

# INTERNATIONAL SALES AND SERVICE CONTACT INFORMATION

International Contacts Europe, Middle East, Northern Africa

**Christian Kraemer** 

Sales Director

Christian.Kraemer@AFLglobal.com

+49 151 6171 6838

Australia Phil Wright

General Manager — Sales <a href="mailto:Phil.Wright@AFLglobal.com">Phil.Wright@AFLglobal.com</a>

Office: +61 7 3292 1400 Cell: +61 438 204 289

Miami, Central America, Latin America

Jaime Gallego

Regional Sales Manager
Jaime.Gallego@AFLglobal.com

Cell: +305-498-8057

Commercial Support Donald Allard

Commercial Manager

Donald.Allard@AFLglobal.com

+1 (603) 783-7175 Cell: +1 (603) 520-2454

Technical Support AFLtesttechsupport@AFLglobal.com

+1 (800) 235-3423 (Option 3)

Sales Support https://www.aflglobal.com/en/Contact/Product-Sales-Team

Sales@AFLglobal.com

+1 (800) 235-3423 (Option 4)

Purchase Orders, Quote, RMA SPBCustomerPO@AFLglobal.com

Service Request AFLEquipmentService@AFLglobal.com

Product Service Request Form +1-800-235-3423 (Option 2)

AFL Test & Inspection web <a href="https://www.AFLglobal.com/Test">www.AFLglobal.com/Test</a>

Warranty Activation www.AFLglobal.com/Register

AFL's Customer Portal - Direct content.AFLglobal.com/Direct.html

UK, Ireland, Netherlands, Southern Africa Ané Nel

Sales Director

Ane.Nel@AFLglobal.com +44 79082 70007

New Zealand Henk Schoeman Country Manager

Henk.Schoeman@AFLglobal.com

+64 9 927 7140 Cell: +621 0289 8548 Middle East Ahmed El Sakaty

Regional Sales Manager
Ahmed.ElSakaty@AFLglobal.com

+20 1006 451 523

©2000-2024, AFL, all rights reserved. Revision 2024-07-15 Specifications are subject to change without notice.



# **TABLE OF CONTENTS**

RELEASE HIGHLIGHTS	5
OTDRs & TROUBLESHOOTERS	6
OTDRs & Troubleshooters Selection Guide	6
FS300 Quad OTDR with SmartAuto® and LinkMap®	7
FlexScan FS300 Ordering Information	8
FS200 SMF OTDR with SmartAuto®, FleXpress® and LinkMap®	10
FlexScan FS200 Ordering Information	11
TS100 FTTH PON Troubleshooter	13
FlexScan TS100 Ordering Information	14
Optical Port Saver — Field-replaceable Connector Adapter	16
FlexScan Series Accessories and Connector Adapters	
MFS Multi-Fiber Switch OTDR Add-on Kit	
Custom-Designed Network Simulators	
FTTx PON Simulator Kits	
OTDR Launch and Receive/Tail Cords - Fiber Rings	
FASTConnect® for Bare Fiber Termination	
TJ-03 Temporary Splice	21
FIBER OPTIC INSPECTION	22
FOCIS Flex Fiber Optic Connector Inspection System	22
FOCIS Flex Connector Inspection Kits	
FOCIS Flex Accessories	23
FOCIS Series Inspection Adapter Tips	23
DFS1 Inspection Adapter Tips	24
FOCIS Lightning®2 Multi-Fiber Optic Connector Inspection System	ı25
FOCIS Lightning2 Connector Inspection Kits	26
FOCIS Lightning®2 / FOCIS Lightning Accessories	
FOCIS Lightning2 / FOCIS Lightning Adapter Tips	27
FIBER OPTIC CLEANING	28
Wall/Rack Mountable Field Portable Cleaning Kits	28
Field Portable Duffle Bag Cleaning Kits	
FCP3 Easy-Access Cleaning Kit	28

FCC2 Cleaning Fluid and CCT Cleaning Sticks	29
Cletop Cassette Cleaners	30
Cletop (ACT) Cleaning Sticks	30
One-Click® Cleaners	31
NEOCLEAN Fiber Connector Cleaning Tools	32
Optical Grade Cleaning Wipes	32
DPTICAL LOSS TESTING	33
ROGUE® OLTS Certifier	33
Mobile App for ROGUE OLTS Certifier	33
ROGUE® Hardware and Accessories	34
Connector Adapters for ROGUE Module Test Ports	34
Encircled Flux (EF) Reference Grade Test Cords	35
Multi-Fiber Switch Models	35
FlowScout® SE100 Single-Ended Test Set	36
FlowScout SE100 Accessories	37
1430 nm Wavelength Optical Reflector	37
FlowScout® Through-Mode PON Power Meter	38
FlowScout Included Accessories	38
FlowScout® OPM8 Optical Power Meter and OLS8 Optical Light Source	:e39
FlowScout® OPM8 Optical Power Meters	40
FlowScout OPM8 Kit Configuration - [KIT]	40
FlowScout OPM8 Included Accessories	40
FlowScout® OLS8 Optical Light Sources	4
FlowScout OLS8 Included Accessories	4
FlowScout® OLS8 and OPM8 Optical Loss Test Kits	42
FlowScout OPM8 and OLS8 Kit Configuration - [KIT]	42
FlowScout OPM8 and OLS8 Adapter Caps	42
Encircled Flux (EF) Compliant Test Kit and Light Source	43
Encircled Flux (EF) Reference Grade Test Cords	43
OLS AC Power Supply	
Optical Power Meters (OPM and CSM1 Series)	45
OPM Accessories	45
Optical Loss Test Kits (SLP, SMLP, and CK Series)	46



# **TABLE OF CONTENTS**

FIBER IDENTIFICATION	47
MFIS Multi-Fiber Identification System	47
MFIS Ordering	47
MFIS Accessories	47
OFI-BIPM & OFI-BIPMe Optical Fiber Identifiers	48
OFI-BIPM/-BIPMe Power Meter Port Adapters	49
OFI-200D and OFI-400 Optical Fiber Identifiers	49
OFI-200D and OFI-400 Accessories	49
VFI4 Visual Fault Identifiers	50
VFI4 Accessories	51
MT Tracer (12-fiber VFI and Display)	51
REPORTING SOFTWARE	52
FlexReporter Software Suite	[2
Tickhicporter Jortware Juite	
•	
TRM® 3 Test Results Manager	54
TRM® 3 Test Results Manager ADAPTER CAPS & ACCESSORIES	54 54
TRM® 3 Test Results Manager	54 54 54
TRM® 3 Test Results Manager  ADAPTER CAPS & ACCESSORIES  Adapter Caps for OPM Ports and OFS300-200  Adapter Caps for OFS300-200 Only	54 54 54
TRM® 3 Test Results Manager	54 54 54 55
TRM® 3 Test Results Manager	54 54 54 55 55
TRM® 3 Test Results Manager	
TRM® 3 Test Results Manager	

ACCESSORIES FOR DISCONTINUED PRODUCTS	56
CALIBRATION SERVICES	59
Calibration and Repair Facilities Extended Warranty Options	
TERMS & CONDITIONS	62
REVISION CHANGES HISTORY	63



# **RELEASE HIGHLIGHTS**



# FlowScout® OPM8 Optical Power Meters and OLS8 Light Sources

AFL's FlowScout OPM8 optical power meter and FlowScout OLS8 optical light source represent the next generation of smart optical power meters and optical light sources respectively. Designed on the legacy of the AFL/ Noyes OPM and OLS series, the FlowScout OPM8 and OLS8 provide rapid loss testing with pass/fail results for use in enterprise LAN, data center, PON, and broadband networks.

See section "FlowScout® OPM8 Optical Power Meter and OLS8 Optical Light Source", page 39.



# FlowScout SE100 Single-Ended Test Set

AFL's FlowScout SE100 is designed to verify fiber connectivity and measure insertion loss to the end of fibers terminated with a 1430 nm Wavelength Optical Reflector. It combines an optical light source and power meter into one, low-cost test set allowing single technician testing.

See section "FlowScout® SE100 Single-Ended Test Set", page 36.

AFL's 1430 nm Wavelength Optical Reflector uses Fiber Bragg Grating technology to provide a wavelength-specific point of reflectance that enables the FlowScout SE100 to verify fiber signal continuity and measure insertion loss.

See "1430 nm Wavelength Optical Reflector", page 37.

# **OTDRs & TROUBLESHOOTERS**

# **OTDRs & Troubleshooters Selection Guide**



	Point-	to-Point	Netwo	rks/Fibe	er Type		FT	Tx PO	N	(	OTDR/Troubles	TDR/Troubleshooter Performance							Integrated Peripherals					Reporting	
	MMF	/SMF		SMF				SMF																_	
Model	Data Center	LAN	Core	Metro	Access	Dark	Live	Test To Splitter	Test Through Splitter	Wavelengths (nm)	Dynamic Range (dB)	Dead Zone EDZ/ ADZ (m)	SmartAuto <sup>®</sup>	Expert & Real- time	LinkMap <sup>®</sup>	FleXpress <sup>®</sup>	Trace View	MPO Switch Control	OLS	Broadband OPM	Dual-\tau PON OPM	VFL	FlexReports	iOS & Android FlexApp	Inspection
FlexScan FS30	00 Quad	OTDR																							
FS300-325	<b>♦</b>	<b>♦</b>	<b>♦</b>	<b>♦</b>	<b>♦</b>	•		<b>♦</b>	<b>♦</b>	850/1300/1310/1550	29/29/37/35	0.5/3.5	•	<b>♦</b>	•		•	<b>♦</b>	<b>♦</b>	•		<b>♦</b>	<b>♦</b>	<b>♦</b>	•
FlexScan FS20	00 SM O	TDR																							
FS200-60				<b>♦</b>	<b>♦</b>	•	<b>♦</b>	•	<b>♦</b>	1650	37	0.8/3.6	•	<b>♦</b>	•		•	<b>♦</b>		•		•	•	<b>♦</b>	•
FS200-100				<b>♦</b>	<b>♦</b>	•		•		1310/1550	32/30	0.8/3.6	•	<b>♦</b>	•		•	<b>♦</b>	•	•		•	•	<b>♦</b>	•
FS200-300			<b>♦</b>	<b>♦</b>	<b>♦</b>	<b>♦</b>		•	<b>♦</b>	1310/1550	37/35	0.8/3.5	•	<b>♦</b>	<b>♦</b>	<b>♦</b>	<b>♦</b>	<b>♦</b>	•	•		<b>♦</b>	<b>♦</b>	<b>♦</b>	•
FS200-303			<b>*</b>	•	•	<b>♦</b>	•	<b>♦</b>	<b>♦</b>	1310/1550/1625	37/35/37	0.8/3.5	•	•	•	•	•	<b>*</b>	•	•		•	<b>♦</b>	<b>♦</b>	•
FS200-304			•	<b>♦</b>	•	•	•	<b>♦</b>	<b>♦</b>	1310/1550/1650	37/35/37	0.8/3.5	•	<b>♦</b>	•	<b>♦</b>	•	<b>♦</b>	•	<b>♦</b>		<b>•</b>	<b>♦</b>	<b>♦</b>	•
FlexScan TS10	00 Troub	leshoot	er																						
<u>TS100-60</u>					•	•	•	<b>♦</b>		1650	Note 'a'	Note 'b'	•		•	•			•	•	•	<b>♦</b>	<b>♦</b>	<b>♦</b>	•
<u>TS100-70</u>					•	•	•	•	•	1650	Note 'a'	Note 'b'	•		•	•			•	•	•	<b>♦</b>	<b>♦</b>	•	•

### Notes:

- a. See TS100 data sheet for measurement range specifications.
- b. See TS100 data sheet for event detection specifications.



# FS300 Quad OTDR with SmartAuto® and LinkMap®



All-in-one solution that automates test setup, shortens test time, and simplifies results interpretation!

Wavelengths: MM 850/1300, SM 1310/1550
 Network Type: Point-to-Point and PON up to 1:64
 Dynamic Range: MM ≥29/29 dB, SM ≥37/35 dB

• Event Dead Zone: ≤0.8 m

• Range Settings: MM 250 m to 30 km, SM 250 m to 240 km

• Data Points: Up to 300,000

• Internal Storage: 4 GB (>4000 traces)

The FlexScan FS300 OTDR enables both expert and novice technicians to quickly and accurately locate, identify and measure components and faults on either single-mode or multimode optical networks.

The pocket-sized FlexScan FS300 includes an integrated optical light source, power meter and visual fault locater (VFL). It can be easily coupled with AFL's award-winning FOCIS inspection probes or optical fiber identifiers (OFI) to give technicians everything they need to locate and resolve any optical network issues.

FlexScan SmartAuto tests utilize multi-pulse acquisition to obtain high-resolution without sacrificing measurement range. Test results are clearly displayed on the large 5-inch touchscreen with color-coded LinkMap® icons providing network configuration and pass/fail status at a glance.

Professional reports can be generated using either integrated Print-to-PDF or free Windows-compatible FlexReports Basic Test Results Manager software with 60-day reports trial or optional FlexReports Advanced with full reporting capability. Results can be transferred from FlexScan by USB cable or wirelessly using the free FlexApp (iOS or Android).







PC Software







FlexScan Basic Kit



FlexScan Plus Kir



FlexScan PRO Kit



FlexScan BIPM Kit



FlexScan MPO Kit

# FS300 Quad OTDR with SmartAuto® and LinkMap®

- Quad OTDR (850/1300 nm MM and 1310/1550 nm SM, including FTTH PON test)
- Larger, higher resolution display (5", 800 x 480)
- Gesture-recognition touchscreen (swipe-to-pan, pinch-to-zoom)
- Integrated Print-to-PDF
- · Auto-save and auto-send
- User-replaceable, longer life battery

FS300 is available in six kit configurations: Basic, PLUS, PRO, BIPM, SMPO, MMPO.

- All kits include FS300 with AC charger, battery, carry strap, SC/2.5 mm connector adapters, FlexReports SW, quick reference user guide, and carry case
- PLUS Kits add 150 m fiber rings and One-Click Cleaner
- PRO Kits additionally include a FOCIS Flex auto-focusing connector inspection probe

- with IEC pass/fail analysis and two adapter tips
- BIPM Kits expand on PRO Kits by adding a bend-insensitive fiber identifier with optical power meter
- SMPO Kits include FS300, single-mode MFS Switch, single-mode 150 m fiber ring (SC/APC to SC/APC), single-mode MPO launch cable (unpinned) to user-selected male (pinned) or female (unpinned) MPO connector, FlexReports Advanced, One-Click Cleaners (single-fiber and MPO), carry case that allows FlexScan, MFS Switch, and fiber rings to be connected, operated in the carry case and remain configured during transport
- MMPO Kits include FS300, multimode MFS Switch, OM3/4/5-compatible 150 m fiber ring (SC to SC), multimode MPO launch cable (unpinned) to user-selected male (pinned) or female (unpinned) MPO connector, FlexReports Advanced, One-Click Cleaners (single fiber and MPO), carry case that allows FlexScan, MFS Switch, and fiber rings to be connected, operated in the carry case and remain configured during transport

# FlexScan FS300 Ordering Information

		PON	OLS/	BT/			
AFL NO.	OTDR/OLS $\lambda$ (nm)	OTDR	ОРМ	Wi-Fi			
FS300-325-[Kit]-P0-W0	850/1300 MM; 1310/1550 SM	•					
FS300-325-[Kit]-P0-W1 <sup>(a)</sup>	850/1300 MM; 1310/1550 SM	<b>*</b>		<b>*</b>			
FS300-325-[Kit]-P1-W0	850/1300 MM; 1310/1550 SM	•	•				
FS300-325-[Kit]-P1-W <sup>(a)</sup>	850/1300 MM; 1310/1550 SM	<b>♦</b>	<b>*</b>	<b>*</b>			

# FlexScan FS300 Quad OTDR Kit Configuration - [KIT]

[KIT]	FS300 Kit Configuration / Kit Contents
BAS <sup>a</sup>	Includes: FS300, soft case, FlexReports Basic software with 60-day Advanced software trial , USB cable
PLUS	Includes: BAS Kit plus 150 m SMF & MMF fiber rings, One-Click Cleaner, upgrade to FlexReports Advanced, user-selected soft or hard carry case
PRO	Includes: PLUS Kit plus FOCIS Flex with two user-selected adapter tips
BIPM	Includes: PRO Kit plus OFI-BIPMe
SMPO	Includes: FS300, SMF MFS Multi-Fiber Switch, SMF 150 m fiber ring (SC/APC to SC/APC), SMF MPO launch cable (unpinned) to user-selected male (pinned) or female (unpinned) MPO connector, FlexReports Advanced, One-Click Cleaners (single-fiber and MPO), carry case that allows FlexScan, MFS Switch, and fiber rings to be connected, operated in the carry case and remain configured during transport
ММРО	Includes: FS300, MMF MFS Multi-Fiber Switch, OM3/4/5-compatible 150 m fiber ring (SC to SC), MMF MPO launch cable (unpinned) to user-selected male (pinned) or female (unpinned) MPO connector, FlexReports Advanced, One-Clickss (single fiber and MPO), carry case that allows FlexScan, MFS Switch, and fiber rings to be connected, operated in the carry case and remain configured during transport

### Notes:

a. Test results can be off-loaded via USB cable or transferred wirelessly to the FlexReporter-Cloud (W1 option) using the FlexApp (free iOS or Android) for future reports generation with FlexReports software. FlexReports Advanced provides batch-processing of test results and professional reports generation. FlexReports Basic provides result viewing and a 60-day trail of Advanced license. User can opt to upgrade FlexReports Basic to Advanced after purchase.

