

OTDR FIBRE RINGS

TEST & INSPECTION

PRODUCT OVERVIEW

Fibre Rings are often a necessity when testing with an OTDR or Optical Troubleshooter.

A launch cable, which connects the OTDR or Optical Troubleshooter 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 150m to 1km (or longer) in length. Because very long test cables are impractical to transport and use, AFL offers coiled lengths of 50 μ m multimode, 62.5 μ m multimode, or single-mode fibre packaged in compact rings.

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



Features

- Compact, rugged, lightweight
- 150, 500, and 1000m lengths standard
- Available with a variety of connector styles
- Compact! Fits easily in OTDR cases or kits

Applications

- Use to test link loss with an OTDR
- For use as OTDR launch cable
- For use as OTDR receive cable
- Measure insertion loss and reflectance of near- and far-end connections

Fiber Rings Part Number Order Entry

Single Fibre (SM or MM) Fibre Rings

AFL No. = FR-FFF-LLLL-CC1-CC2, where:

FR = Fibre Ring (single fibre)

FFF = Fibre Type

SMF = Single-mode (G.652)

BIF = Bend Insensitive (G.657)

OM1 = 62.5 µm multimode

OM2 = 50 µm multimode

OM3 = 50 µm laser optimised

OM4 = 50 µm laser optimised

LLLL = Fibre Length (meters)

150 = 150 m (492 ft)

500 = 500 m (1640 ft)

1000 = 1000 m (3280 ft)

CC1 = Connector Configuration OTDR end (see below)

CC2 = Connector Configuration Network end (see below)

MPO-terminated Multi-Fiber (SM or MM) Fibre Rings

AFL No. = FRM1-FF-LLLL-P-MC1-MC2, where:

FRM1 = MPO-terminated 12-fibre fibre ring

FF = Fibre Type

S2 = Standard single-mode (G.652)

M4 = OM4 50 µm laser optimised

LLLL = Fibre Length (meters)

61 = 61 m (200 ft)

P = Polarity

A = Type A polarity (straight through, fibre 1 to fibre 1)

B = Type B polarity (fibre 1 to fibre 12)

MC1, MC2 = MPO Connector (OTDR end and Network end, respectively)

AF = APC, female (unpinned)

AM = APC, male (pinned)

UF = UPC, female (unpinned)

UM = UPC, male (pinned)

Supported Single Fibre Single-mode Fibre Ring Configurations

Connector Type		Standard SMF Fibre Rings		Special Order SMF Fibre Rings ^a	
ID	Description	CC1	CC2	CC1	CC2
USC	SC/UPC	◆	◆		
ASC	SC/APC	◆	◆		
ULC	LC/UPC		◆	◆	◆
ALC	LC/APC		◆	◆	◆
UFC	FC/UPC		◆	◆	◆
AFC	FC/APC		◆	◆	◆
UST	ST/UPC		◆	◆	◆
UE2	E2000/UPC		Special Order ^a		◆
AE2	E2000/APC		Special Order ^a		◆
OTA	OptiTap APC		Special Order ^a		
TRD	TRIDENT APC		Special Order ^a		

Supported Single Fibre Multimode Fibre Ring Configurations

Connector Type		Standard SMF Fibre Rings		Special Order SMF Fibre Rings ^a	
ID	Description	CC1	CC2	CC1	CC2
USC	SC/UPC	◆	◆		
ULC	LC/UPC		◆	◆	◆
UFC	FC/UPC		◆	◆	◆
UST	ST/UPC		◆	◆	◆
UE2	E2000/UPC		Special Order ^a		

Ordering Information

Standard SMF Fibre Rings

Part Number	Description
FR-SMF-150-CC1-CC2	Fibre Ring, 150m, G.652 SMF, CC1-CC2
FR-SMF-500-CC1-CC2	Fibre Ring, 500m, G.652 SMF, CC1-CC2
FR-SMF-1000-CC1-CC2	Fibre Ring, 1000m, G.652 SMF, CC1-CC2

Special Order SMF Fibre Rings ^a

Part Number	Description
FR-SMF-150-CC1-CC2	Fibre Ring, 150m, G.652 SMF, CC1-CC2
FR-SMF-500-CC1-CC2	Fibre Ring, 500m, G.652 SMF, CC1-CC2
FR-SMF-1000-CC1-CC2	Fibre Ring, 1000m, G.652 SMF, CC1-CC2
FR-BIF-150-CC1-CC2	Fibre Ring, 150m, G.657.A2 BIF, CC1-CC2
FR-BIF-500-CC1-CC2	Fibre Ring, 500m, G.657.A2 BIF, CC1-CC2
FR-BIF-1000-CC1-CC2	Fibre Ring, 1000m, G.657.A2 BIF, CC1-CC2

Standard OM1, OM2, OM3, OM4 Multimode Fibre Rings

Part Number	Description
FR-OM1-150-CC1-CC2	Fibre Ring, 150m, OM1 (62.5 mm) MMF, CC1-CC2
FR-OM2-150-CC1-CC2	Fibre Ring, 150m, OM2 (50 mm) MMF, CC1-CC2
FR-OM3-150-CC1-CC2	Fibre Ring, 150m, OM3 (50 mm laser-optimized) MMF, CC1-CC2
FR-OM4-150-CC1-CC2	Fibre Ring, 150m, OM4 (50 mm laser-optimized) MMF, CC1-CC2

