

CORNING

Corning® RGB 400 Specialty Optical Fibers



Optimized for visible light spectral range applications

Corning® RGB 400 special fiber is a single-mode fiber that is optimized for visible operating wavelength applications. The fiber's short cut-off wavelength design enables single-mode operation in the visible wavelength range. Outside vapor deposition (OVD) processing is used to fabricate this fiber, providing consistent geometric properties and high strength. In addition to exceptional performance as a single-mode visible fiber, the design is also optimized to produce low-loss fused biconic tapered couplers.

Applications

- Blue lasers
- Sensors
- Photolithography
- Red-Green-Blue components
- Couplers
- Diode pigtails
- High-resolution displays

Features

- Outstanding consistency and uniformity using Corning's patented OVD process
- Dual acrylate coating system provides excellent protection from microend-induced attenuation and superior mechanical robustness
- Profile optimized for adiabatic taper loss
- Excellent geometry control
- High reliability

Key Optical Specifications

Operating Wavelength (nm)	450-700
Fiber Cutoff Wavelength (nm)	400 ± 50
Maximum Attenuation (dB/km)	≤ 30 @ 500 nm ≤ 20 @ 600 nm
Mode-Field Diameter (μm)	3.2 ± 0.5 @ 500 nm 3.9 ± 0.5 @ 600 nm

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*

Numerical Aperture	0.12
Index of Refraction	1.46
Core Diameter (μm)	4.0

*Values in this table are nominal or calculated values

Figure 1

Corning® RGB 400 fiber bend loss at 20 mm and 50 mm diameters

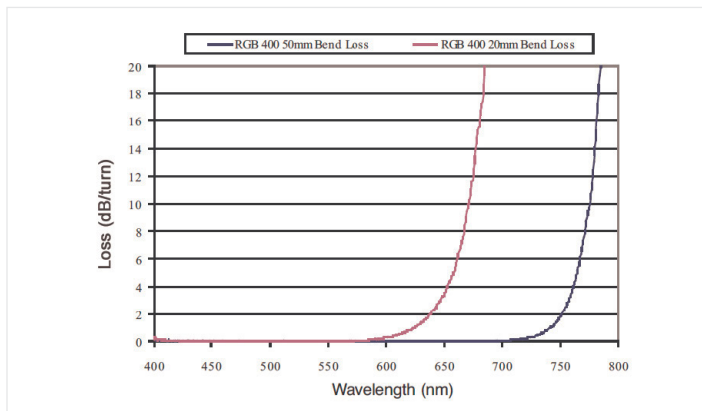
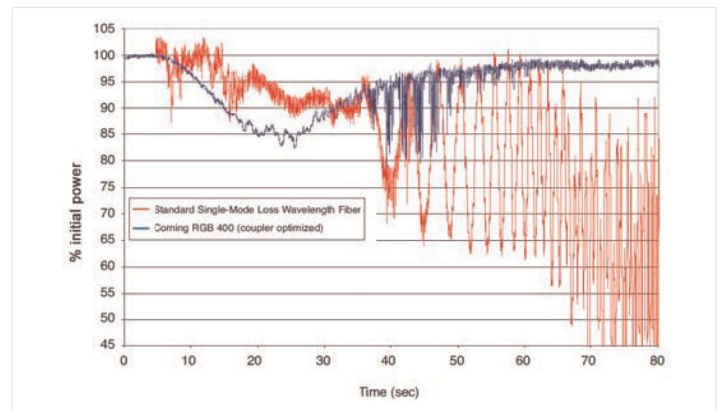


Figure 2

Single fiber taper loss pulls for RGB 400 and standard single-mode low wavelength fiber at 532 nm



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 a solid blue square. Inside the square, the word "CORNING" is written in a white, serif, all-caps font, centered horizontally and vertically.

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