# FlexScan FS300 Accessories and Connector Adapters

See sections "FlexScan Series Accessories and Connector Adapters", page 17.



# FlexScan® FS300-325 Order Entry

FS300-325 Basic, Plus, PRO, BIPM Kits Order Entry: FS300-325-[KIT]-[Pn]-[Wn]-[C]-[CC]-[LNG]-[AC]-[SMFR]-[MMFR]-[TIP],

FS300-325 MPO Kits (SMF and MMF) Order Entry: FS300-325-[MKIT]-P1-[Wn]-[LNG]-[AC]-[MPOC], where:

BAS Includes: FS300, soft case, FlexReports Basic with 60-day Advanced license trial, USB cable <sup>(a)</sup> PLUS Includes: BAS Kit plus 150 m SMF & MMF Fiber Rings	
PLUS Includes: BAS Kit plus 150 m SMF & MMF Fiber Rings	
,	
One-Click Cleaner, upgrade to FlexReports Advanced,	
user-selected soft or hard carry case	
<b>PRO</b> Includes: PLUS Kit plus FOCIS Flex with two user-	
selected adapter tips	
BIPM Includes: PRO Kit plus OFI-BIPMe	
[MKIT] FS300-325 MPO Kit Configuration / Kit Conter	its
<b>SMPO</b> Single-mode MPO test Kit (see SMPO Kit details on	
preceding page)	
MMPO Multimode MPO test Kit (see MMPO Kit details on	
preceding page)	
[Pn] Light Source (OLS) & Optical Power Meter (OP	M)
PO No OLS, no OPM	
<b>P1</b> 850/1300 MM; 1310/1550 SM Source and Power Me	eter
[Wn] Bluetooth / Wi-Fi Configuration	
WO No Bluetooth or Wi-Fi	
W1 <sup>(b)</sup> Includes Wi-Fi and Bluetooth	
[C] OTDR / Source Connector Type	
A APC (recommended)	
U UPC	
<b>o</b>   Orc	
[CC] (c) Carry Case Option	
<b>S1</b> Large soft case for FlexScan, Fiber Rings, FOCIS Flex,	
OFI-BIPM, accessories (Plus, PRO, BIPM Kits only)	
Standard soft case for FlexScan, Fiber Rings, FOCIS Fl	ex,
accessories (Basic, Plus, PRO Kits only)	
H1 Hard carry case (Plus, PRO, BIPM Kits only)	

[LNG]	Language Option
ENG	English
CHS	Chinese Simplified
CHT	Chinese Traditional
CZE	Czech
DEU	German
DNK	Danish
FIN	Finnish
FRA	French
ITA	Italian

[LNG]	Language Option
JPN	Japanese
KOR	Korean
NOR	Norwegian
POL	Polish
POR	Portuguese
SPA	Spanish
TUR	Turkish
VNM	Vietnamese

[AC]	Destination Country	AC Plugs
US	USA	2-pin, US
EU	European Union	2-pin, EU
UK	United Kingdom	3-pin, UK
CN	China, Australia	2-pin, SAA

[MMFR]	150 m OM1 62.5 µm MMF Fiber Ring
Absent	N/A in Basic Kits
USC/UST1	FR-OM1-150-USC-UST
USC/USC1	FR-OM1-150-USC-USC
USC/ULC1	FR-OM1-150-USC-ULC
USC/UFC1	FR-OM1-150-USC-UFC

[MMFR] 150 m OM2 50 µm MMF Fiber Ring			
Absent	N/A in Basic Kits		
USC/UST2	FR-OM2-150-USC-UST		
USC/USC2	FR-OM2-150-USC-USC		
USC/ULC2	FR-OM2-150-USC-ULC		
USC/UFC2	FR-OM2-150-USC-UFC		

[MMFR]	150 m OM3/4/5 - Compatible Fiber Ring
Absent	N/A in Basic Kits
USC/UST3	FR-OM3-150-USC-UST
USC/USC3	FR-OM3-150-USC-USC
USC/ULC3	FR-OM3-150-USC-ULC
USC/UFC3	FR-OM3-150-USC-UFC

	1
[SMFR]	150 m SMF Fiber Ring
Absent	N/A in Basic Kits
USC/USC	FR-SMF-150-USC-USC
USC/UFC	FR-SMF-150-USC-UFC
USC/ULC	FR-SMF-150-USC-ULC
USC/UST	FR-SMF-150-USC-UST
USC/AFC	FR-SMF-150-USC-AFC
USC/ALC	FR-SMF-150-USC-ALC
USC/UE2	FR-SMF-150-USC-UE2
ASC/USC	FR-SMF-150-ASC-USC
ASC/UFC	FR-SMF-150-ASC-UFC
ASC/ULC	FR-SMF-150-ASC-ULC
ASC/UST	FR-SMF-150-ASC-UST
ASC/ASC	FR-SMF-150-ASC-ASC
ASC/AFC	FR-SMF-150-ASC-AFC
ASC/ALC	FR-SMF-150-ASC-ALC
ASC/AE2	FR-SMF-150-ASC-AE2

	FOCIS Flex Tips & Cleaning (PRO, BIPM Kits)					
[TIP]	Bulkhead Tip	Ferrule Tip	One-Click			
SC	SC/UPC	2.5 mm UPC	2.5 mm			
FC	FC/UPC	2.5 mm UPC	2.5 mm			
LC	LC/UPC	1.25 mm UPC	1.25 mm			
ASC	SC/APC	2.5 mm APC	2.5 mm			
AFC	FC/APC	2.5 mm APC	2.5 mm			
ALC	LC/APC	1.25 mm APC	1.25 mm			
Absent	Option not available in Basic and PLUS Kits					

[MPOC]	MPO Launch Cable Network Connector			
F	Female (unpinned) to Female (unpinned)			
M	Female (unpinned) to Male (pinned)			

### Notes:

- a. Test results can be off-loaded via USB cable or transferred wirelessly to the FlexReporter-Cloud (W1 option) using the FlexApp for future reports generation with FlexReports software.
- b. FlexScans equipped with Bluetooth option (W1) support Bluetooth transfer of results via FlexApp for remote reporting using FlexReports.
- c. Basic Kit always ships with S1 (Standard Soft Case); MPO Kit always ships with MPO-specific soft case..



# FS200 SMF OTDR with SmartAuto®, FleXpress® and LinkMap®



# Measure fiber attenuation and identify connectors, splices, cable ends & issues such as bends or breaks

- Wavelengths: 1, 2, or 3 (1310, 1550, 1625, 1650 nm)
- Network Type: Point-to-Point and/or FTTH PON
- Dynamic Range: Up to 37 dB
- Internal Storage: 4 GB (>4000 traces)
- Size: 86 x 160 x 43 mm; Weight: 0.4 kg
- Battery Life: >12 hours, Telcordia test conditions
- Display: Color touchscreen 4.3 in LCD
- Available with field-replaceable Port Saver
- USB, Bluetooth, and Wi-Fi interfaces

The FlexScan FS200 is a family of performance-packed single-mode OTDRs which provide fast, accurate fiber characterization and fault location for point-to-point and FTTH PON networks.

FlexScan FS200 OTDRs automate test setup, simplify results interpretation, and shorten test time, all at an affordable price point. AFL's SmartAuto® mode requires just the push of a button to test the network. Results are clearly displayed on the large touchscreen using color-coded LinkMap® icons that show network configuration and pass/fail status at a glance. Our new FleXpress® mode completes dual-wavelength tests in under 5 seconds — 10 x faster than other OTDRs!

The integrated light source, power meter and VFL, along with an optional connector inspection scope, provide both expert and novice technicians everything they need to locate and resolve optical network issues.

Results can be stored internally, saved to a USB, and uploaded via USB cable, Bluetooth (via FlexApp), or Wi-Fi (via FS200 Wi-Fi Link) for real-time reporting using AFL's free Windows-compatible FlexReports Basic Test Results Manager software with 60-day reports trial or optional FlexReports Advanced with full reporting capability.





FlexScan OTDR





**PC Software** 







FlexScan Basic Kit



FlexScan Plus Kit



FlexScan PRO Kit



FlexScan MPO Kit

# FS200 SMF OTDR with SmartAuto®, FleXpress® and LinkMap®

Combining SmartAuto network-optimized event detection and analysis with its intuitive LinkMap view of the tested network, AFL's FlexScan OTDRs enable even novice technicians to quickly and easily troubleshoot or fully characterize optical fiber networks. Have dozens of fibers to test? Reduce test time more than 10x, completing dual-wavelength OTDR tests in <5 seconds using new FleXpress fast test! For even faster testing, use FlexScan's new

integrated MPO switch control to automate multi-fiber testing.

FlexScans equipped with Bluetooth option (W1) support Bluetooth transfer of results via iOS or Android FlexApp for remote reporting using FlexReports. The FlexApp is available as a free download from 'iOS App Store' or 'Google play' store.

# FlexScan FS200 Ordering Information

FlexScan FS200 family offers the following models with integrated VFL, two USB ports plus optional source, power meter, Bluetooth® and Wi-Fi communications:

- FS200-60: 1650 nm Live PON Troubleshooting OTDR
- FS200-100: 1310/1550 Point-to-Point Verification and Troubleshooting OTDR
- FS200-300: 1310/1550 PON and Point-to-Point Verification and Troubleshooting OTDR with FleXpress and MPO Switch control
- FS200-303: 1310/1550/1625 PON and Point-to-Point Verification and Troubleshooting OTDR with FleXpress and MPO Switch control
- FS200-304: 1310/1550/1650 PON and Point-to-Point Verification and Troubleshooting OTDR with FleXpress and MPO Switch control

		PON	OTDR					
AFL NO.	OTDR/Source λ (nm)	Dark	Live	OLS/OPM	BT/Wi-Fi			
FS200-60-[Kit]-P1-W1	1650	<b>*</b>	•	•	<b>*</b>			
FS200-100-[Kit]-P0-W0	1310/1550							
FS200-100-[Kit]-P1-W1	1310/1550			•	•			
FS200-300-[Kit]-P0-W1	1310/1550	<b>*</b>			•			
FS200-300-[Kit]-P1-W1	1310/1550	<b>*</b>		•	•			
FS200-303-[Kit]-P1-W0	1310/1550/1625	<b>*</b>	•	•				
FS200-303-[Kit]-P1-W1	1310/1550/1625	•	•	•	<b>*</b>			
FS200-304-[Kit]-P0-W1	1310/1550/1650	<b>*</b>	<b>*</b>		<b>*</b>			
FS200-304-[Kit]-P1-W0	1310/1550/1650	•	•	•				
FS200-304-[Kit]-P1-W1	1310/1550/1650	<b>*</b>	•	•	<b>*</b>			

# FlexScan FS200 Kit Configuration - [KIT]

[KIT]	FS200 Kit Configuration / Kit Contents			
BAS (a)	Includes: FS200, FlexReports Basic software with 60-day Advanced software trial, USB cable, soft case			
PLUS	ncludes: BAS Kit plus 150 m SMF Fiber Ring, One-Click Cleaner, upgrade to FlexReports Advanced, soft or hard carry case			
PRO	Includes: PLUS Kit plus FOCIS Flex with two user-selected adapter tips			
FTTH-PRO	Includes: BAS Kit plus 150 m SC/APC and LC/APC Fiber Rings, FOCIS Flex plus SC/APC & LC/APC bulkhead and ferrule adapters, SC & LC One-Click Cleaners, Port Saver, FlexReports Advanced, soft or hard carry case (FS200-303/304 only)			
BIPM	Includes: PRO Kit plus OFI-BIPMe			
MPO	Includes: FS200, MFS Multi-Fiber Switch, MPO launch cable, OTDR-to-Switch launch cable, OTDR-to-Switch USB cable, FlexReports Advanced			

### Notes:

a. Test results can be off-loaded via USB cable or transferred wirelessly to the FlexReporter-Cloud (W1 option) using the FlexApp (free iOS or Android) for future reports generation with FlexReports software. FlexReports Advanced provides batch-processing of test results and professional reports generation. FlexReports Basic provides result viewing and a 60-day trail of Advanced license. User can opt to upgrade FlexReports Basic to Advanced after purchase.



# FlexScan® FS200 Order Entry

All kits include a FlexScan FS200 with AC charger, battery, carry strap, SC/2.5 mm connector adapters, FlexReports, USB cable, and carry case.

