



Corning RCBI Optical Fiber

Reduced-clad, bend-insensitive fiber

Specialty Optical Fibers

Corning understands the changing needs of the telecom industry. Fibers must have the capacity to reliably handle steadily increasing information at higher data rates, in an ever-decreasing footprint. Reducing the glass cladding diameter of a fiber can enable a significant step-change in package size. As module packages shrink in response to these changes, long lengths of fiber are deployed in permanently bent configurations, requiring consideration of the optical and mechanical impact of continuous, tightly wound coils. That is why we designed our new reduced-clad fiber specifically to be bend insensitive.

The new Corning RCBI optical fiber is the first reduced-clad fiber compatible with G.657 and G.652. This bend insensitive fiber features a thin cladding diameter of 80 microns. RCBI offers outstanding optical components with low attenuation, superior macrobending performance, and industry-leading geometry to continually pursue smaller packaging.

Applications

- [Ultra-compact components requiring small bend radii](#)

- [Photonic components in small package sizes](#)

- [WDM components](#)

- [Fiber array units](#)

- [Pigtail assemblies](#)

Key Optical Specifications

| Description | RCBI 1310 | RCBI 1550 |
|------------------------------------|------------|------------|
| Operating Wavelength (nm) | 1310, 1550 | 1550 |
| Fiber Cutoff Wavelength (nm) | ≤ 1260 | ≤ 1520 |
| Maximum Attenuation @ 1310 (dB/km) | 0.5 | N/A |
| Maximum Attenuation @ 1550 (dB/km) | 0.3 | 0.3 |
| Mode-Field Diameter @ 1310 (µm) | 8.6 ± 0.4 | N/A |
| Mode-Field Diameter @ 1550 (µm) | 9.65 ± 0.5 | 9.65 ± 0.5 |

Key Geometric, Mechanical, and Environmental Specifications

| | RCBI 1310 | RCBI 1550 |
|--|--|-----------|
| Cladding Outside Diameter (μm) | 80.5 \pm 0.5 | |
| Coating Outside Diameter (μm) | 165 \pm 10 | |
| Core-to-Cladding Concentricity (μm) | \leq 0.3 | |
| Proof Test (kpsi) | 200 | |
| Operating Temperature ($^{\circ}\text{C}$) | -60 $^{\circ}\text{C}$ to +85 $^{\circ}\text{C}$ | |
| Coating Type | UV Curable Acrylate | |
| Minimum Order Quantity (m) | 500 | |

Performance Characterizations

| | RCBI 1310 | RCBI 1550 |
|--|------------|------------|
| Recommended Minimum Bend Radius (mm) | 5 | 5 |
| Macrobend Loss @ 5 mm radius, dB/turn: | | |
| 1550 nm | \leq 0.3 | \leq 0.1 |
| 1625 nm | \leq 0.5 | \leq 0.3 |

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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