Hollow core Photonic Bandgap Fibers guide light in a hollow core, surrounded by a microstructured cladding of air holes and silica. Since only a small fraction of the light propagates in silica, the effect of material nonlinearities is insignificant and the fibers do not suffer from the same limitations on loss as conventional fibers made from solid material alone.

Applications
- Fiber optic gyroscopes
- Pulsed lasers (pulse delivery and/or compression)
- Gas spectroscopy
- Low latency communication
- Space laser communication

Physical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Core diameter</td>
<td>$10 \pm 1 \mu m$</td>
</tr>
<tr>
<td>Cladding pitch</td>
<td>$3.8 \pm 0.1 \mu m$</td>
</tr>
<tr>
<td>Diameter of PCF region</td>
<td>$70 \pm 5 \mu m$</td>
</tr>
<tr>
<td>Cladding diameter</td>
<td>$120 \pm 2 \mu m$</td>
</tr>
<tr>
<td>Coating diameter</td>
<td>$220 \pm 30 \mu m$</td>
</tr>
<tr>
<td>Coating material</td>
<td>Single layer acrylate</td>
</tr>
</tbody>
</table>

Optical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Design wavelength</td>
<td>1550 nm</td>
</tr>
<tr>
<td>Attenuation @ 1550 nm</td>
<td>&lt; 30 dB/km</td>
</tr>
<tr>
<td>Typical GVD @ 1550 nm</td>
<td>90 ps/nm/km</td>
</tr>
<tr>
<td>Operating wavelength$^{(1)}$</td>
<td>1490-1680 nm</td>
</tr>
<tr>
<td>Mode field diameter @ 1550 nm$^{(2)}$</td>
<td>$9 \pm 1 \mu m$</td>
</tr>
</tbody>
</table>

1. Over which the attenuation is < 30 dB/km
2. Full 1/e-width of the near field intensity distribution