FS200-XXX-Basic, Plus, PRO, BIPM Kits Order Entry: FS200-[MOD]-[KIT]-[PW]-[C]-[CC]-[LNG]-[AC]-[FR]-[TIP]

FS200-XXX-MPO Kits Order Entry: FS200-[MOD]-MPO-P1-W1-[C]-[LNG]-[AC]-[MPOC]

FS200-303/304-FTTH-PRO Kits Order Entry: **FS200-[MOD]-FTTH-PRO-[CC]-[LNG]-[AC]**, where:

[MOD]	FS200 FlexScan OTDR Configuration		
60	1650 nm only Live PON Troubleshooting OTDR		
100	1310/1550 nm Verification & Troubleshooting OTDR		
300	1310/1550 nm Pt-to-Pt and PON Verification & Troubleshooting OTDF		
303	1310/1550/1625 nm Pt-to-Pt and PON Verification & Troubleshooting		
304	1310/1550/1650 nm Pt-to-Pt and PON Verification & Troubleshooting		

[KIT]	FS200 FlexScan Kit Configuration / Kit Contents
BAS	Includes: FS200, FlexReports Basic with 60-day Advanced license trial, USB cable (a), soft case
PLUS	Includes: BAS Kit plus 150 m SMF Fiber Rings, One-Click Cleaner, upgrade to FlexReports Advanced, soft or hard carry case
PRO	Includes: PLUS Kit plus FOCIS Flex with 2 user-selected adapter tips
FTTH-PRO	Includes: BAS Kit plus 150 m SC/APC and LC/APC Fiber Rings, FOCIS Flex plus SC/APC & LC/APC bulkhead and ferrule adapters, SC & LC One-Click Cleaners, Port Saver, FlexReports Advanced, soft or hard carry case (FS200-303/304 only)
BIPM	Includes: PRO Kit plus OFI-BIPMe
МРО	Includes: FS200, MFS Multi-Fiber Switch, MPO launch cable, OTDR-to-Switch launch cable, OTDR-to-Switch USB cable, FlexReports Advanced

[PW]	Power Meter / Wireless Option		
P0-W0	No Source, Power Meter, or Bluetooth/Wi-Fi (-100 only)		
P0-W1 <sup>b</sup>	No Source, Power Meter; Includes Bluetooth/Wi-Fi (-300/304)		
P1-W0	No Bluetooth/Wi-Fi (-303/304 only); Includes Source, Power Meter		
P1-W1 <sup>b</sup> Includes Source, Power Meter, Bluetooth/Wi-Fi			

[C]	OTDR / Source Connector Type	
Α	APC (recommended)	
U	UPC (available in all models except FS200-60)	

[CC] (c)	Carry Case Option (PLUS, PRO, FTTH-PRO, BIPM Kits)
<b>S1</b>	Large soft case for FS200, Fiber Ring, FOCIS Flex, OFI-BIPMe, accessories
<b>S2</b>	Medium soft case for FS200, Fiber Ring, FOCIS Flex, accessories
H1	Hard carry case for FS200, Fiber Ring, FOCIS Flex, OFI-BIPMe, accessories

[LNG]	Language Option
ENG	English
CHS	Chinese Simplified
CHT	Chinese Traditional
CZE	Czech
DEU	German
DNK	Danish
FIN	Finnish
FRA	French
ITA	Italian

[LNG]	Language Option
JPN	Japanese
KOR	Korean
NOR	Norwegian
POL	Polish
POR	Portuguese
SPA	Spanish
TUR	Turkish
VNM	Vietnamese

[AC]	<b>Destination Country</b>	AC Plugs
US	USA	2-pin, US
EU	European Union	2-pin, EU
UK	United Kingdom	3-pin, UK
CN	China, Australia	2-pin, SAA

[FR]d	150 m SMF Fiber Ring Configuration
Absent	N/A in Basic Kits
USC/USC	FR-SMF-150-USC-USC
USC/UFC	FR-SMF-150-USC-UFC
USC/ULC	FR-SMF-150-USC-ULC
USC/UST	FR-SMF-150-USC-UST
USC/AFC	FR-SMF-150-USC-AFC
USC/ALC	FR-SMF-150-USC-ALC
USC/UE2	FR-SMF-150-USC-UE2
ASC/USC	FR-SMF-150-ASC-USC
ASC/UFC	FR-SMF-150-ASC-UFC
ASC/ULC	FR-SMF-150-ASC-ULC
ASC/UST	FR-SMF-150-ASC-UST
ASC/ASC	FR-SMF-150-ASC-ASC
ASC/AFC	FR-SMF-150-ASC-AFC
ASC/ALC	FR-SMF-150-ASC-ALC
ASC/AE2	FR-SMF-150-ASC-AE2

	FOCIS Flex Tips & Cleaning (PRO only)			
[TIP]e	Bulkhead Tip	Ferrule Tip	One-Click	
SC	SC/UPC	2.5 mm UPC	2.5 mm	
FC	FC/UPC	2.5 mm UPC	2.5 mm	
LC	LC/UPC	1.25 mm UPC	1.25 mm	
ASC	SC/APC	2.5 mm APC	2.5 mm	
AFC	FC/APC	2.5 mm APC	2.5 mm	
ALC	LC/APC	1.25 mm APC	1.25 mm	
Absent	Option not available in Basic and PLUS Kits			

[MPOC]	MPO Launch Cable Network Connector
F	Female (unpinned) to Female (unpinned)
М	Female (unpinned) to Male (pinned)

### Notes:

- a. Results can be transferred from FlexScan OTDR to FlexReports using USB cable, or performed wirelessly (W1 option) after downloading free FlexApp. The FlexApp is available as a free download from 'Google play' or 'App Store'.
- FlexScans equipped with Bluetooth option (W1) support
   Bluetooth transfer of results via FlexApp for remote reporting using FlexReports.
- Basic Kit always ships with S2 (Medium Soft Case); MPO Kit always ships with MPO-specific soft case.

# FlexScan FS200 Accessories and Connector Adapters

See sections "FlexScan Series Accessories and Connector Adapters", page 17.



# **TS100 FTTH PON Troubleshooter**



Avoid extended downtime and additional truckrolls with the easy-to-use TS100 designed for frontline technicians

# **Specifications**

- Wavelengths: 1650 nm filtered live PON Troubleshooter
- Network Type: Point-to-Point and/or FTTH PON
- Integrated GPON/10GPON PON Power Meter
- Test Range: Up to 40 km
- Test Time: Length, Loss, ORL, faults to end or Splitter ≤3 sec
- Results Storage: 4 GB internal memory
- Size: 86 x 160 x 43 mm and weighs 0.4 kg
- Battery Life: >12 hours, Telcordia test conditions
- Display: 4.3 inch color touchscreen LCD
- Available with field-replaceable Port Saver

AFL's FlexScan TS100 is a family of pocket-sized optical troubleshooters for frontline service technicians to enable them to quickly verify or diagnose GPON, video and XG/XGS-PON or 10GFPON networks.

It features automated setup, ultra-fast fault location, and color-coded icons that enable even novices to diagnose and repair single-mode networks like experts.

TS100 measures downstream PON power, link length, loss, and ORL in under three seconds with the push of a button. Technicians then simply touch any failed measurements to get information on what to do about it.

Test results may be stored internally or externally and easily shared via USB or Bluetooth. AFL's free Windows-compatible FlexReports Basic Test Results Manager software with 60-day reports trial or optional FlexReports Advanced with full reporting capability quickly generates easy-to-understand reports.

Service providers, MSOs, and contractors love FlexScan TS100 because it automates testing, shortens test time, interprets results, and recommends corrective actions - improving the efficiency of their frontline technicians and reducing costs.





FlexScan TS100









**PC Software** 



FlexScan Basic Kit



FlexScan Plus Kit



# FlexScan® TS100 FTTH PON Troubleshooter

AFI's FlexScan TS100 Optical Troubleshooter is an easy-to-use, all-in-one tool for detecting, identifying, locating, and resolving single-mode optical network issues. The TS100 provides auto-configured settings to quickly measure received power, link length, loss, ORL and detect events with the push of a button. Results are displayed within seconds using color-coded LinkMap® icons for easy analysis. The FlexScan TS100 automates testing, shortens test time, interprets results, and recommends corrective actions, improving efficiency of frontline technicians and reducing costs.

Higher performance TS100-70 FlexScans can test through splitters up to 1:64, measure splitter loss and compare it to user-settable min/max loss limits, enabling technicians to detect dirty or damaged connections or macro-bends at the splitter.

The lower cost FlexScan TS100-60 will test to the splitter but not through the splitter. Consequently, it will not detect and report macro-bends or poor connections at the splitter which cause excess loss through the splitter.

TS100s are available with a field-replaceable connector, which accepts tool-free, interchangeable connector adapters. Users are able to replace the connector in the field if damaged when mating dirty or damaged connectors to the TS100. The field-replaceable connector also allows users to convert the Troubleshooter port from APC to UPC or vice versa.

# FlexScan TS100 Ordering Information

All TS100s include an integrated Light Source, Broadband and Dual-wavelength PON Power Meter, Visual Fault Locator (VFL), USB and optional Bluetooth interfaces. The Light Source generates CW, Wave ID and fiber-identifying tones, while the Power Meter automatically detects Wave ID and tones.

AFL NO.	Application	Test $\lambda$ (nm)	Power Meter		
TS100-60-P2	PON to Splitter & Point-to-Point	1650 nm filtered	Broadband + PON		
TS100-70-P2	PON through Splitter & Point-to-Point	1650 nm filtered	Broadband + PON		

# FlexScan TS100 Kit Configuration - [KIT]

All kits include selected FlexScan TS100 with AC charger, battery, carry strap, SC/2.5 mm connector adapters, FlexReports, USB cable, and soft carry case. PLUS Kits add a 150 m Fiber Ring, One-Click cleaner, and upgrade to FlexReports Advanced software. PRO Kits add a FOCIS Flex auto-focusing connector inspection probe with IEC pass/fail analysis and two adapter tips. TS100s are manufactured with APC connectors.

[KIT]	TS100 Kit Configuration / Kit Contents
BAS <sup>(a)</sup>	Includes: TS100, soft case, FlexReports Basic software with 60-day Advanced software trial, USB cable
PLUS	Includes: BAS Kit plus 150 m Fiber Ring, One-Click Cleaner, upgrade to FlexReports Advanced
PRO	Includes: PLUS Kit plus FOCIS Flex with 2 adapter tips

### Notes:

a. Test results can be off-loaded via USB cable or transferred wirelessly to the FlexReporter-Cloud using the FlexApp (free iOS or Android) for future reports generation with FlexReports software. FlexReports Advanced provides batch-processing of test results and professional reports generation. FlexReports Basic provides result viewing and a 60-day trail of Advanced license. User can opt to upgrade FlexReports Basic to Advanced after purchase.

# FlexScan TS100 Accessories and Connector Adapters

See sections "FlexScan Series Accessories and Connector Adapters", page 17.

# FlexScan® TS100 Order Entry

TS100-[MOD]-[KIT]-[Pn]-[Wn]-[LNG]-[AC]-[FR]-[TIP], where:

[1	MOD]	TS100 Configuration
6	0	1650 nm filtered Live PON Troubleshooter; Test to Splitter
7	0	1650 nm filtered Live PON Troubleshooter; Test through Splitter
[	KIT]	TS100 Kit Configuration/Kit Contents
B	AS	Includes: TS100, soft case, FlexReports Basic with 60-day Advanced license trial, USB cable (a)

[Pn	1]	Power Meter Option
PR	0	Includes: PLUS Kit plus FOCIS Flex with 2 adapter tips
PLU	US	Includes.: BAS Kit plus 150 m Fiber Ring, One-Click Cleaner, FlexReports Advanced
	_	

	[Pn]	Power Meter Option
	P2	Broadband Power Meter plus dual-wavelength PON Power Meter for GPON / Video / XG/XGS/10GE PON
ı		

[Wn]	Bluetooth Wireless Option
W0	Disabled
W1 (b)	Installed and enabled

[LNG]	Language Option
ENG	English
CHS	Chinese Simplified
CHT	Chinese Traditional
CZE	Czech
DEU	German
DNK	Danish
FIN	Finnish
FRA	French

[LNG]	Language Option			
ITA	Italian			
JPN	Japanese			
KOR	Korean			
NOR	Norwegian			
POL	Polish			
POR	Portuguese			
SPA	Spanish			
TUR	Turkish			

[AC]	Destination Country	AC Plugs
US	USA	2-pin, US
EU	European Union	2-pin, EU
UK	United Kingdom	3-pin, UK
CN	China, Australia	2-pin, SAA

[FR1]	150 m SMF Fiber Ring
Absent	N/A in Basic Kits
ASC/USC	FR-SMF-150-ASC-USC
ASC/UFC	FR-SMF-150-ASC-UFC
ASC/ULC	FR-SMF-150-ASC-ULC
ASC/UST	FR-SMF-150-ASC-UST
ASC/ASC	FR-SMF-150-ASC-ASC
ASC/AFC	FR-SMF-150-ASC-AFC
ASC/ALC	FR-SMF-150-ASC-ALC
ASC/AE2	FR-SMF-150-ASC-AE2

[TIP]	FOCIS Flex Tips & Cleaning (PRO only)
Blank	Option not available in Basic and PLUS Kits
SC	SC/UPC bulkhead tip, 2.5 mm UPC ferrule tip, 2.5 mm One-Click
FC	FC/UPC bulkhead tip, 2.5 mm UPC ferrule tip, 2.5 mm One-Click
LC	LC/UPC bulkhead tip, 1.25 mm UPC ferrule tip, 1.25 mm One-Click
ASC	SC/APC bulkhead tip, 2.5 mm APC ferrule tip, 2.5 mm One-Click
AFC	FC/APC bulkhead tip, 2.5 mm APC ferrule tip, 2.5 mm One-Click
ALC	LC/APC bulkhead tip, 1.25 mm APC ferrule tip, 1.25 mm One-Click

### Notes:

- a. Results can be transferred from FlexScan to FlexReports using USB cable, or uploaded via Bluetooth using FlexApp downloaded from 'iOS App Store' or 'Google play' store.
- b. FlexScans equipped with Bluetooth option (W1) support Bluetooth transfer of results via iOS or Android FlexApp for remote reporting using FlexReports.



# Optical Port Saver — Field-replaceable Connector Adapter



2900-58-0002MR









2900-58-0014MR

# **Color Bands Legend:**

Green = SMFAPC

Blue = SMF UPC

Pink = MMF UPC

### **Features**

- Prevents damage to factory-installed OTDR ferrules
- Allows damaged connectors to be replaced in the field
- Supports APC and UPC ferrules and connectors
- Available for single-mode and multimode OTDR ports
- Available for SMF and 50 µm MMF ports

AFL's Port Saver is a field-replaceable connector that protects FlexScan®-series OTDR's ferrule from damage due to repeated mating.

Protect your OTDR ports from damage due to mating with dirty or damaged launch cables, patch cords, or normal wear-and-tear. Equip your FlexScan FS200/ FS300 OTDRs or FlexScan TS100 Troubleshooter with a field-replaceable connector, which installs in seconds and accepts AFL's tool-free interchangeable SC, LC, FC, and ST connector adapters.

Replace damaged connectors in the field: When normal wear-and-tear or poor cleaning practices damage the Port Saver's end-face, replace it in seconds without having to return the OTDR to a service center for an expensive and time-consuming repair.

**Easy to install and cost-effective:** The Port Saver helps you avoid factory replacement of damaged ferrules caused by dirt and debris. Traditional repair time for factory OTDR ferrules can be over 1 week. With the Port Saver, you can simply swap out the damaged Port Saver in the field with a new one saving time and costly shipping charges to the factory. Its easy, quick, and you will be back to testing in about 2 minutes!



# **Optical Port Savers**



2900-58-0001MR



2900-58-0002MR



2900-58-0003MR



2900-58-0004MR



2900-58-0014MR



Fiber Ring, page 19

# FlexScan Series Accessories and Connector Adapters

		Com	patible \	Nith	
AFL NO.	Accessories   Description	FS200	FS300	TS100	
6000-00-0031MR	Cable, USB-micro B, 5 pin, 6 ft <sup>(a)</sup>	<b>♦</b>	<b>♦</b>	•	
4050-00-0931PR	AC charger 100-240 VAC to 5 VDC (specify [AC] option; see 'Order Entry')	<b>*</b>	<b>♦</b>	<b>•</b>	
1400-05-0230PZ	FlexScan wrist strap	<b>♦</b>	<b>♦</b>	•	
1400-05-0231PZ	FlexScan neck strap, 36"	<b>♦</b>	<b>♦</b>	•	
1400-01-0111PZ	Soft carry case for FS200/TS100 Kits with FOCIS Flex and Fiber Ring	•		•	
1400-20-0008PZ	Soft carry case for FS200/TS100 Kits with FOCIS Flex, OFI-BIPMe and Fiber Ring	<b>•</b>		•	
1400-01-0134PZ Hard carry case for FS200/TS100 Kits with FOCI Flex, OFI-BIPMe and Fiber Ring		<b>♦</b>		•	
1400-01-0182PZ	Soft Carry Case for FS200 MPO Kit	<b>♦</b>			
1400-20-0006PZ	Soft carry case for FS300 with FOCIS, OFI, Fiber Ring		•		
1400-01-0177PZ	Hard carry case for FS300 Kits with FOCIS, OFI and Fiber Ring		<b>•</b>		
1400-20-0001PZ	Soft Carry Case for FS300-325 MPO Kits		<b>♦</b>		
1400-20-0005PZ	Soft carry case for FS300 with FOCIS, & Fiber Ring		<b>♦</b>		
3900-06-0902MR	FS300 extended temperature replacement battery		<b>♦</b>		
4050-00-0935PR	Vehicle charger with USB to barrel adapter cable	<b>♦</b>	<b>♦</b>	•	
6000-00-0034PR	5V USB charging cable (1.5 m), type A to barrel (0.9 X 3.2 X 9 mm)	<b>♦</b>	•	•	
RPTS-UP-TRM3-1 FLexReports Advanced, one seat, Upgrade from TRM® 3 Advanced on USB. Users must have TRM-3 Advanced license		•	<b>*</b>	•	

**OFI-BIPMe** - See "OFI-BIPM & OFI-BIPMe Optical Fiber Identifiers", page 49

**FOCIS Flex** - See "FOCIS Flex Fiber Optic Connector Inspection System", page 22

**Fiber Rings** - Coiled lengths of multimode or single-mode fiber packaged in compact rings for use as OTDR test cords. See page 19

**Network Simulators** - Custom-designed bench top or rack mountable boxes intended to duplicate installed fiber optic networks. See page 18

TJ-03 Temporary Splice - See "TJ-03 Temporary Splice", page 21.

