

# Corning® HI 780 & HI 780C Specialty Optical Fibers

## Single Mode / Bend Insensitive

CORNING



*For low loss fused couplers, high performance components and small footprint assemblies*

*Manufactured with Corning's 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, HI 780C, 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 Corning's 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

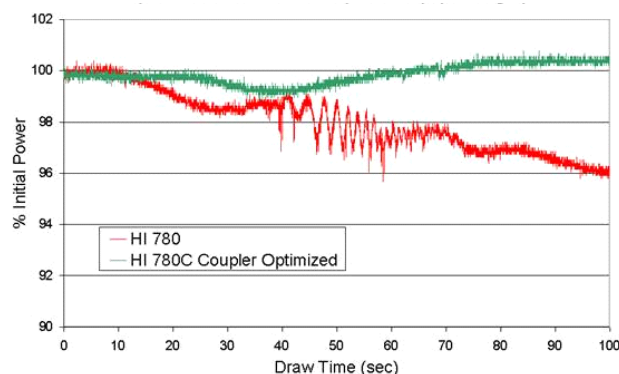
Cladding Outside Diameter (μm)	125 ± 0.5
Coating Outside Diameter (μm)	245 ± 10
Core-to-Cladding Concentricity (μm)	≤ 0.3
Standard Lengths	500 m, 1 km, 2 km, 5 km
Proof Test (kpsi)	100 or 200
Operating Temperature (°C)	-60 to +85

## 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
Bendloss (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 850nm  
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 [www.corning.com/specialtyfiber](http://www.corning.com/specialtyfiber)  
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