**NOYES® OTDR Fiber Rings**

Measuring an insertion loss of the near-end and/or far-end connection of a fiber optic link with an OTDR requires a launch and/or receive test cable. A launch cable, which connects the OTDR to the link under test, reveals the insertion loss and reflectance of the near-end connection. A receive cable, which connects to the far-end of the link, reveals the insertion loss and reflectance of the far-end connection. Launch and receive test cables can range from 150 m to 1 km (or longer) in length. Because very long test cables are impractical to transport and use, Noyes offers coiled lengths of 50 mm multimode, 62.5 mm multimode, or single-mode fiber packaged in compact rings.

Fiber Rings of 150 m of fiber are ideal for premises fiber network test applications. Fiber Rings of 500 m and 1 km of single-mode fiber are designed for broadband, long-haul fiber network test applications.

### Fiber Ring Models

<table>
<thead>
<tr>
<th>CONFIGURATION</th>
<th>FIBER TYPE</th>
<th>FIBER LENGTH</th>
<th>AFL NO.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard, one fiber</td>
<td>Multimode, 50 mm</td>
<td>150 m (492 ft)</td>
<td>FR1-M5-150- x1- x2</td>
</tr>
<tr>
<td>Standard, one fiber, Laser Optimized</td>
<td>Multimode, 50 mm</td>
<td>150 m (492 ft)</td>
<td>FR1-L5-150-x1-x2</td>
</tr>
<tr>
<td>Standard, one fiber</td>
<td>Multimode, 62.5 mm</td>
<td>150 m (492 ft)</td>
<td>FR1-M6-150-x1-x2</td>
</tr>
<tr>
<td>Standard, one fiber</td>
<td>Single-mode</td>
<td>150 m (492 ft)</td>
<td>FR1-SM-150-y1-y2</td>
</tr>
<tr>
<td>Standard, one fiber</td>
<td>Single-mode</td>
<td>500 m (1640 ft)</td>
<td>FR1-SM-500-y1-y2</td>
</tr>
<tr>
<td>Standard, one fiber</td>
<td>Single-mode</td>
<td>1000 m (3280 ft)</td>
<td>FR1-SM-1000-y1-y2</td>
</tr>
<tr>
<td>MT-RJ near-end, A and B fibers</td>
<td>Multimode, 50 mm</td>
<td>150 m (492 ft)</td>
<td>FR3-M5-x1-MTRJ</td>
</tr>
<tr>
<td>MT-RJ near-end, A and B fibers</td>
<td>Multimode, 62.5 mm</td>
<td>150 m (492 ft)</td>
<td>FR3-M6-x1-MTRJ</td>
</tr>
<tr>
<td>MT-RJ near-end, A and B fibers</td>
<td>Single-mode</td>
<td>150 m (492 ft)</td>
<td>FR3-SM-x1-MTRJ</td>
</tr>
<tr>
<td>E2000 to ST, SC, FC, etc., one fiber</td>
<td>Multimode, 50 mm</td>
<td>150 m (492 ft)</td>
<td>FR1-M5-x1-E2000</td>
</tr>
<tr>
<td>E2000 to ST, SC, FC, etc., one fiber</td>
<td>Multimode, 62.5 mm</td>
<td>150 m (492 ft)</td>
<td>FR1-M6-x1-E2000</td>
</tr>
<tr>
<td>E2000 to ST, SC, FC, etc., one fiber</td>
<td>Single-mode</td>
<td>150 m (492 ft)</td>
<td>FR1-SM-x1-E2000</td>
</tr>
<tr>
<td>E2000 to E2000, one fiber</td>
<td>Multimode, 50 mm</td>
<td>150 m (492 ft)</td>
<td>FR1-M5-E2000-E2000</td>
</tr>
<tr>
<td>E2000 to E2000, one fiber</td>
<td>Multimode, 62.5 mm</td>
<td>150 m (492 ft)</td>
<td>FR1-M6-E2000-E2000</td>
</tr>
</tbody>
</table>

x1, x2 — connectors for multimode cables, specify type [ST, SC, ASC (angled SC), FC, AFC (angled FC), LC]
y1, y2 — connectors for single-mode cables, specify type [ST, SC, ASC (angled SC), FC, AFC (angled FC), LC]

Other connector types, fiber types, and fiber lengths will be quoted upon request.
**NOYES® OTDR Fiber Rings**

**How to Generate a Baseline Trace Using Fiber Rings**

- Use the Fiber Ring as a launch cable.
  Connect the Fiber Ring between your OTDR and the fiber link under test. This will allow you to measure the loss of the near-end connection.
- Use the Fiber Ring as a receive cable.
  Connect the Fiber Ring to the far-end connector of your fiber link under test. This will allow you to measure the loss of the far-end connection.
- By using Fiber Rings as both launch and receive cables, as shown in the diagram below, you can measure total insertion loss of the fiber link under test.

![Diagram of OTDR Fiber Rings Configuration](image)

**Example OTDR Test Configuration With Launch And Receive Cables.**

**OTDR Trace Made Using Launch And Receive Cables.**

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