### Notes:

- a. Results can be transferred from FlexScan to FlexReports using USB cable, or performed wirelessly after downloading IOS or Android FlexApp from 'iOS App Store' or 'Google play' store.
- b. OTDR software updates are available for download on the <a href="https://www.AFLglobal.com">www.AFLglobal.com</a> -> Resources -> Software web page.

AFL NO.	Connector Adapters Description	Test Port	FS200	FS300	TS100	
2900-58-0001MR	FlexScan-facing APC female to APC male field- replaceable Port Saver SMF	OTDR/OLS	•	<b>•</b>	•	
2900-58-0002MR	FlexScan-facing APC female to UPC male field- replaceable Port Saver SMF	OTDR/OLS	•	<b>*</b>	•	
2900-58-0003MR	FlexScan-facing UPC female to APC male field- replaceable Port Saver SMF	OTDR/OLS	•	•	•	
2900-58-0004MR	FlexScan-facing UPC female to UPC male field- replaceable Port Saver SMF	OTDR/OLS	•	<b>*</b>	•	
2900-58-0014MR	FlexScan-facing UPC female to UPC male field- replaceable Port Saverr, 50 µm MMF	OTDR/OLS	•	<b>*</b>	•	
2900-50-0002MR	FC	OTDR/OLS	•	<b>*</b>	•	
2900-50-0003MR	SC	OTDR/OLS	<b>•</b>	◆ (incl)	•	
2900-50-0004MR	ST	OTDR/OLS	•	<b>*</b>	•	
2900-50-0006MR	LC	OTDR/OLS	•	<b>*</b>	<b>*</b>	
2900-50-0011MR	SC/APC	OTDR/OLS	◆ (incl)	◆ (incl)	◆ (incl)	
2900-52-0001MR	FC	OPM	<b>♦</b>	<b>♦</b>		
2900-52-0002MR	SC	OPM	•	<b>*</b>		
2900-52-0003MR	ST	OPM	<b>♦</b>	<b>♦</b>		
2900-52-0004MR	LC	OPM	•	<b>♦</b>		
2900-52-0005MR	2.5 mm Universal	OPM	◆ (incl)	◆ (incl)		
2900-52-0006MR	1.25 mm Universal	OPM	•	<b>♦</b>		
2900-53-0001MR	2.5 mm Universal	FS200 VFL	◆ (incl)		◆ (incl)	
2900-53-0002MR	1.25 mm Universal	FS200 VFL	•		<b>♦</b>	
2900-50-0007MR	2.5 mm Universal	FS300 VFL		◆ (incl)		
2900-50-0010MR	1.25 mm Universal	FS300 VFL		<b>♦</b>		



# MFS Multi-Fiber Switch OTDR Add-on Kit

Single-mode and multimode Multi-Fiber Switches (MFS) are available to accelerate OTDR testing of MPO-connectorized, multi-fiber cables. OTDR MFS Add-on Kits include (1) MFS with MPO connector, (1) single-fiber Fiber Ring to connect OTDR to the switch, plus (1) MPO Fiber Ring. Select single-mode or multimode. See "Multi-Fiber Switch Models", page 35 for details.

	Contains (ea.)				
AFL NO.	12F MFS Switch	Fiber Ring	MPO Fiber Ring		
MPO-SM-OTDR-ADD	MFS-12-SM-ASC, SM, SC/APC-MPO/APC pinned	SM, 150 m, SC-ASC or ASC-ASC (depending on OTDR connector)	12F, 61 m, MPO/APC- unpinned to MPO	Select pinned or unpinned	
MPO-MM-OTDR-ADD	MFS-12-MM-USC, MM, SC/UPC-MPO/UPC pinned	OM3/4/5-compatible, SC-SC, 150 m	12F, 61 m, MPO-unpinned to MPO;	network MPO connector	

# MFS Multi-Fiber Switch OTDR Add-on Kit Order Entry

Multimode OTDR Add-on Kit: MPO-MM-OTDR-ADD-[FRM] where:

**[FRM]** = multimode MPO fiber ring to connect MPO switch to multimode network under test

UF/UM = MPO/UPC unpinned to MPO/UPC pinned, Type A polarity

UF/UF = MPO/UPC unpinned to MPO/UPC unpinned, Type A polarity

Note: Multimode Add-on Kit always includes: 150 m, OM4, SC/UPC to SC/UPC fiber ring to connect multimode OTDR to multimode switch.

Single-mode OTDR Add-on Kit: MPO-SM-OTDR-ADD-[FR]-[FRM] where:

**[FR]** = single-mode fiber ring to connect OTDR to MPO Switch; Options:

USC/ASC = SC/UPC to SC/APC for FlexScan OTDRs equipped with SC/UPC single-mode connector

ASC/ASC = SC/APC to SC/APC for FlexScan OTDRs equipped with SC/APC connector

**[FRM]** = single-mode MPO fiber ring to connect MPO Switch to single-mode network under test

AF/AM = MPO/APC unpinned to MPO/APC pinned, Type A polarity

AF/AF = MPO/APC unpinned to MPO/APC unpinned, Type A polarity



NS Bench Top Model



NSR Rack-mountable Model



FTTx PON Simulator Kit

# **Custom-Designed Network Simulators**

AFL network simulators are custom-designed bench-top or rack mountable boxes intended to duplicate installed fiber optic networks. Network simulators may be ordered with customerspecified lengths of multimode or single-mode fiber. Events such as connections, fusion splices, and mechanical splices can be added at various points within the fiber to duplicate installed networks. A variety of changeable panel mounted connector types are available. The bench top models can accommodate up to 15 km of fiber and the rack mountable cases can hold up to 100 km of fiber.

# FTTx PON Simulator Kits

The FTTx PON Simulator Kit is designed to simulate a wide variety of FTTx PON architectures. It is field-configurable to implement both single splitter and distributed splitter PONs.

This field-portable kit may be used for lab or table-top FTTx PON demonstration, evaluation, and testing applications. The FTTx PON Simulator Kit is designed for a variety of users and applications, including network designers, fiber optic installation teams and trainers, equipment manufacturers, and sales engineers.

AFL NO.	Description	
PONS-00-0901PZ	Kit includes: (1) FTTx PON splitter box, (4) fiber rings, (3) SC/APC jumpers, (2) hybrid jumpers, (1) PON demo procedure, (1) carry case.	





Fiber Ring

# OTDR Launch and Receive/Tail Cords - Fiber Rings

To measure the insertion loss of the near-end and/or far-end connection of a fiber optic link, an OTDR requires a launch and/or receive/tail test cord, which essentially are test jumpers that can range from about 150 m to 1 km in length. AFL offers coiled lengths of 50 µm and 62.5 µm multimode, standard single-mode fiber (G.652) and bend-insensitive fiber (G.657), packaged in compact rings for use as OTDR test cords. 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 and FTTH applications when testing through a splitter.

# **Fiber Rings Part Number Order Entry**

# Single Fiber (SM or MM) Fiber Rings

AFL NO. = [FR]-[FFF]-[LLLL]-[CC1]-[CC2], where:

**[FR]** = Fiber Ring (single fiber)

**[FFF]** = Fiber Type

SMF= Single-mode (G.652)

BIF = Bend Insensitive (G.657)

 $OM1 = 62.5 \mu m multimode$ 

 $OM2 = 50 \mu m multimode$ 

 $OM3 = 50 \mu m$  laser optimized

 $OM4 = 50 \mu m$  laser optimized

[LLLL] = Fiber 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) Fiber Rings

AFL NO. = [FRM1]-[FF]-[LLLL]-[P]-[MC1]-[MC2], where:

**[FRM1]** = MPO-terminated 12-fiber fiber ring

**[FF]** = Fiber Type

S2 = Standard single-mode (G.652)

 $M4 = OM4 50 \mu m$  laser optimized

**[LLLL]** = Fiber Length (meters)

61 = 61 m (200 ft)

**[P]** = Polarity

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

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

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

AF = APC, female (unpinned)

AM = APC, male (pinned)

UF = UPC, female (unpinned)

UM = UPC, male (pinned)

# **Supported Single Fiber Multimode Fiber Ring Configurations**

Connector Type		Standard MM Fiber Rings		Special Order MM Fiber Rings (a)	
ID	Description	CC1	CC2	CC1	CC2
USC	SC/UPC	•	<b>♦</b>		
ULC	LC/UPC		<b>♦</b>	<b>*</b>	<b>*</b>
UFC	FC/UPC		<b>♦</b>	<b>*</b>	<b>*</b>
UST	ST/UPC		<b>♦</b>	<b>*</b>	<b>*</b>
UE2	E2000/UPC		Special Ordera		

### Notes:

- a. Contact AFL for special order fiber rings. Not all combinations of lengths and connectors are supported. Minimum Order Qty of 10.
- Contact AFL for other special order configurations of MPO-terminated multi-fiber single-mode or multimode fiber rings. Minimum Order Qty of 10.

# **Supported Single Fiber Single-mode Fiber Ring Configurations**

	Conne	ctor Type	Standard SI	M Fiber Rings	Special Order SM Fiber Rin	
	ID	Description	CC1	CC2	CC1	CC2
	USC	SC/UPC	<b>♦</b>	•		
	ASC	SC/APC	<b>♦</b>	<b>♦</b>		
	ULC	LC/UPC		<b>♦</b>	<b>*</b>	<b>•</b>
ı.	ALC	LC/APC		<b>•</b>	<b>*</b>	<b>*</b>
	UFC	FC/UPC		•	<b>•</b>	<b>♦</b>
	AFC	FC/APC		<b>•</b>	<b>•</b>	<b>•</b>
	UST	ST/UPC		<b>•</b>	<b>•</b>	<b>♦</b>
	UE2	E2000/UPC		Special Order <sup>a</sup>		<b>*</b>
	AE2	E2000/APC		Special Ordera		<b>•</b>
	OTA	OptiTap APC		Special Order <sup>a</sup>		

# **Fiber Rings Ordering Information**

# **Standard SMF Fiber Rings**

AFL NO.	Description	Price
FR-SMF-150-CC1-CC2	Fiber Ring, 150 m, G.652 SMF, CC1-CC2	
FR-SMF-500-CC1-CC2	Fiber Ring, 500 m, G.652 SMF, CC1-CC2	
FR-SMF-1000-CC1-CC2	Fiber Ring, 1000 m, G.652 SMF, CC1-CC2	

# Special Order SMF Fiber Rings<sup>a</sup>

AFL NO. Description			
FR-SMF-150-CC1-CC2	C1-CC2 Fiber Ring, 150 m, G.652 SMF, CC1-CC2		
FR-SMF-500-CC1-CC2	Fiber Ring, 500 m, G.652 SMF, CC1-CC2		
FR-SMF-1000-CC1-CC2	Fiber Ring, 1000 m, G.652 SMF, CC1-CC2		
FR-BIF-150-CC1-CC2	Fiber Ring, 150 m, G.657.A2 BIF, CC1-CC2		
FR-BIF-500-CC1-CC2	Fiber Ring, 500 m, G.657.A2 BIF, CC1-CC2		
FR-BIF-1000-CC1-CC2	Fiber Ring, 1000 m, G.657.A2 BIF, CC1-CC2		

# Standard OM1, OM2, OM3, OM4 Multimode Fiber Rings

AFL NO. Description		
FR-OM1-150-CC1-CC2	Fiber Ring, 150 m, OM1 (62.5 mm) MMF, CC1-CC2	
FR-OM2-150-CC1-CC2	Fiber Ring, 150 m, OM2 (50 mm) MMF, CC1-CC2	
FR-OM3-150-CC1-CC2	Fiber Ring, 150 m, OM3 (50 mm laser-optimized) MMF, CC1-CC2	
FR-OM4-150-CC1-CC2	Fiber Ring, 150 m, OM4 (50 mm laser-optimized) MMF, CC1-CC2	

# Special Order OM1, OM2, OM3, OM4 Multimode Fiber Rings<sup>a</sup>

AFL NO.	Description	Price
FR-OM1-150-CC1-CC2	Fiber Ring, 150 m, OM1 (62.5 mm) MMF, CC1-CC2	
FR-OM2-150-CC1-CC2	Fiber Ring, 150 m, OM2 (50 mm) MMF, CC1-CC2	
FR-OM3-150-CC1-CC2	Fiber Ring, 150 m, OM3 (50 mm laser-optimized) MMF, CC1-CC2	
FR-OM4-150-CC1-CC2	Fiber Ring, 150 m, OM4 (50 mm laser-optimized) MMF, CC1-CC2	

# Standard MPO-terminated Multi-fiber Single-mode and Multimode Fiber Rings<sup>b</sup>

AFL NO.	Description	Price
FRM1-S2-61-A-AF-AF	MPO Fiber Ring, 61 m (200 ft), G.652 SMF, Type A, APC unpinned to APC unpinned	
FRM1-S2-61-A-AF-AM	MPO Fiber Ring, 61 m (200 ft), G.652 SMF, Type A, APC unpinned to APC pinned	
FRM1-M4-61-A-UF-UF	MPO Fiber Ring, 61 m (200 ft), OM4 MMF, Type A, UPC unpinned to UPC unpinned	
FRM1-M4-61-A-UF-UM	MPO Fiber Ring, 61 m (200 ft), OM4 MMF, Type A, UPC unpinned to UPC pinned	

## Notes:

- a. Contact AFL for special order fiber rings. Not all combinations of lengths and connectors are supported. Minimum Order Qty of 10.
- b. Contact AFL for other special order configurations of MPO-terminated multi-fiber single-mode or multimode fiber rings. Minimum Order Qty of 10.



### **FAST**Connect®

# **FASTConnect® for Bare Fiber Termination**



Suitable for either permanent connection or as a bare fiber termination for OTDR testing, FASTConnect connectors may be used to terminate single-mode or multimode fiber (OM1, OM2, OM3/4-compatible) with SC, SC/APC, LC, ST connectors. Termination requires simple, familiar strip, clean, and cleave process. Each FASTConnect adapter may be reused up to 3 times.

