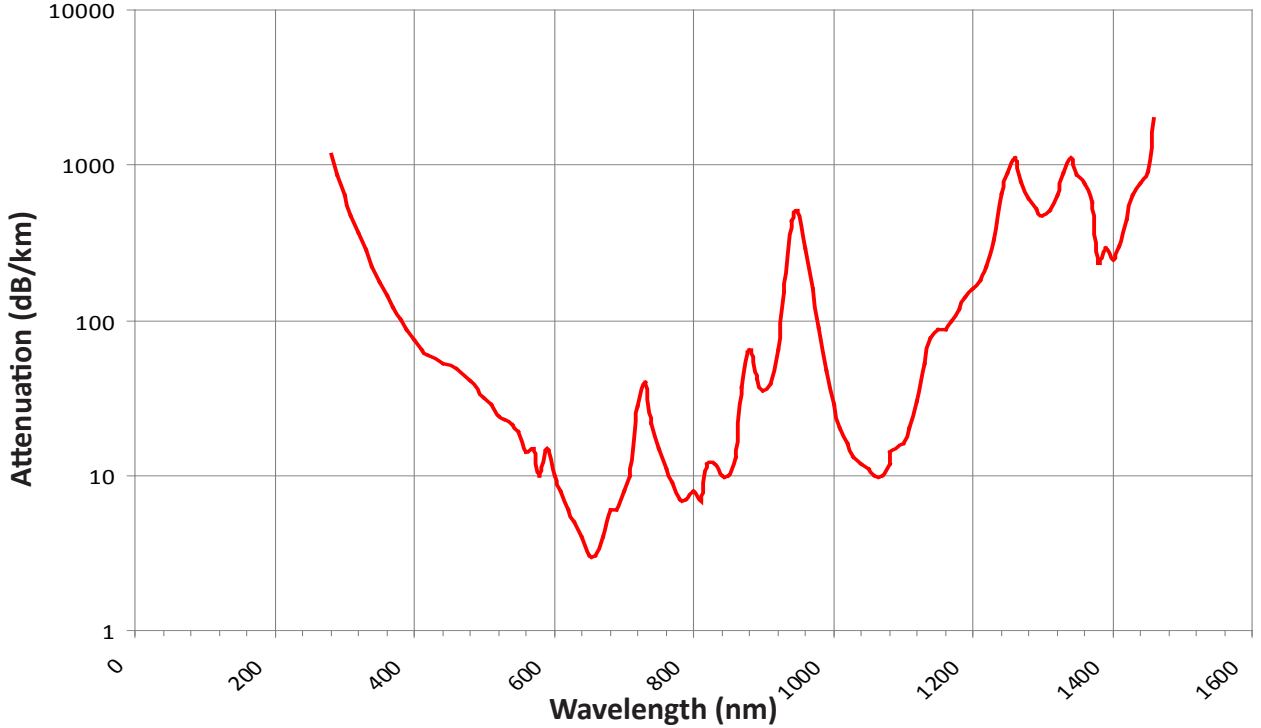
**Fiber Type:**  
Step Index  
Multimode

**Fiber Construction:**  
Hard Clad Silica

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

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

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



**Fiber Type:**  
Step Index  
Multimode

**Fiber Construction:**  
Hard Clad Silica

**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)
		0.37
Anhydroguide™ Pure Fused Silica Core/Hard Polymer Cladding - Step Index Multimode	Core	1.457
	Cladding	1.410
Superguideguide™ Pure Fused Silica Core/Hard Polymer Cladding - Step Index Multimode	Core	1.457
	Cladding	1.410

**Tefzel Coating (Natural)**

Temperature: -40°C to +125°C / -40°F to + 257°F

**Fiber Type:** Anhydroguide™ Pure Fused Silica Core/Hard Polymer Cladding - Step Index Multimode

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

**Numerical Aperture (NA):**

Standard: 0.37 ± 0.02 (Full acceptance Angle 46°) - Prefix APCH or SPCH

**Proof Test:** 100 KPSI 4-Axis Bend Test

Product Code	Core Diameter (µm)	Cladding Diameter (µm)	Coating Diameter (µm)	Bend Radius Short Term/ Long Term (mm)
APCH200/230/500Z	200 ± 5	230 ± 5	500 ± 30	≥ 20/40
APCH300/330/650Z	300 ± 6	330 ± 10	650 ± 30	≥ 30/60
APCH400/430/730Z	400 ± 8	430 ± 10	730 ± 30	≥ 40/80
APCH600/630/1040Z	600 ± 12	630 ± 10	1040 ± 50	≥ 60/120
APCH800/830/1040Z	800 ± 16	830 ± 10	1040 ± 62	≥ 80/160
APCH1000/1035/1400Z	1000 ± 20	1035 ± 15	1400 ± 70	≥ 100/200
APCH1500/1550/2000Z	1500 ± 35	1550 ± 31	2000 ± 100	≥ 150/300

