

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. It 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 780, 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

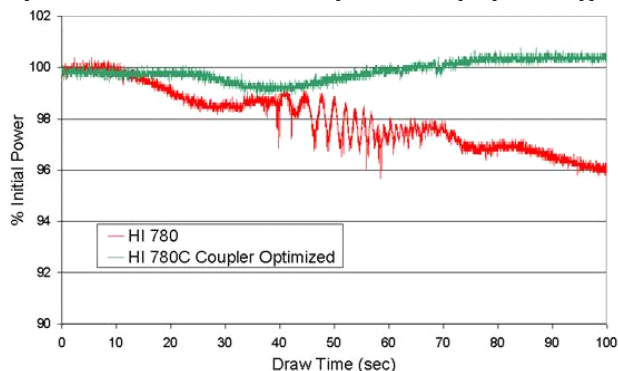
Cladding Outside Diameter (μm)	125 ± 0.5
Coating Outside Diameter (μm)	245 ± 10
Core-to-Cladding Concentricity (μm)	≤ 0.3
Standard Lengths	500 m, 1 km, 2 km, 5 km
Proof Test (kpsi)	100 or 200
Operating Temperature (°C)	-60 to +85

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
To obtain additional technical information, an engineering sample or to place an order for this product, please contact us at:

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