# FASTConnect Order Entry: FAST-[C]-[FT]-[Q] where:

[C]	Connector Type
SC	SC/UPC for 900 µm buffered fiber
ST	ST/UPC for 900 µm buffered fiber
LC	LC/UPC for 900 µm buffered fiber
SC48	SC/APC for 4.8 mm single-mode cable

[FT]	Fiber Type
MM50	50 μm OM2, UPC ferrule
MM50L	50 μm OM3/4-compatible, UPC ferrule
MM62.5	62.5 μm OM1, UPC ferrule
SM	Single-mode, UPC end
SMAU	Single-mode, APC ferrule with flat-cleaved fiber stub (SC48 only)

[Q]	Quantity
6	Package of 6
100	Package of 100

# **FASTConnect Ordering**

		[Q]TY 6 price for [C]onnector		[Q]TY 100 price for [C]onnector			
AFL NO.	Description	SC	LC	ST	SC	LC	ST
FAST-[C]-MM50-[Q]	50 μm OM2, UPC ferrule						
FAST-[C]-MM50L-[Q]	50 μm OM3/4-compatible, UPC ferrule						
FAST-[C]-MM62.5-[Q]	62.5 μm OM1, UPC ferrule						
FAST-[C]-SM-[Q]	Single-mode, UPC ferrule						
FAST-[C]-SMAU-[Q]	Single-mode, APC ferrule with flat-cleaved fiber stub						



TJ-03 Temporary Splice

# **TJ-03 Temporary Splice**

### Only available to customers in North America!

The TJ-03 is a temporary mechanical fiber splice for fiber and cable connections to test equipment such as OTDRs or fiber optic cable reels. The TJ-03 uses a precision ceramic V-groove to align up to 12 fibers simultaneously. The fibers are prepared for joining by using standard mass fusion fiber preparation tools (fiber holders, hot jacket stripper, and cleaver.) Using the TJ-03 with an OTDR equipped with an optical switch provides rapid one button optical tests of 12 fibers.

AFL NO.	Description	
S012772	TJ-03 Temporary Splice Kit includes: (1 pair) FH-50-12 fiber holders, CT-30 cleaver, HJS-02 hot jacket stripper, ADC-09 AC adapter for HJS-02, ACC-09 power cord	
S010456	TJ-03 Temporary Splice (without fiber preparation tools)	



# **FIBER OPTIC INSPECTION**

# **FOCIS Flex Fiber Optic Connector Inspection System**

FOCIS Flex is self-contained fiber connector inspection probe. Its innovative, ultrafast auto-focusing system auto-centers, captures and analyzes the optical fiber end-face, displaying "Pass/ Fail" results on the built-in screen in one push of a button. Results can be transferred wirelessly to smart devices or FlexScan® OTDRs. The FOCIS Flex offers built-in pass/fail analysis to updated IEC 61300-3-35, IPC, AT&T or user set criteria. The device can also be used for OptiTap and MTP/MPO inspections with AFL adapters. AFL's free Windows-compatible FlexReports Basic Test Results Manager software with a 60-day reports trial or optional FlexReports Advanced with full reporting capability guickly generates easy-to-understand connector inspection reports including images and pass/fail results. Free FlexApp (iOS and Android) supports inspection reporting and FlexReports provides comprehensive reporting capabilities for single-fiber inspection results. FOCIS Flex is available in a 'No Wireless' [NW] variant, which removes the Bluetooth and Wi-Fi functionality for use in RF restricted facilities.

# **FOCIS Flex Connector Inspection Kits**

Each FOCIS Flex Kit includes: FOCIS Flex probe with wrist strap and dust cap, FlexReports-Basic software with 60-day reporting trial, AC charger with country-specific plug, USB cable, quick reference guide, and soft carry case with strap.

					Des	cription				
	Contains (ea.)								Functionality	
			UPC	Tips	APC	Tips				
AFL NO.	FOCIS Flex	AC Charger	Bulkhead	Ferrule	Bulkhead	Ferrule	One-Click Cleaner	Soft Carry Case	BT/Wi-Fi	
FOCIS-FLX-P4XN	1	1						1	<b>•</b>	
FOCIS-FLX-P4XU	1	1	1	1			1	1	<b>•</b>	
FOCIS-FLX-P4XA	1	1			1	1	1	1	<b>*</b>	
FOCIS-FLX-P4XUA	1	1	1	1	1	1	1	1	<b>*</b>	
FOCIS-FLX-NW-P4XN	1	1						1		
FOCIS-FLX-NW-P4XU	1	1	1	1			1	1		
FOCIS-FLX-NW-P4XA	1	1			1	1	1	1		
RPTS-UP-KITS-1	Software: Fle	Software: FlexReports Advanced. Provides Professional Test Reports for use with AFL instruments. For use only at time of purchase with any kit.								

# FOCIS Flex Order Entry - FOCIS-FLX-[NW]-P4X[K]-[PLUG]-[TIP], where:

[NW]	Wireless Option				
Absent	Includes wireless				
NW	No Wireless				
[K]	Kit Type				
N	No adapter tips				
U	UPC adapter tips				
Α	APC adapter tips				
UA	UPC and APC adapter tips				
[PLUG]	Country-specific AC power plug				
US	United States				
UK	United Kingdom				
EU	European Union				
CN	China, Australia				

Kit Type [K]	[TIP]	Bulkhead Adapter Tips	Tip ID	Ferrule Adapter Tips	Tip ID	One-Click Cleaner
	SC	SC/UPC	SC	Universal 2.5 mm UPC	U25	2.5 mm
U	FC	FC/UPC	FC	Universal 2.5 mm UPC	U25	2.5 mm
ľ	ST	ST/UPC	ST	Universal 2.5 mm UPC	U25	2.5 mm
	LC	LC/UPC	LC	Universal 1.25 mm UPC	U125	1.25 mm
	SC	SC/APC	XASC	Universal 2.5 mm APC	A25	2.5 mm
Α	FC	FC/APC	XAFC	Universal 2.5 mm APC	A25	2.5 mm
	LC	LC/APC	XALC	Universal 1.25 mm APC	A125	1.25 mm
	sc	SC/UPC	SC	Universal 2.5 mm UPC	U25	2.5 mm
		SC/APC	XASC	Universal 2.5 mm APC	A25	2.5
UA	FC	FC/UPC	FC	Universal 2.5 mm UPC	U25	2.5 mm
UA	FC	FC/APC	XAFC	Universal 2.5 mm APC	A25	2.3 111111
	LC	LC/UPC	LC	Universal 1.25 mm UPC	U125	1.25 mm
	LC	LC/APC	XALC	Universal 1.25 mm APC	A125	1.23 111111

**User-selected Adapter Tips and One-Click Cleaner** 











**PC Software** 



FlexScan® & FOCIS Flex



Smart Device & FOCIS Flex



6000-00-0034PR



1410-02-0228PZ



FFLX-01-SC



FFLX-4S-ALC



FFLX-01-ULCE

# **FOCIS Flex Accessories**

AFL NO.	Description	
1400-01-0107MZ	Soft carry case with strap	
1400-05-0230PZ	Wrist strap	
3900-04-0008ME	Battery, 3.6V, NiMH, rechargeable	
4050-00-0931PR	FOCIS Flex2 AC charger. Select power plug option [PLUG] when ordering (see "FOCIS Flex Order Entry", page 22).	
4050-00-0030USMR	US power plug for AC charger	
4050-00-0030UKMR	UK power plug for AC charger	
4050-00-0030EUMR	EU power plug for AC charger	
4050-00-0030SAAMR	CN power plug for AC charger	
6000-00-0031MR	USB — Micro-B cable, 5 pin, 6'	
8800-02-0074MZ	Dust cap for the Inspection Port	
4050-00-0935PR	Vehicle charger, 12 VDC to 5 VDC @2A	
6000-00-0034PR	5V USB charging cable (1.5 m), type A to barrel (0.9 x 3.2 x 9 mm)	
1410-02-0228PZ	Rubber boot for FOCIS Flex, FOCIS Lightning, FOCIS Duel	

# **FOCIS Series Inspection Adapter Tips**

Inspection Adapter Tips for FOCIS Duel Port 1, FOCIS Flex, and FOCIS WiFi2

AFL NO.	Description	Tip ID	
FFLX-01-SC	SC/UPC bulkhead	SC	
FFLX-01-FC	FC/UPC bulkhead	FC	
FFLX-01-ST	ST/UPC bulkhead	ST	
FFLX-01-LC	LC/UPC bulkhead	LC	
FFLX-01-U25	Universal 2.5 mm, UPC ferrule	U25	
FFLX-01-A25	Universal 2.5 mm, APC ferrule	A25	
FFLX-01-U125	Universal 1.25 mm, UPC ferrule	U125	
FFLX-01-A125	Universal 1.25 mm, APC ferrule	A125	
FFLX-01-ULCE	Extended LC UPC adapter tip	ULCE	
FFLX-01-EXTS46	FOCIS adapter extension tube, straight, 46 mm		
FFLX-01-EXTS80	FOCIS adapter extension tube, straight, 80 mm		
FFLX-4S-ASC	SC/APC bulkhead adapter tip, quad-slotted	XASC	

AFL NO.	Description	Tip ID	
FFLX-4S-AFC	FC/APC bulkhead adapter tip, quad-slotted	XAFC	
FFLX-4S-ALC	LC/APC bulkhead adapter tip, quad-slotted, internal prism	XALC	
FFLX-4S-ALC3	Extended LC APC bulkhead adapter tip, quad-slotted	ALC3	
FFLX-4S-E2K	E2000/PC bulkhead adapter tip, quad-slotted (~60 mm)	E2K	
FFLX-4S-AE2K	E2000/APC bulkhead adapter tip	AE2K	
FFLX-4S-OTA	OptiTap (SC/APC) bulkhead adapter tip, quad-slotted	OTA	
FFLX-4S-DCU	MDC/UPC adapter tip, quad-slotted	DCU	
FFLX-4S-SNU	SN/UPC adapter tip, quad-slotted	SNU	
FFLX-4S-DCA	MDC/APC adapter tip, quad-slotted	DCA	
FFLX-4S-LC6U	NG4 UPC bulkhead adapter	LC6U	
FFLX-4S-LC6A	NG4 APC bulkhead adapter	LC6A	
FFLX-4S-EVA	Evolv Bulkhead Adapter Tip, Quad-Slotted	EVA	



DFS1-00-0001MR



DFS1-00-0002MR



DFS1-00-0003MR



DFS1-00-0062MR



DFS1-00-0060MR



DFS1-00-0041MR



DFS1-00-0050MR

# **DFS1 Inspection Adapter Tips**

AFL NO.	Description	Tip ID	
PC Ferrule Connecto	•	ן טוקוון	
DFS1-00-0001MR	Universal 1.25 mm	U125	
DFS1-00-0002MR	Universal 2.5 mm	U25	
DFS1-00-0005MR	Universal 2.0 mm	U20	
DFS1-00-0006MR	Universal 1.6 mm (for termini)	T16M	
DFS1-00-0008MR	ELIO 1.25 mm	E12M	
DFS1-00-0009MR	SMA 905	SMA	
DFS1-00-0038MR	Slim 1.25 mm (for LuxCis and termini)	T12M	
DFS1-00-0039MR	Slim 2.5 mm (for ELIO and termini)	T25M	
SC/PC and FC/PC Bu	lkhead Adapter Tips		
DFS1-00-0003MR	SC/PC and FC/PC	FS	
DFS1-00-0012MR	Long (~150 mm) extended tip for SC/PC and FC/PC bulkhead adapter	FS	
DFS1-00-0013MR	60° angled tip for SC/PC and FC/PC bulkhead adapter	FS, A6A	
LC/PC/UPC Bulkhead	Adapter Tips		
DFS1-00-0022MR	60° angled tip for LC/PC bulkhead adapter	LC, A6	
DFS1-00-0059MR	Short (~60 mm) extended tip for LC PC/UPC bulkhead	LCP-S	
DFS1-00-0062MR	LC/UPC female style adapter tip	LCM	
ODC Bulkhead Adap	•		
DFS1-00-0065MR	Guide and socket tip for ODC-2 bulkhead connectors	ODC-2	
DFS1-00-0066MR	Guide and socket tip for QODC-2 bulkhead connectors	Q-ODC-2	
DFS1-00-0067MR	Guide and socket tip for ODC-4 bulkhead connectors	ODC-4	
MU/PC Bulkhead Ad	lapter Tip		
DFS1-00-0026MR	MU/PC bulkhead adapter tip	MU	
MTP/MPO Multi-fibe	er Adapter Tips (ferrule and bulkhead)		
DFS1-00-0060MR	Multi-row base for MTP/PC ferrule and bulkhead adapter extended tip	MTP (a), (b)	
DFS1-00-0041MR	Adapter tip for MPO-12 PC bulkhead; Requires single- or multi-row base	MTP (b)	
DFS1-00-0058MR	Adapter tip for MPO-16 PC bulkhead; Requires single- or multi-row base	MTP16 <sup>(b)</sup>	
DFS1-01-0012MR	Adapter tip for MPO-12 APC bulkhead; Requires single- or multi-row base	MTPA (b)	
DFS1-01-0015MR	Adapter tip for MPO-16 APC bulkhead; Requires single- or multi-row base	MTPA16 <sup>(b)</sup>	
DFS1-00-0037MR	Kit: Single-row base and extended MPO-12 PC bulkhead adapter tip	MTP (a), (b)	
DFS1-00-0042MR	Kit: Single-row base and MTP plus MTPA (MPO-12 PC and MPO-12 APC) bulkhead adapter tips	MTP, MTPA <sup>(a), (b)</sup>	

AFL NO.	Description	Tip ID	
DFS1-00-0050MR	Kit: Multi-row base and MTP (MPO-12 PC) bulkhead adapter tip	MTP <sup>a,b</sup>	
DFS1-01-0010MR	Kit: Single-row base and MTPA (MPO-12 APC) bulkhead adapter tip	MTPA <sup>a, b</sup>	
Miscellaneous Adap	oter Tips		
DFS1-00-0056MR	Universal 60 degrees angled extended adapter tip	A6A, U-A6	
DFS1-00-0031MR	LEMO 2.0 mm bulkhead	LEMO	
DFS1-00-0033MR	2.0 mm termini bulkhead	T20F	
DFS1-00-0034MR	1.6 mm termini bulkhead	T16F	
DFS1-00-0036MR	ELIO 1.25 mm bulkhead	E12F	
DFS1-00-0046MR	SMA 905 bulkhead	SMAF¢	
DFS1-00-0048MR	TFOCA II ferrule and bulkhead adapter guide only	TFO-G	
DFS1-00-0049MR	TFOCA II ferrule and bulkhead adapter tip only	TFO-U	
DFS1-00-0057MR	Adapter for Viavi/Westover tips and FOCIS Flex probe	WOA	
APC Tips			
DFS1-01-0006MR	60° angled tip for SC/APC bulkhead	A6A	
DFS1-01-0013MR	Single-row base with OptiTip® APC bulkhead and ferrule adapter tips	OTIPA	

### otes:

- a. MTP extended tip marking includes S/N since these have moving parts.
- b. Base plus tip is required to inspect MPO/MTP connectors. All MPO/MTP connectors are inspected through bulkhead adapter.
- c. Requires FFLX-01-EXT46 extension for use with FOCIS Flex.

# FOCIS Lightning®2 Multi-Fiber Optic Connector Inspection System



FOCIS Lightning2 focuses, captures, analyzes all fibers in the MPO/MPT end-face with a click of a button!

# **Specifications**

• Field of View Multi Fibers Live: 3200 x 4800 μm

• Field of View Single Fiber Live: 1314 x 2144 μm

• Display: 3,5, color TFT LCD touch screen, 320 x 480

• Pass/Fail Analysis: IEC 61300-3-35, , user

• File Formats: 640 x 480 pixels JPG, GIF

• Storage Capacity: 10,000 files

• Battery: 8 hours, Li-Pol, user-replaceable

FOCIS Lightning2 is a compact, self-contained inspection probe that captures and displays the entire MPO end-face image in less than two seconds. One button provides autofocusing, centering, and pass/fail analysis at the connector and individual fiber level. It can complete a 24-fiber MPO inspection task in less than 15 seconds. Results can be easily shared via USB and Bluetooth®.

