

## Test & Inspection



FR1-M6-150-SC-ST



FR1-SM-1000-SC-ST



FR1-SM-150-SC-SC

### 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, AFL offers coiled lengths of 50  $\mu\text{m}$  multimode, 62.5  $\mu\text{m}$  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

CONFIGURATION	FIBER TYPE	FIBER LENGTH	AFL NO.
Standard, one fiber	Multimode, 50 $\mu\text{m}$ , OM2	150 m (492 ft)	FR1-M5-150- x1- x2
Standard, one fiber, Laser Optimized	Multimode, 50 $\mu\text{m}$ , OM3	150 m (492 ft)	FR1-OM3-150-x1-x2
Standard, one fiber, Laser Optimized	Multimode, 50 $\mu\text{m}$ , OM4	150 m (492 ft)	FR1-OM4-150-x1-x2
Standard, one fiber	Multimode, 62.5 $\mu\text{m}$	150 m (492 ft)	FR1-M6-150- x1- x2
Standard, one fiber	Single-mode	150 m (492 ft)	FR1-SM-150-y1-y2
Standard, one fiber	Single-mode	500 m (1640 ft)	FR1-SM-500-y1-y2
Standard, one fiber	Single-mode	1000 m (3280 ft)	FR1-SM-1000-y1-y2
Standard, one fiber, Bend Insensitive	Single-mode, G.657.A2 BIF	150 m (492 ft)	FR1-BIF-150-y1-y2
Standard, one fiber, Bend Insensitive	Single-mode, G.657.A2 BIF	500 m (1640 ft)	FR1-BIF-500-y1-y2
Standard, one fiber, Bend Insensitive	Single-mode, G.657.A2 BIF	1000 m (3280 ft)	FR1-BIF-1000-y1-y2

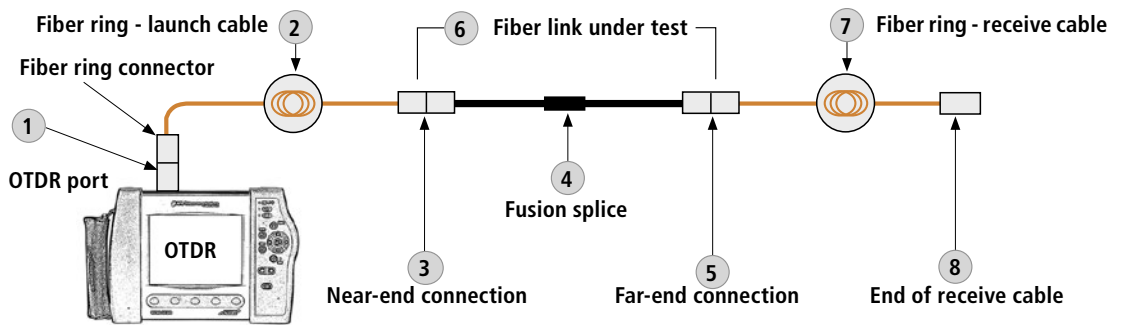
x1, x2 — connectors for multimode cables, specify type [ST, SC, ASC (angled SC), FC, AFC (angled FC), LC]  
y1, y2 — connectors for single-mode cables, specify type [ST, SC, ASC (angled SC), FC, AFC (angled FC), LC]  
Other connector types, fiber types, and fiber lengths will be quoted upon request.

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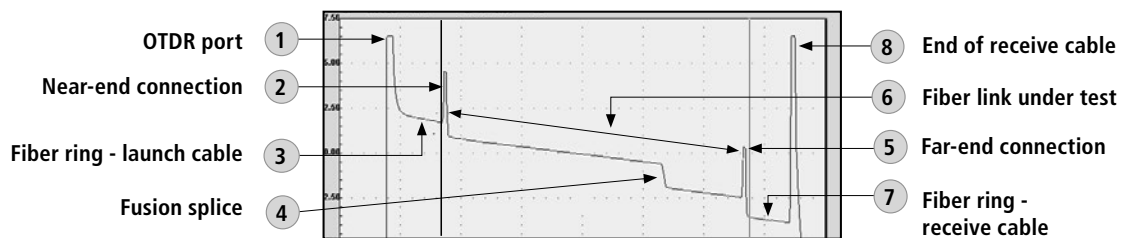
### OTDR Fiber Rings

#### 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.



Example OTDR Test Configuration with Launch and Receive Cables



OTDR Trace Made using Launch and Receive Cables

