

# Corning® RGB 400 Specialty Optical Fiber



*Optimized  
for visible  
light spectral  
range  
applications*

*Corning RGB 400 Specialty 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 pigtailed
- High resolution display

## **Features:**

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

## RGB 400

### Key Optical Specifications

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

### Key Geometric, Mechanical and Environmental Specifications

Cladding Outside Diameter (μm)	125 ± 0.5
Coating Outside Diameter (μm)	245 ± 10
Core-to-Cladding Offset (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

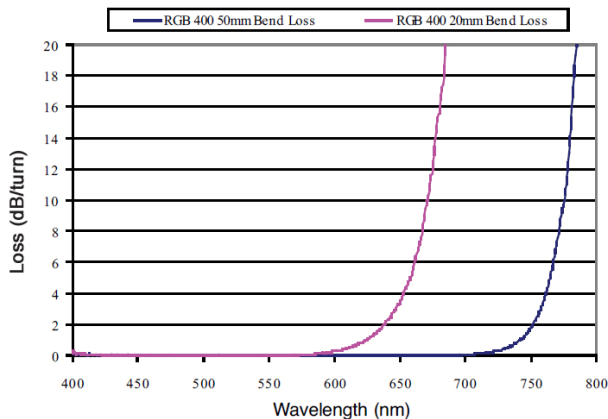


Figure 1

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

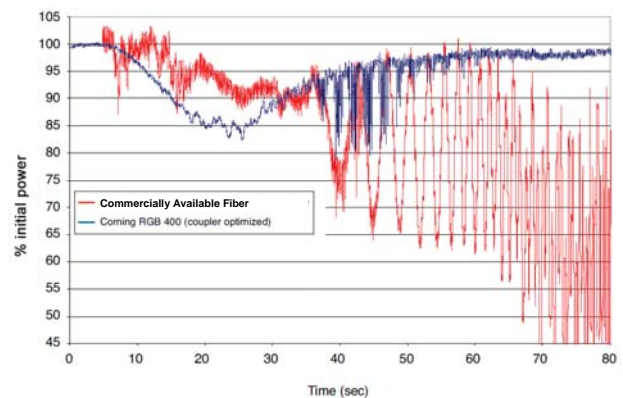


Figure 2

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 [www.corning.com/specialtyfiber](http://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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