FOCIS Lightning2 fits in the palm of your hand and easily inspects hard-to-reach MPO datacenter connection panels. Its large 3.4" color LCD touchscreen easily allows viewing of MPO and single fiber ferrules. The high-resolution display and improved zoom capability will enable quick, advanced fiber analysis and inspection.

Test results can be shared using the FlexReporter software suite. Designed for speed and simplicity, FlexReporter enables you to generate clear and easy-to-read reports quickly and easily.

Put the speed and power of fiber inspection in your hands with the FOCIS Lighting2. Contact your AFL representative to schedule a demo or get more information.





FOCIS Lightning2









**PC Software** 

# FOCIS Lightning®2 Multi-Fiber Optic Connector Inspection System

FOCIS Lightning2 is a compact, ultrafast MPO/MTP® connector inspection system engineered to dramatically simplify and streamline connector inspection. With its large, easy-to-use touchscreen and intuitive operations, FOCIS Lightning2 enables service providers, enterprises and data center operators to efficiently inspect and validate their fiber connectivity. It performs IEC-compliant auto-analysis up to 100 times faster than legacy mechanical scanning methods. FOCIS Lightning2 captures up/down key orientation, and supports all fiber configurations up to two rows with sixteen fibers per row. Individual fiber images, pass/fail auto analysis overlays, and zone table data are available for viewing on the large integrated color touch screen. Free FlexApp (iOS and Android) supports inspection reporting and FlexReports Basic Test Results Manager software with 60-day reports trial or optional FlexReports Advanced with full reporting capability provides comprehensive reporting capabilities for MPO end-face, individual fiber and single-fiber inspection results.

# **FOCIS Lightning2 Connector Inspection Kits**

Each FOCIS Lightning2 Kit includes: FOCIS Lightning probe with wrist strap and dust cap, USB data/power cable and charger with country-specific plug, quick reference guide, and Easy Access carry case.

FOCIS Lightning2 is available in a 'No Wireless' [NW] variant, which removes the Bluetooth and WiFi functionality for use in RF restricted facilities.

					Co	ntains (ea.)					
	FOCIS		Bulkhead Adapter Tips								
	Lightning2	Data/ Power	UPC	MPO	APC	MPO	SFC	Alignmer	nt Sleeves	One-Clic	k Cleaner
AFL NO.	Probe	Cable	M12U	MPOU	M12A	MPOA		MPO-12	MPO-16	MPO-12	MPO-16
FOCIS-LT2-N	1	1									
FOCIS-LT2-U	1	1	1	1				1	1	1	1
FOCIS-LT2-A	1	1			1			1		1	
FOCIS-LT2-UA	1	1	1	1	1			1	1	1	1
FOCIS-LT2-UASF	1	1		1		1	1	1	1	1	1
FOCIS-LT2-NW-N	1	1									
FOCIS-LT2-NW-U	1	1	1	1				1	1	1	1
FOCIS-LT2-NW-A	1	1			1			1		1	
FOCIS-LT2-NW-UA	1	1	1	1	1			1	1	1	1
FOCIS-LT2-NW-UASF	1	1		1		1	1	1	1	1	1
RPTS-UP-KITS-1		<b>Software:</b> FlexReports Advanced. Provides Professional Test Reports for use with AFL instruments.  For use only at time of purchase with any kit.									

# FOCIS Lightning2 Order Entry - FOCIS-LT2-[NW]-[K]-[PLUG], where

[NW]	Wireless Option
Absent	Includes wireless
NW	No Wireless
[K]	Kit Type
N	No MPO adapter tips
U	UPC MPO adapter tips
Α	APC MPO adapter tips
UA	UPC and APC MPO adapter tips
UASF	UPC and APC MPO adapter tips, single fiber adapter

[PLUG]	Country-specific AC power plug
US	United States
UK	United Kingdom
EU	European Union
CN	China, Australia

	Со	ntains (e	ea.)	
Kit Type [K]	Bulkhead Adapter Tips	Tip ID	MPO Adapters (for patch cords)	One-Click Cleaner
U	MPO-12 (with key)	M12U	MPO-12 opposed	MPO-12
U	MPO-12 / MPO-16 (without key)	MPOU	MPO-16 opposed	MPO-16
Α	MPO-12 (with key)	M12A	MPO-12 opposed	MPO-12
	MPO-12 (with key)	M12U	MPO-12 opposed	MPO-12
UA	MPO-12 (with key)	M12A		
	MPO-12 / MPO-16 (without key)	MPOU	MPO-12 opposed	MPO-16
	MPO-12 / MPO-16 (without key)	MPOU	MPO-16 opposed	MPO-16
UASF	MPO-12 / MPO-16 (without key)	MPOA	MPO-12 opposed	MPO-12
	Single Fiber Adapter	SFC	MPO-16 opposed	





1400-01-0172PZ (example)



6000-00-0034PR



1410-02-0228PZ

# M12A

FLTNG-01-M12A



FLTNG-01-MPOU



FLTNG-01-M12U



FLTNG-01-SFA

# **FOCIS Lightning®2 / FOCIS Lightning Accessories**

AFL NO.	Description	FLTNG2	FLTNG	
1400-01-0172PZ	Easy Access carry case	•	•	
1400-05-0230PZ	Wrist strap	•	<b>♦</b>	
3900-04-0008ME	Battery, 3.6V, NiMH, rechargeable		•	
3900-06-0005MR	Battery Pack, 3.6V, Li-Pol, rechargeable	•		
4050-00-0034MR	AC adapter. Select power plug option [PLUG] when ordering. See "FOCIS Lightning2 Order Entry", page 26	•		
4050-00-0931PR	AC charger for FOCIS Lightning. Select power plug option [PLUG] when ordering		•	
4050-00-0030USMR	US power plug for AC adapter/ charger	•	<b>♦</b>	
4050-00-0030UKMR	UK power plug for AC adapter/charger	•	<b>*</b>	
4050-00-0030EUMR	EU power plug for AC adapter/charger	•	<b>*</b>	
4050-00-0030SAAMR	CN power plug for AC adapter/charger	•	<b>*</b>	
6000-00-0036MR	USB-A to USB-C Charge and Data Transfer Cable	•		
6000-00-0031MR	USB – Micro-B cable, 5 pin, 6'		<b>*</b>	
8800-02-0283MZ	FOCIS Lightning2 replacement dust cap	•		
8800-02-0083MZ	FOCIS Lightning replacement dust cap		<b>♦</b>	
1400-01-0024MZ	Small tackle box	•	•	
6000-00-0034PR	5V USB charging cable (1.5 m), type A to barrel (0.9 X 3.2 X 9 mm)		•	
MPO Mating Adapters	See section "Mating Adapters for both MMF and SMF testing", page 55			

# **FOCIS Lightning2 / FOCIS Lightning Adapter Tips**

AFL NO.	Description	Tip ID	
FLTNG-01-M12A	Adapter tip for MPO-12/24 APC bulkhead (with key)	M12A	
FLTNG-01-M12U	Adapter tip for MPO-12/24 UPC bulkhead (with key)	M12U	
FLTNG-01-M16U	Adapter tip for MPO-16/32 UPC bulkhead (with key)	M16U	
FLTNG-01-MPU	Universal adapter tip for MPO-12/16/24/32 UPC bulkhead (partial key)	MPU	
FLTNG-01-MPOA	Adapter tip for MPO-12/16/24/32 APC bulkhead (no key)	MPOA	
FLTNG-01-MPOU	Adapter tip for MPO-12/16/24/32 UPC bulkhead (no key)	MPOU	
FLTNG-01-MAC	Adapter Tip for MPO-12/16/24/32 APC connector (with key)	MAC	
FLTNG-01-MUC	Adapter Tip for MPO-12/16/24/32 UPC connector (with key)	MUC	
FLTNG-01-OPTM	Adapter Tip for OptiTip male (pinned) connector	OPTM	
FLTNG-01-OPTF	Adapter Tip for OptiTip female (unpinned) connector	OPTF	
FLTNG-01-SFA	SFA Coupler for most 'FFLX' single fiber connector adapter tips - FOCIS Lightning only	SFA	
FLTNG2-01-SFC	SFA Coupler for most 'FFLX' single fiber connector adapter tips - FOCIS Lightning2 only	SFC	
FLTNG-01-ALCM	Extended adapter tip for LC/APC bulkhead	ALCM	
FLTNG-01-ULCM	Extended adapter tip for LC/UPC bulkhead	ULCM	
FLTNG-01-MPE	MPO extender barrel	MPE	
FLTNG-01-HSAS	Adapter tip for Q-ODC-12 APC pinned (male) hardened connectors	HSAS	
FLTNG-01-HSAP	Adapter tip for Q-ODC-12 APC unpinned (female) hardened connectors	HSAP	
FLTNG2-01-LVU	Adapter tip for Large Field of View — UPC MPO - FOCIS Lightning2 only	LVU	
FLTNG-01-MMCA	Adapter Tip for MMC APC connector patchords	MMCA	

# **FIBER OPTIC CLEANING**

# AFL-CleanDisplay-1

AFL offers a custom display to showcase our most popular connector cleaning products. This display features 3 tier shelves and attention-grabbing product images. The display accommodates a variety of products and enables easy grab-and-go purchases. Overall Width x Height x Depth: 11.5" x 15.3" x 8.1"

AFL NO.	Description	
1400-01-0183PZ	Empty three-tiered custom-printed acrylic display	
AFL-CleanDisplay-1	Display and a selection of our top selling wet and dry cleaning supplies	

# **Wall/Rack Mountable Field Portable Cleaning Kits**

Wall/rack mountable field portable cleaning kits offer a complete selection of fiber optic cleaning products for field cleaning of connector end-faces in fiber frames, adapters, and on jumpers. Each kit consists of a wall or rack mountable carry case, FCC2 cleaning fluid, and color-coded instructions. Each stick is double-ended, designed for two (2) cleans.

	CCTS-25-0900MZ for FC, SC, ST	CCTS-12-0900MZ for LC, MU CCTP-25-0900MZ for all connectors			
AFL NO.	QTY=40, BLUE	QTY=40, GREEN	QTY=20, YELLOW	Cletop SB	
FCP1-00-0901	1		2	1	
FCP1-00-0914	2	1	1	1	

# **Field Portable Duffle Bag Cleaning Kits**

FCP2 Kits offer a selection of optical cleaning products for field cleaning of connector end-faces in a convenient duffle bag style carry case.

AFL NO.	Contains (1 ea.)	
FCP2-10-0900	FCC2 cleaning fluid, FiberWipes, Cletop-SB, SC and LC One-Clicks, Debris Destroyer, Duffle Bag	
FCP2-00-0901	FCC2 cleaning fluid, FiberWipes, Cletop-SB, SC and LC One-Clicks, Debris Destroyer, MPO One-Click, Duffle Bag	
FCPR-10-0900	Refill for FCP2-10-0900 Kit (no duffle bag). Includes FCC2 cleaning fluid, FiberWipes, Cletop-SB, SC and LC One-Clicks, Debris Destroyer.	

# **FCP3 Easy-Access Cleaning Kit**

AFL NO.	Description	
FCP3-00-0900	Basic Easy-Access Cleaning Kit. Includes:  FCC2 Fiber Connector Cleaner And Preparation Fluid (can)  FCC3 Debris Destroyer Fiber Optic Cleaning Pen  CCTS-12 (for 1.25 mm ferrule) and CCTS-25 (for 2.5 mm ferrule) Connector Cleaning Tips  Cletop-SB, White Tape  One-Click Cleaners (SC, LC/MU, Ultra 2.5, MPO/MTP)  Soft Carry Case	
FCP3-00-0901	<ul> <li>Enterprise Easy-Access Cleaning Kit. Includes:</li> <li>FCC2 Fiber Connector Cleaner And Preparation Fluid (can)</li> <li>FCC3 Debris Destroyer Fiber Optic Cleaning Pen</li> <li>CCTS-12 (for 1.25 mm ferrule) and CCTS-25 (for 2.5 mm ferrule) Connector Cleaning Tips</li> <li>Cletop-SB, White Tape</li> <li>One-Click Cleaners (Duplex LC, LC/MU, Ultra 2.5, MPO/MTP)</li> </ul>	



1400-01-0183PZ



AFL-CleanDisplay-1



FCP1 Kit



FCP2-10-0900



FCP3-00-0901



FCC2 in 3 oz/85 g Can





# FCC2 Cleaning Fluid and CCT Cleaning Sticks

# FCC2 Enhanced Formula Fiber Connector Cleaner and Preparation Fluid

The FCC2 Enhanced Formula Fiber Optic Cleaning and Preparation Fluid is a non-flammable, environmentally safe, residue free solvent engineered to easily remove contaminants from fiber optic end-faces and bare fiber. The FCC2 is not hazardous and not regulated for all modes of transportation and shipping including air-cargo. For best results, use CCT cleaning sticks with FCC2 fluid!

AFL NO.	Description	
FCC2-00-0902	Enhanced Formula, (3 oz/85 g) Fiber Connector Cleaner and Preparation Fluid (1 can)	
FCC2-00-0903	Enhanced Formula, (3 oz/85 g) Fiber Connector Cleaner and Preparation Fluid (case of 12 cans)	
FCC3-00-PEN1	Debris Destroyer™ - Fiber Optic Cleaning Pen (1 pen)	

# **CCT Connector Cleaning Tips**

CCT Connector Cleaning Tips are molded cleaning tips that trap contamination and wick cleaning solvents away from connector end-faces. These tips use a molded, sintered polymer that is both porous and pliable, conforming to virtually any fiber end-face polish geometry while trapping and absorbing contaminants. CCT Tips are intended for cleaning the ferrule end-faces in adapters and sockets, as well as the exposed ferrules and termini of jumpers. Available in double-ended or single-ended design.

AFL NO.	Description	<b>Tube Color</b>	Sticks QTY			
Connector Cleaning	Connector Cleaning Tips - Double-ended					
CCTP-25-0900MZ	TP-25-0900MZ For exposed 2.5 mm, 2.0 mm, 1.6 mm, 1.25 mm ferrules and termini (FC, SC, ST, LC, MU, etc., jumpers, male MIL T 29504/14 for MIL C 28876 and MIL T 29504/04 for MIL C 38899)					
CCTS-25-0900MZ	For 2.5 mm ferrule in adapters or sockets (SC, FC, ST, etc. in adapters)	Blue	40			
CCTS-12-0900MZ	For 1.25 mm ferrule in adapters or sockets (LC, MU, etc., in adapters)	Green	40			
CCTS-16-0900MZ	For MT-RJ connectors and 2.0 mm and 1.6 mm termini in sockets (female MILT 29504/15 for MIL C 28876 and MILT 29504/05 for MIL C 38999, MT-RJ both jumpers and adapters)	Orange	40			
<b>CCT Tips are availal</b>	ole in bulk packs of single-ended sticks. Packs of 50 sticks packaged in boxes of 6 packs (	300 sticks).				
CCTP-25-0910MZ	For exposed 2.5 mm, 2.0 mm, 1.6 mm, 1.25 mm ferrules and termini (FC, SC, ST, LC, MU, etc., jumpers, male MIL T 29504/14 for MIL C 28876 and MIL T 29504/04 for MIL C 38999)	Yellow	300			
CCTS-12-0910MZ	For 1.25 mm ferrule in adapters or sockets (LC, MU, etc., in adapters)	Green	300			
CCTX-MT-0910MZ	For Biconic and MT ferrule connectors both jumpers and in adapters (Biconic, MTP, MPO, MPX, etc.)	Pink	300			





Cletop -SB



Replacement Tape Type S



Cletop Type A



Cletop Type B



Cletop Type A and B top view



**Cletop Cassette Cleaners** 

- Cletop series: Original version.
- Cletop-S series: Second generation cleaner with improved ergonomics and tape maintenance.
- Type A and -SA: Designed for single 2.5 mm ferrules (SC, FC, ST, and D4).
- Type B and -SB: Cleans SC, SC2, FC, ST, DIN, D4, MU, LC, MT, MPO/MTP without pins, MT-RJ without pins.