Special Order OM1, OM2, OM3, OM4 Multimode Fibre Rings ^a

Part Number	Description
FR-OM1-150-CC1-CC2	Fibre Ring, 150m, OM1 (62.5 mm) MMF, CC1-CC2
FR-OM2-150-CC1-CC2	Fibre Ring, 150m, OM2 (50 mm) MMF, CC1-CC2
FR-OM3-150-CC1-CC2	Fibre Ring, 150m, OM3 (50 mm laser-optimized) MMF, CC1-CC2
FR-OM4-150-CC1-CC2	Fibre Ring, 150m, OM4 (50 mm laser-optimized) MMF, CC1-CC2

Standard MPO-terminated Multi-fibre Single-mode and Multimode Fibre Rings ^b

Part Number	Description
FRM1-S2-61-A-AF-AF	MPO Fibre Ring, 61m (200 ft), G.652 SMF, Type A, APC unpinned to APC unpinned
FRM1-S2-61-A-AF-AM	MPO Fibre Ring, 61m (200 ft), G.652 SMF, Type A, APC unpinned to APC pinned
FRM1-M4-61-A-UF-UF	MPO Fibre Ring, 61m (200 ft), OM4 MMF, Type A, UPC unpinned to UPC unpinned
FRM1-M4-61-A-UF-UM	MPO Fibre Ring, 61m (200 ft), OM4 MMF, Type A, UPC unpinned to UPC pinned

Notes:

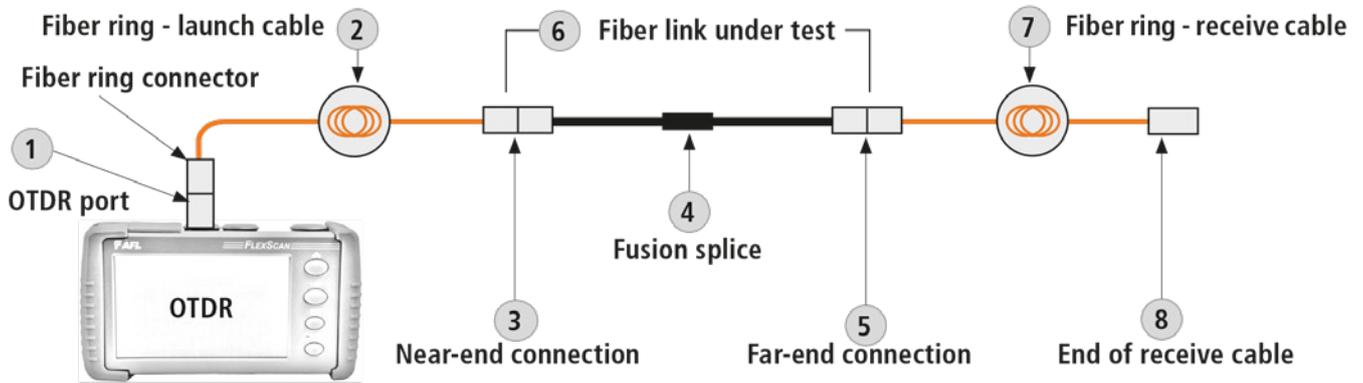
a. Contact AFL for special order fibre rings. Not all combinations of lengths and connectors are supported.

b. Contact AFL for other special order configurations of MPO-terminated multi-fibre single-mode or multimode fibre rings.

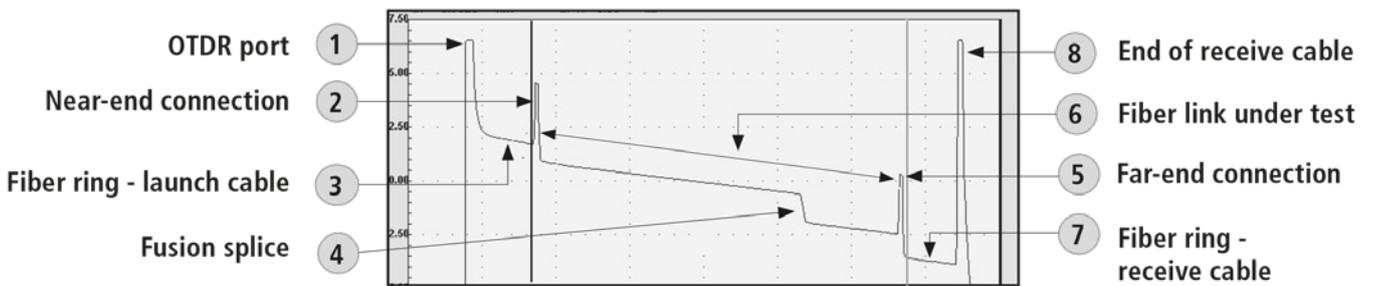
Operating

How to Generate a Baseline Trace Using Fibre Rings

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



Example OTDR Test Configuration with Launch and Receive Cables



OTDR Trace Made using Launch and Receive Cables