**Tefzel Coating (Natural)**

Temperature: -40°C to +125°C / -40°F to + 257°F

**Fiber Type:** Superguide™ Pure Fused Silica Core/Hard Polymer Cladding - Step Index Multimode

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

**Numerical Aperture (NA):**

Standard: 0.37 ± 0.02 (Full acceptance Angle 46°) - Prefix APCH or SPCH

**Proof Test:** 100 KPSI 4-Axis Bend Test

Product Code	Core Diameter (µm)	Cladding Diameter (µm)	Coating Diameter (µm)	Bend Radius Short Term/ Long Term (mm)
SPCH200/230/500Z	200 ± 5	230 ± 5	500 ± 30	≥ 20/40
SPCH300/330/650Z	300 ± 6	330 ± 10	650 ± 30	≥ 30/60
SPCH400/430/730Z	400 ± 8	430 ± 10	730 ± 30	≥ 40/80
SPCH600/630/1040Z	600 ± 12	630 ± 10	1040 ± 50	≥ 60/120
SPCH800/830/1040Z	800 ± 16	830 ± 10	1040 ± 62	≥ 80/160
SPCH1000/1035/1400Z	1000 ± 20	1035 ± 15	1400 ± 70	≥ 100/200
SPCH1500/1550/2000Z	1500 ± 35	1550 ± 31	2000 ± 100	≥ 150/300

# Hard Clad Fiber (Low & High OH) Anhydroguide™ (APCH) & Superguide™ (SPCH)

**Fiber Type:**  
Step Index  
Multimode

**Fiber Construction:**  
Hard Clad Silica

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

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

### Tefzel Coating (Blue)

Temperature: -40°C to +125°C / -40°F to + 257°F

**Fiber Type:** Anhydroguide™ Pure Fused Silica Core/Hard Polymer Cladding - Step Index Multimode

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

### Numerical Aperture (NA):

Standard: 0.37 ± 0.02 (Full acceptance Angle 43°) - Prefix APCH or SPCH

**Proof Test:** 100 KPSI 4-Axis Bend Test

Product Code	Core Diameter (µm)	Cladding Diameter (µm)	Coating Diameter (µm)	Bend Radius Short Term/ Long Term (mm)
APCH200/230/500C	200 ± 5	230 ± 5	500 ± 30	≥ 20/40
APCH300/330/650C	300 ± 6	330 ± 10	650 ± 30	≥ 30/60
APCH400/430/730C	400 ± 8	430 ± 10	730 ± 30	≥ 40/80
APCH600/630/1040C	600 ± 12	630 ± 10	1040 ± 50	≥ 60/120
APCH800/830/1040C	800 ± 16	830 ± 10	1040 ± 62	≥ 80/160
APCH1000/1035/1400C	1000 ± 20	1035 ± 15	1400 ± 70	≥ 100/200
APCH1500/1550/2000C	1500 ± 35	1550 ± 31	2000 ± 100	≥ 150/300

### Tefzel Coating (Blue)

Temperature: -40°C to +125°C / -40°F to + 257°F

**Fiber Type:** Superguide™ Pure Fused Silica Core/Hard Polymer Cladding - Step Index Multimode

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

### Numerical Aperture (NA):

Standard: 0.37 ± 0.02 (Full acceptance Angle 43°) - Prefix APCH or SPCH

**Proof Test:** 100 KPSI 4-Axis Bend Test

Product Code	Core Diameter (µm)	Cladding Diameter (µm)	Coating Diameter (µm)	Bend Radius Short Term/ Long Term (mm)
SPCH200/230/500C	200 ± 5	230 ± 5	500 ± 30	≥ 20/40
SPCH300/330/650C	300 ± 6	330 ± 10	650 ± 30	≥ 30/60
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SPCH800/830/1040C	800 ± 16	830 ± 10	1040 ± 62	≥ 80/160
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