AEL NO	Description				
AFL NO.	Description				
Cletop –S Series					
8500-10-0020MZ	Cletop-SA with Blue Tape				
8500-10-0029MZ	Cletop-SB with Blue Tape				
8500-10-0016MZ	Cletop-SB with White Tape				
8500-10-0021MZ	Replacement Tape, Type S - Blue				
8500-10-0017MZ	Replacement Tape, Type S - White				
8500-10-0046MZ	Cletop-SB White Tape (box of 5 cleaners, 8500-10-0016MZ)				
8500-10-0047MZ	Replacement Tape, Type S-White (box of 6 tapes, 8500-10-0017MZ)				
8500-10-0041MZ	Replacement Tape, Type S-Blue (box of 6 tapes, 8500-10-0021MZ)				
Cletop Original Seri	es				
8500-10-0027MZ	Cletop Type A with Blue Tape				
8500-10-0011MZ	Cletop Type A with White Tape				
8500-10-0028MZ	Cletop Type B with Blue Tape				
8500-10-0014MZ	Cletop Type B with White Tape				
8500-10-0033MZ	Cletop for MPO/MTP with pins (White Tape)				
8500-10-0012MZ	Replacement Tape, Type A and B – Blue				
8500-10-0015MZ	Replacement Tape, Type A and B – White				
8500-10-0042MZ	Replacement Tape, Type A and B – Blue (box of 6 tapes, 8500-10-0012MZ)				

# **Cletop (ACT) Cleaning Sticks**

AFL NO.	Description	
8500-10-0024MZ	ACT-01	
	2.5 mm single-ended sticks (box of 200 - 40 bags of 5 sticks per bag). For FC, SC, ST, and D4.	
8500-10-0023MZ	ACT-03 2.0 mm single-ended sticks (box of 200 - 40 bags of 5 sticks per bag). For Military and High Definition Video (LEMO).	
8500-10-0030MZ	2.0/2.5 mm double-ended sticks (box of 100 - 100 bags of 1 stick per bag). For Military and High Definition Video (LEMO).	



# One-Click® Cleaners

U.S. Patent Numbers 7,212,719 and 8,087,118

# One-Click® Cleaner MMC

### **Features**

- Cleans high-density, low-insertion-loss pinned or unpinned MMC connectors
- Patented single-action cleaning in a small ergonomic design
- Precise mechanical action delivers consistent cleaning results
- Automatic tape advance ensures each clean is performed with fresh cleaning tape



Designed to clean Very Small Form Factor (VSFF) MMC multi-fiber connectors used in Data Centers and other high density optical networks, the new One-Click Cleaner MMC is a revolutionary push-type cleaner, which simplifies cleaning of the ferrule end-face of both MMC exposed connectors and connectors in adapters.

**Ease of use** — With its patented push-action cleaning, the One-Click Cleaner MMC removes dirt, dust, and contaminants with just one click. Its straightforward use requires no training. Simply insert and click to clean MMC connectors

**Maximized efficiency** — By utilizing the one-click design, technicians can speed through the cleaning process. No manual wipes or wet solvents are needed. The mechanical push action instantly advances the optical grade cleaning tape while the cleaning tip is rotated to ensure the MMC end-face is effectively, but gently, cleaned.

Increased uptime — With the move to nextgen VSFF data-center connectivity, it is essential to maintain connections for optimal performance. Using the specialized One-Click Cleaner MMC, technicians can clean MMC-16 and MMC-24 connectors easily and effectively in 1/2 the time as traditional methods leading to reliable signal transmission and extended lifespan of the connector.

AFL NO.	Description	# of Cleans	
8500-05-MMC16	One-Click Cleaner MMC for MMC-16 Connectors	500+	
8500-05-MMC24	One-Click Cleaner MMC for MMC-24 Connectors	500+	





Cleaning MMC-16 connector on jumper



Cleaning MMC-16 connector in adapters



# **One-Click® Cleaners**

U.S. Patent Numbers 7,212,719 and 8,087,118

		Number		
AFL NO.	Description	of Cleans	QTY	
8500-05-0001MZ	One-Click Cleaner SC, ST, FC	500+	1	
8500-05-0002MZ	One-Click Cleaner MU/LC	500+	1	
8500-05-0004MZ	One-Click Cleaner ODC, outdoor connector	500+	1	
8500-05-0005MZ	One-Click Cleaner Mini-100 SC, ST, FC	100+	1	
8500-05-0006MZ	One-Click Mini-100 MU/LC	100+	1	
8500-05-0009MZ	One-Click Cleaner Mini-500 SC, ST, FC	500+	1	
8500-05-0010MZ	500-05-0010MZ One-Click Cleaner Mini-500 MU/LC		1	
8500-05-0007MZ	One-Click Ultra Cleaner 2.5 (enlarged cleaning) SC, ST, FC	2 x 500+	1	
8500-05-0008MZ	One-Click Cleaner D-LC, Duplex LC (2 x 500+ cleans)	500+	1	
8500-05-0030MZ	One-Click Cleaner MPO (500+ cleans)	500+	1	
8500-05-0013MZ	One-Click Cleaner MPO-16	500+	1	
8500-05-0014MZ	One-Click Cleaner M20, 2.0 mm ferrule	500+	1	
8500-05-0015MZ	One-Click Cleaner CS, MDC Duplex	500+	1	
8500-05-0016MZ	One-Click Cleaner SN Duplex	500+	1	
8500-05-0018MZ	One-Click Cleaner HOC, Hardened Optic Connectors	500+	1	
8500-05-PRO-SC	One-Click Cleaner SC PRO	775+	1	
8500-05-PRO-LC	One-Click Cleaner LC PRO	775+	1	
8500-05-MMC16	One-Click Cleaner MMC for MMC-16 Connectors	500+	1	
8500-05-MMC24	One-Click Cleaner MMC for MMC-24 Connectors	500+	1	
8500-05-0021MZ	One-Click Cleaner SC, ST, FC (box of 5 units)	5 x 500+	5	
8500-05-0022MZ	One-Click Cleaner MU/LC (box of 5 units)	5 x 500+	5	
8500-05-0025MZ	One-Click Cleaner Mini-100 SC, ST, FC (box of 5 units)	5 x 500+	5	
8500-05-0026MZ	One-Click Cleaner Mini-100 MU/LC (box of 5 units)	5 x 500+	5	
8500-05-0027MZ	One-Click Ultra Cleaner 2.5 SC, ST, FC (box of 5 units)	5 x 500+	5	
8500-05-0023MZ	One-Click Cleaner MPO-16 (box of 5 units)	5 x 500+	5	

# **NEOCLEAN Fiber Connector Cleaning Tools**

AFL NO.	Description	# Of Cleans	
8500-15-0900MZ	NEOCLEAN-E1 for MU and LC connectors with UPC/APC polishes	750+	
8500-15-0901MZ	NEOCLEAN-E2 for SC and FC connectors with UPC/APC polishes and OptiTap connectors	750+	
8500-15-0902MZ	NEOCLEAN-E3 for SC, ST, FC, E2000 with UPC/APC polishes and OptiTap connectors	750+	
8500-15-0909MZ	NEOCLEAN-M for MPO/MTP® connectors	600+	

# **Optical Grade Cleaning Wipes**

AFL NO.	Description			
9000-03-0025MZ	FiberWipes <sup>™</sup> - 90 optical quality wipes per tub, (1 tub)			
9000-03-0026MZ FiberWipes - 90 optical quality wipes per tub (1 case of 24 tubs)				



# 9AR ...

iB1 Base with Module

iB1 Base with Module





# **OPTICAL LOSS TESTING**

# **ROGUE® OLTS Certifier**

# Only available to customers in North America, Central America and the Caribbean, and the Middle East!

- Each ROGUE OLTS Certifier Kit includes two (2) of each: ROGUE iB1 Base, kit-specific ROGUE Modules, battery, AC charger, carry strap, carry case.
- Each ROGUE OLTS Certifier Kit includes (1) One-Click Cleaner SC/2.5 mm, (1) One-Click Cleaner LC/1.25 mm, switchable test port adapters.

			Contains (ea.)						
					Test	Port Ada <sub>l</sub>	oters		
		ROGUE Base	ROGUE Modules		Mating Adapters	OLS	OF	M	
AFL NO.	ROGUE OLTS Certifier Kit	iB1	Quad SM/MM	Dual Engine SM	SC	SC	SC	LC	
RGK-CERT01B1	Quad SM/MM	2	2		2	2	2	2	
RGK-CERT03B1	Dual Engine SM	2		2	2	4	2	2	

# ROGUE OLTS Certifier Kit Order Entry - RGK-CERT[KIT]-[C], where:

[KIT]	ROGUE OLTS Certifier Kit Type/Contents
01B1	(2) iB1 Base, (2) Quad SM/MM OLTS Certifier Module, adapters, One-Click Cleaner
03B1	(2) iB1 Base, (2) Dual Engine SM OLTS Certifier Module, adapters, One-Click Cleaner

[C]	Single-mode Connector Type
U	UPC
Α	APC

# **Mobile App for ROGUE OLTS Certifier**

Android Apps are available as free downloads from Google Play to configure, control and access results from ROGUE OLTS Certifier.

Mobile App	Android Google Play	
ROGUE TURBO OLTS Certifier	Available	



ROGUE iB1 Base



**OLTS** Certifier Module

Connector Adapters for ROGUE OLTS Certifier Module Test Ports



2900-50-0003MR



2900-52-0005MR



2900-50-0007MR

# **ROGUE® Hardware and Accessories**

AFL NO.	Description	Contains	
RGK-OLTS03B1	ROGUE OLTS Kit with iB1 Base	(1) ROGUE iB1 Base, (1) Dual Engine SM Module, (2) SM reference cords (1) battery, (1) AC charger, (1) adjustable carry strap	
RG-B01	ROGUE iB1, Intelligent Base	(1) ROGUE iB1 Base, (1) battery, (1) AC charger, (1) adjustable carry strap	
RG-1100-Q01	ROGUE OLTS Certifier Quad Module	(1) Quad Module; test port adapters: (2) SC for OLS port, (1) SC and (1) LC for OPM port	
RG-1100-S01-D	ROGUE OLTS Certifier SM Module	(1) SM Module; test port adapters (2) SC for OLS port, (1) SC and (1) LC for OPM port	
5400-00-0200	ORL Referencing Mandrel	(1) Mandrel	
8400-00-0066MZ	SC UPC Terminator for ORL Reference	(1) Terminator	
8400-00-0048MZ	FC UPC Terminator for ORL Reference	(1) Terminator	
RGA-STRAP-01	ROGUE Adjustable Carry Strap	(1) Strap	
4050-00-0918PR	AC charger fpr ROGUE iB1 Base	(1) AC charger, (specify power cord, see page 55, Table 1)	

# **Connector Adapters for ROGUE Module Test Ports**

Note: ROGUE modules are shipped with SC adapter installed on OLS ports and universal 2.5 mm adapters installed on OPM and VFL ports.

AFL NO.	Connector Adapter Type	Test Port Usage	
2900-50-0002MR	FC	OLS	
2900-50-0003MR	SC	OLS	
2900-50-0004MR	ST	OLS	
2900-50-0006MR	LC	OLS	
2900-52-0001MR	FC	OPM	
2900-52-0002MR	SC	OPM	
2900-52-0003MR	ST	OPM	
2900-52-0004MR	LC	OPM	
2900-52-0005MR	2.5 mm Universal	OPM	
2900-52-0006MR	1.25 mm Universal	OPM	
2900-50-0007MR	2.5 mm Universal	VFL	
2900-50-0010MR	1.25 mm Universal	VFL	

# **Encircled Flux (EF) Reference Grade Test Cords**

Encircled Flux (EF) requirements (IEC 61280-1-4 and TIA-568-14-B) specify multimode launch conditions at the end of an EF qualified Reference Grade Test Cord (RGTC). Thus, compliance to EF standards requires both, a light source with EF compliant optics and a RGTC. AFL offers RGTCs with a range of connector options. RGTCs are qualified in one direction and marked accordingly (input/output). AFL Reference Grade Test Cords use 50 µm OM4 fiber, red jacketing, and come in 2-meter length. Red jacketing used to distinguish RGTCs from standard multimode fiber jumpers.

AFL NO.	Connectors	
8700-04-0001MR	FC to FC	
8700-04-0002MR	FC to SC	
8700-04-0003MR	FC to LC	
8700-04-0004MR	FC to ST	
8700-04-0005MR	SC to FC	
8700-04-0006MR	SC to SC	
8700-04-0007MR	SC to LC	
8700-04-0008MR	SC to ST	
8700-04-0028MR	LC to LC	



MFS- Multi-Fiber Switch



### Multi-Fiber Switch Models

AFI's Multi-Fiber Switch enables the testing of 12-fiber cables without the need to use a breakout cable. The switch allows you to utilize a single piece of test equipment to seamlessly cycle through all of the fibers in a connector regardless of polarity without having to disconnect and reconnect your test equipment. Multi-Fiber Switch is compatible with your OLTS Certification equipment.

Model	Fiber Type	Wavelength Range	Insertion Loss	Optical Return Loss (ORL)	Power
MFS-12-SM	Single-mode	1270 – 1670 nm	2.8 dB typ.; 3.3 dB max.	50 dB min	Li-Ion, USB
MFS-12-MM	OM4 multimode	800 – 1320 nm	1.8 dB typ.; 2.3 dB max.	Not specified	Li-Ion, USB

AFL NO.	Description	
MFS-12-SM-ASC-FR	Multi-Fiber Switch, 12 fibers SM, APC—SC, MPO Fiber Ring (pinned or non-pinned), soft case	
MFS-12-SM-ASC	Multi-Fiber Switch, 12 fibers SM, APC—SC, soft case	
MFS-12-SM-USC	Multi-Fiber Switch, 12 fibers SM, UPC—SC, soft case	
MFS-12-MM-USC	Multi-Fiber Switch, 12 fibers MM, UPC—SC, soft case	

# FlowScout® SE100 Single-Ended Test Set



### **Features**

- Verifies fiber continuity and insertion loss at 1430 nm from a single end
- Excess reflection (low ORL) detection at 1550 nm
- Live fiber detection and reporting
- Built-in optical continuous wave (CW) reflectometer
- Combines light source and power meter into a single unit

AFL's FlowScout SE100 is designed to verify fiber continuity and measure insertion loss to the end of fibers terminated with AFL's 1430 nm Wavelength Optical Reflectors. When a reflector is detected, the FlowScout SE100 immediately reports its presence (confirming continuity to the reflector) and measures insertion loss to the reflector at 1430 nm wavelength. The reflector is near-transparent to PON and other wavelengths, allowing it to remain installed during network operation.

**Reduce cost:** Combining an optical light source and power meter into one low-cost test set, the FlowScout SE100 enables a single technician to verify continuity and measure insertion loss, reducing equipment costs by over 38% and labor costs by over 50%.

**Shorten test time and eliminate setup errors:** Traditional two-ended testing requires equipment configuration and test coordination. FlowScout SE100 eliminates time-consuming setup and technician coordination time. It also speeds up testing by reducing visits to subscriber premises, demarcation points, and cell tower climbs.

**Enhance customer experience:** The FlowScout SE100 eliminates the need for onsite troubleshooting of FTTH drop issues. All testing can be completed from a distribution panel or splitter, eliminating technician time at the subscriber premises and overcoming scheduling and access challenges for both subscribers and service providers.

