For Bragg Grating

iXblue Photonics is offering 2 different types of Photosensitive Single Mode Fibers:

IXF-PHO-CMF and IXF-PHO-CMF-PM are designed to suppress the cladding modes losses (CMF Cladding Mode Free). The fibers have a mode field diameter similar to most standard SMF with a relatively low photosensitivity that can be enhanced with Hydrogen loading. Both Photosensitive fibers exhibit uniform and controlled photosensitivity to conventional UV radiation techniques. Similar fibers are available with polyimide coatings for harsh environment.

Key Features
- Excellent cladding mode suppression
- Mode field diameter matched to transmission

Applications cover
- Fiber Bragg gratings
- Gain flattening filters
- Broadband filters
- Temperature and strain sensor

Related Products
- Photosensitive active doped fibers
- Laser packaging and pigtailling
- Polyimide Fibers

IXF-PHO-CMS is designed to adapt the cladding mode offset (CMS Cladding Mode Shifted) in order to optimize the channel spacing. This fiber has very high germanium core concentration with low attenuation compared to exotic boron doped core fibers enabling high reflectivity gratings without hydrogen loading. CMS series will shift the cladding modes up to 9 nm.

Main Specifications
- Outside cladding diameter (µm): 125 +/- 2
- Coating diameter (µm): 245 +/- 15
- Core/Coat Conc Error (µm): < 15
- Proof Test Level (Kpsi): 100

IXF-PHO-CMF fiber

Cladding Modes Losses < 0.1 dB for - 35 dB saturated Bragg Grating

<table>
<thead>
<tr>
<th>Product Name</th>
<th>Core Diameter (µm)</th>
<th>Core NA</th>
<th>Attenuation @1550nm (dB/km)</th>
<th>Cut-off wavelength (nm)</th>
<th>MFD (µm)</th>
<th>Splice loss to SMF (dB)</th>
<th>Cladding Modes</th>
</tr>
</thead>
<tbody>
<tr>
<td>IXF-PHO-CMF</td>
<td>8.2</td>
<td>0.13</td>
<td>&lt; 0.5</td>
<td>&lt; 1400</td>
<td>10.5 +/- 1</td>
<td>&lt; 0.07</td>
<td>&lt; 0.2 dB for FBG &gt; 30 dB</td>
</tr>
<tr>
<td>IXF-PHO-CMF-PM</td>
<td>8.2</td>
<td>0.13</td>
<td>&lt; 0.5</td>
<td>&lt; 1450</td>
<td>10.5 +/- 1</td>
<td>&lt; 0.07</td>
<td>&lt; 0.2 dB for FBG &gt; 30 dB</td>
</tr>
<tr>
<td>IXF-PHO-CMSp</td>
<td>5</td>
<td>0.21</td>
<td>&lt; 2</td>
<td>&lt; 1450</td>
<td>6 +/- 1</td>
<td>&lt; 0.12</td>
<td>Shift up to 4 nm</td>
</tr>
<tr>
<td>IXF-PHO-CMS</td>
<td>2.8</td>
<td>0.37</td>
<td>&lt; 10</td>
<td>&lt; 1450</td>
<td>4 +/- 1</td>
<td>&lt; 0.25</td>
<td>Shift up to 9 nm</td>
</tr>
</tbody>
</table>

Common specifications
- Outside cladding diameter (µm): 125 +/- 2
- Coating diameter (µm): 245 +/- 15
- Core/Coat Conc Error (µm): < 15
- Proof Test Level (Kpsi): 100