

CORNING

Corning® HI 780 & HI 780C Specialty Optical Fibers Single-Mode / Bend Insensitive



For Low-Loss Fused Couplers, High-Performance Components, and Small Footprint Assemblies

Manufactured with our patented outside vapor deposition (OVD) process, Corning® HI 780 specialty fiber offers world-class durability and reliability. When used as component pigtailed, this fiber allows for efficient fiber coupling within photonic products. Corning HI 780 also offers reduced bend attenuation due to its high core index of refraction. Corning HI 780 specialty fiber is capable of operating with short wavelength laser and LED sources. Corning now offers a re-engineered version, the Corning® HI 780C specialty fiber, which delivers non-adiabatic taper loss during component manufacturing. HI 780C is a coupler-optimized design that allows for steeper tapers and shorter couplers with lower losses.

Applications

- Low-loss fused fiber couplers
- Component fiber for couplers and other DWDM components
- Short wavelength laser and LED sources
- Sensors and gyroscopes

Features

- Outstanding consistency and uniformity using our patented Outside Vapor Deposition (OVD) process
- Dual acrylate coating system provides excellent protection from micro-induced attenuation and superior mechanical robustness
- Excellent geometry control
- High core index of refraction
- Efficient coupling
- High numerical aperture

Key Optical Specifications	HI 780 and HI 780C*
Operating Wavelength (nm)	> 780
Fiber Cutoff Wavelength (nm)	720 ± 50
Maximum Attenuation (dB/km)	4.3 @ 780 nm 3.0 @ 850 nm
Mode Field Diameter (μm)	4.6 ± 0.5 @ 780 nm 5.0 ± 0.5 @ 850 nm

*HI 780C - Coupler optimized (see graph below)

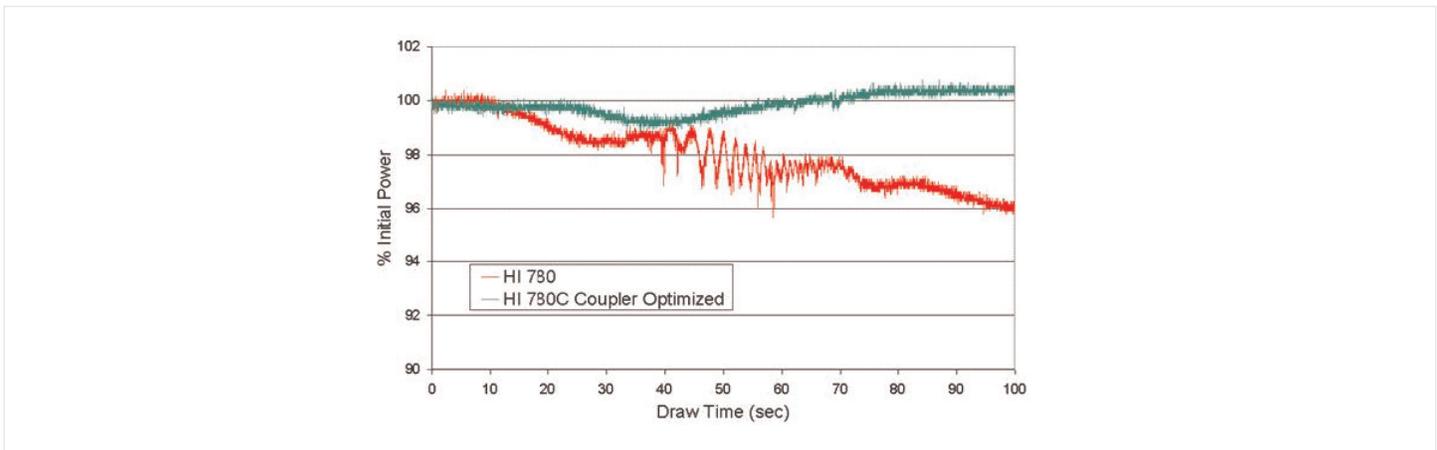
Key Geometric, Mechanical, and Environmental Specifications	HI 780 and HI 780C*
Cladding Outside Diameter (μm)	125 ± 0.5
Coating Outside Diameter (μm)	245 ± 10
Core-to-Cladding Concentricity (μm)	≤ 0.3
Standard Lengths	500 m, 1 km, 2 km, 5 km
Proof Test (kpsi)	100 or 200
Operating Temperature (°C)	-60 to +85

*HI 780C - Coupler optimized (see graph below)

Performance Characterizations†	HI 780	HI 780C
Nominal Delta (%)	0.46	0.47
Numerical Aperture	0.14	0.14
Refractive Index Value - Core	1.4591 @ 850 nm	1.4590 @ 850 nm
Bend Loss (20 mm O.D.; 850 nm) (dB/turn)	< 0.05	< 0.05
Core Diameter (μm)	4.2	3.7
Dispersion (ps/nm/km)	-132 @ 780 nm -99 @ 850 nm	-137 @ 780 nm -105 @ 850 nm

†Values in this table are nominal or calculated values

HI 780 and HI 780C single fiber pull at 850 nm taper loss as a function of pull time (taper length)



For more information about Corning's leadership in specialty fiber technology, visit our website at [corning.com/specialtyfiber](https://www.corning.com/specialtyfiber). To obtain additional technical information, an engineering sample, or to place an order for this product, please contact us at:

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The Corning logo consists of the word "CORNING" in a white, serif, all-caps font, centered within a solid blue square.

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