**Increase technician safety:** Repeated tower climbs for troubleshooting FTTA fibers are eliminated by using the FlowScout SE100 to test from the ground to optical reflectors installed at the Radio Unit.

**Ensure integrity of test results:** FlowScout SE100 alerts the user when excess reflection or a live signal is present on the tested network. Reflection issues from damaged, open, mismatched, or dirty connectors often result in poor network performance. FlowScout SE100 immediately alerts the user and displays ORL when excess reflection is present.

**Complements subscriber-installed ONT initiatives:** Reducing the need for FTTH premises visits, the FlowScout SE100 solution supports service provider goals to reduce costs by adopting a subscriber self-install ONT methodology.







# FlowScout® SE100 Single-Ended Test Set

AFL's FlowScout SE100 is designed to verify fiber continuity and measure insertion loss to the end of fibers terminated with AFL's 1430 nm Wavelength Optical Reflectors. When a reflector is detected, the FlowScout SE100 immediately measures insertion loss to the reflector at 1430 nm wavelength. The reflector is near-transparent to PON and other wavelengths, allowing it to remain installed during network operation.

FlowScout SE100 kit includes the FlowScout SE100 test set, SC/APC to SC/APC patch cord to connect to network under test, reference 1430 nm Wavelength Optical Reflector, wrist strap, and Quick Reference Guide in a convenient soft carry case.

AFL NO.	Description							
	FI 6 . CF100	Wavelength	1430 and 1550 nm					
SE100-00-0901PR	FlowScout SE100 Single-Ended Test	Measurement Range	>10 dB one-way fiber loss (ORL ≥25 dB @1550 nm); >6 dB one-way fiber loss (ORL ≤15 dB @1550 nm)					
	Set Kit	Detection Range	Reflector detected / not detected up to 20 km (18 mi) with optical loss ≤9 dB at 1430 & 1550 nm and					
	JCI KII		1550 nm ORL ≥25 dB					

## FlowScout SE100 Accessories

AFL NO.	Description	
Accessories Included	d with SE100-00-0901PR Kit	
8700-03-1430MZ	1430 nm Wavelength Optical Reflector, SC/APC, female-to-male, plug type	
8800-00-0072PR	Universal flip-top dust cap for UCI outputs	
8700-00-0218MR	Single-mode test jumper, SC/APC to SC/APC, conical ferrule, 2 m, 3 mm jacketed	
1400-05-0230PZ	Wrist strap	
1400-01-0107MZ	Soft carry case with strap	
Additional Optional	Accessories	
6000-00-0031MR	USB – Micro-B cable, 5 pin, 6 ft	
4050-00-0034MR	AC Adapter. AFL ships one power plug (of customer choice) along with the order. Please select one out of the four plugs listed below.	
	4050-00-0030EUMR EU Power Plug for AC charger	
	4050-00-0030USMR US power plug for AC charger	
	4050-00-0030SAAMR CN/AUS power plug for AC charger	
	4050-00-0030UKMR UK power plug for AC charger	
2900-50-0011MR	SC/APC adapter for optical port	
2900-58-0001MR	FlowScout SE100-facing APC female to APC male field-replaceable Port Saver SMF	
8500-05-0009MZ	One-Click Cleaner Mini-500 SC, ST, FC; 500+ cleans	



# 1430 nm Wavelength Optical Reflector

AFI's 1430 nm Wavelength Optical Reflector is used in conjunction with test devices, such as AFI's FlowScout SE100 continuity and insertion loss test set. It uses Fiber Bragg Grating technology to support testing over the wavelength range around 1430 nm. With the reflector used at one end of a fiber under test, a technician can verify fiber continuity and measure insertion loss to the reflector using the FlowScout SE100.

AFL NO.	Description	scription							
Accessories Included with SE100-00-0901PR Kit									
8700-03-1430MZ	1430 nm Wavelength Optical Reflector, SC/APC, female-to-male, plug type								







# FlowScout® Through-Mode PON Power Meter

FlowScout Through-Mode PON power meter is designed to meet the demands of the outside plant environment. It easily withstands the one-meter drop test and has splash resistant controls that are easy to use, even with gloves on. A range of field-swappable output adapters support multiple connector styles and enables access for easy cleaning. The efficient design provides long test time from rechargeable Li-Polymer battery. The File Management system allows technicians to organize test results into multiple files and transfer stored results via USB to a PC for analyzing, generating reports, and printing. QR code feature can easily collect and transfer test data via any smart devices. Fully N.I.S.T. traceable.

AFL NO.	Description										
		Unstraam	Wavelength	1270 nm	1310 nm						
TPPM-XG	FlowScout Through-Mode PON Power Meter	Upstream	Measurement Range	-30 to +13 dBm	-30 to +13 dBm						
IPPINI-AG	XGPON/XGSPON	D	Wavelength	1490 nm	1550 nm	1577 nm					
		Downstream	Measurement Range	-50 to +13 dBm	-35 to +26 dBm	-50 to +17 dBm					

## FlowScout Included Accessories

AFL NO.	Description							
8700-00-0090MR	(2) SC/APC to SC/APC Test Jumpers, 2 m	) SC/APC to SC/APC Test Jumpers, 2 m						
6000-00-0036MR	USB-A to USB-C Charge and Data Transfer Cable							
8500-05-0009MZ	One-Click Cleaner Mini-500 SC, ST, FC; 500+ cleans							
4050-00-0034MR	AC Adapter							
AFL ships one power p	lug (of customer choice) along with the order. Please select one out of the four plugs listed below.							
4050-00-0030EUMR	EU Power Plug for AC charger							
4050-00-0030USMR	US power plug for AC charger							
4050-00-0030SAAMR	CN/AUS power plug for AC charger							
4050-00-0030UKMR	UK power plug for AC charger							





# FlowScout® OPM8 Optical Power Meter and OLS8 Optical Light Source

Available in August, 2024!

AFL's FlowScout OPM8 optical power meter and FlowScout OLS8 optical light source represent the next generation of smart optical power meters and optical light sources respectively. Designed on the legacy of the AFL/Noyes OPM and OLS series, the FlowScout OPM8 and OLS8 provide rapid loss testing with pass/fail results for use in enterprise LAN, data center, PON, and broadband networks.

**Intuitive operation:** With a simple to use interface based on a color touchscreen, fiber technicians can quickly set-up, test, validate, and document installed fiber plant, as well as provide power measurements. The FlowScout OPM8 measures power levels and automatically evaluates them against user-set min/max limits. The large color touchscreen displays detected power levels with color-coded pass/fail indications.

**Wave ID for reduced test time and errors:** When used with a Wave ID light source, such as the FlowScout OLS8, the power meter automatically synchronizes to source wavelengths, reducing test time and eliminating wavelength setting errors. The broadband power meter also automatically detects and reports the presence of 270 Hz, 330 Hz, 1 kHz, and 2 kHz fiber identifying tones.

**Full Reporting Capabilities:** Measured power levels, pass/fail limits and status can be stored in internal memory for download via USB. Test results may be uploaded for subsequent analysis, editing, and reports generation with FlexReports PC software.

#### **Features**

- Large color touchscreen with icon-driven user interface
- · Rapid pass/fail analysis based on user-set limits
- Wave ID functionality for accuracy and reduced test time
- Rugged design backed by industry-best 5-year warranty
- Internal test results storage
- Reports generation via OPM8 using AFL's FlexReporter<sup>™</sup> Suite

## Reports Generation via OPM8 Using AFL's FlexReporter™ Suite



## **Product Highlights**



## **Icon-driven Interface**



**Comprehensive Reporting** 



Handheld



**Battery Operated** 



USB Power Port / Software Upgrades

# Field-replaceable output adapter

Field-replaceable output adapters to support multiple connector styles.

## Large color display

Large color touchscreen, visible in direct sunlight, displays a simple to use user interface.

## Rapid pass/fail analysis

Measured power levels automatically evaluated against user-set min/max limits.

## Durable design for field use

Rugged design backed by an industry-best 5-year warranty.







# FlowScout® OPM8 Optical Power Meters

The FlowScout OPM8 optical power meter represents the next generation of smart optical power meters. Built from the legacy of AFL/Noyes OPMs, the FlowScout OPM8 provides rapid loss testing with pass/fail results for use in enterprise LAN, data center, PON, and broadband networks.

**Intuitive operation:** With a simple to use interface based on a color touchscreen, fiber technicians can quickly set-up, test, validate, and document installed fiber plant, as well as provide power measurements. The FlowScout OPM8 measures power levels and automatically evaluates them against user-set min/max limits. The large color touchscreen displays detected power levels with color-coded pass/fail indications.

**Wave ID for reduced test time and errors:** When used with a Wave ID light source, such as the FlowScout OLS8, the power meter automatically synchronizes to source wavelengths, reducing test time and eliminating wavelength setting errors. The broadband power meter also automatically detects and reports the presence of 270 Hz, 330 Hz, 1 kHz, and 2 kHz fiber identifying tones.

Full reporting capability: Project setup, measured power levels, pass/fail limits and status can be stored in internal memory for download via USB to FlexReporter™.

Versatile and efficient: Rugged, ergonomic, and backed by an industry-best 5-year warranty.

#### All Models Key Features:.

- All models feature project setup and save, and pass/fail analysis
- Measurement units: insertion loss in dB; power measurements in dBm
- Multiple test tone detection for fibre identification: 270 Hz, 330 Hz, 1 kHz, and 2 kHz tone
- For a list of all available adapter caps, see page "FlowScout OPM8 and OLS8 Adapter Caps", page 42.

			Calibrated Wavelengths (nm)									Detector	Measurement	
Model	AFL NO. (a,b)	850	980	1270	1300	1310	1490	1550	1577	1610	1625	Туре	Range (dBm)	
OPM8-L	OPM8-SP3-[Kit]	•	•	•	<b>♦</b>	•	•	<b>♦</b>	<b>♦</b>	•	•	InGaAs	+10 to -70	
ОРМ8-Н	OPM8-SP4-[Kit]	<b>♦</b>	<b>♦</b>	<b>♦</b>	<b>♦</b>	<b>♦</b>	<b>♦</b>	<b>♦</b>	<b>♦</b>	<b>♦</b>	<b>♦</b>	InGaAs	+26 to -50	

## FlowScout OPM8 Kit Configuration - [KIT]

[KIT]	OPM8 Kit Configuration / Kit Contents
BAS (c)	Includes: OPM8, soft case, FlexReports Basic software with 60-day FlexReports Power software trial, USB cable
PLUS	Includes: BAS Kit plus upgrade to FlexReports Power

#### Notes

- a. FlowScout OPM8 is equipped with 2.5 mm universal adapter. Additional OPM8 adapters may be ordered separately.
- b. FlowScout OPM8 optical power meters use a common calibration point for 1300 nm (multimode) and 1310 nm (single-mode).
- c. Test results can be off-loaded via USB cable to FlexReports Basic, which provides result viewing and a 60-day trail of the FlexReports Power license. User can opt to upgrade FlexReports Basic to FlexReports Power after purchase. FlexReports Power provides professional reports generation for AFL power meters.

## FlowScout OPM8 Included Accessories

AFL NO.	Description							
6000-00-0036MR	USB-A to USB-C Charge and Data Transfer Cable							
4050-00-0034MR	AC Adapter							
AFL ships one power p	lug (of customer choice) along with the order. Please select one out of the four plugs listed below.							
4050-00-0030EUMR	EU Power Plug for AC charger							
4050-00-0030USMR	US power plug for AC charger							
4050-00-0030SAAMR								
4050-00-0030UKMR	UK power plug for AC charger							





# FlowScout® OLS8 Optical Light Sources

AFL's FlowScout OLS8 optical light source represents the next generation of smart optical light sources. Built on the legacy of AFL/Noyes OLS series optical light sources, the FlowScout OLS8 provides a stable and accurate light source for use in enterprise LAN, data center, PON, and broadband networks.

**Wave ID for reduced test time and errors:** In the Wave ID mode, the OLS8 encodes each wavelength with a unique Wave ID code. When used with a Wave ID capable power meter, such as OPM8, the pair can test up to three wavelengths simultaneously reducing test time and eliminating wavelength-setting errors. The light source also offers CW mode (continuous output - no encoding) and supports test Tone generation (270 Hz, 330 Hz, 1 kHz, 2 kHz) to assist in troubleshooting.

Multiple options available: Single-mode dual (1310/1550 nm), Quad (850/1300 and 1310/1550 nm) and FTTx (1310/1490/1550 nm).

			Output \	Naveleng	ths (nm)		Output	Emitter	Output Power		
Model	AFL NO.	850	1300	1310	1490	1550	Ports	Type (a)	(nominal, dBm)	Stability	
OLS8-SM Dual	OLS8-SL2-BAS			<b>*</b>		•	1	Laser	-1	± 0.05 dB/1 hr	
OLS8-Quad	OLS8-SL4-BAS	•	•	•		<b>•</b>	2	LED Laser	-20 @850 &1300 nm -1 @1310 & 1550 nm	± 0.05 dB/1 hr	
OLS8-SM XGS	OLS8-SL7-BAS			•	•	•	1	Laser	-1	± 0.05 dB/1 hr	

#### Notes:

All Laser output powers are specified into 9/125 µm single-mode fiber.

a. Safety: Class I FDA 21 CFR 1040.10 and 1040.11, IEC 60825-1: 2014.

## FlowScout OLS8 Included Accessories

AFL NO.	Description						
6000-00-0036MR	USB-A to USB-C Charge and Data Transfer Cable						
4050-00-0034MR	AC Adapter						
AFL ships one power pl	lug (of customer choice) along with the order. Please select one out of the four plugs listed below.						
4050-00-0030EUMR	EU Power Plug for AC charger						
4050-00-0030USMR	US power plug for AC charger						
4050-00-0030SAAMR							
4050-00-0030UKMR	UK power plug for AC charger						





# FlowScout® OLS8 and OPM8 Optical Loss Test Kits

- All SLP8/SMLP8 test kits include an optical power meter, optical light source, adapter cap, quick reference guide, and carry case.
- All OPM8 models are equipped with 2.5 mm universal adapter caps. If additional caps are required, they can be ordered separately, see "FlowScout OPM8 and OLS8 Adapter Caps", page 42.
- All OLS8 models are equipped with SC adapter caps. If additional caps are required, they can be ordered separately, see "FlowScout OPM8 and OLS8 Adapter Caps", page 42.
- For Encircled Flux Options for multimode testing see "Encircled Flux (EF) Compliant Test Kit and Light Source", page 43.

				Fiber	Fiber Loss Measurements (nm)						
Model	AFL NO,	Power Meter	Light Source	Туре	850	1300	1310	1490	1550	Dynamic Range (dB)	
SLP8-Dual	SLP8-02-[KIT]	OPM8-L	OLS8-SM Dual	SM			<b>♦</b>		<b>♦</b>	70 <sup>(b)</sup>	
CMI DO Ound	CMI DO OA [VIT]	<b>5MLP8-04-[KIT]</b> OPM8-L	OLS8-Quad	MM	<b>♦</b>	<b>♦</b>				40 @850/1300 nm <sup>(a)</sup>	
SMLP8-Quad SMLP8-04-	SIVILP8-U4-[KII]			SM			<b>♦</b>		<b>♦</b>	60 @1310/1550 nm <sup>(b)</sup>	
SLP8-FTTX	SLP8-07-[KIT]	OPM8-H	OLS8-SM XGS	SM			•	•	•	45 <sup>(b)</sup>	

## FlowScout OPM8 and OLS8 Kit Configuration - [KIT]

[KIT]	OPM8 Kit Configuration / Kit Contents
BAS <sup>(c)</sup>	Includes: OPM8, OLS8, soft case, FlexReports Basic software with 60-day FlexReports Power software trial, USB cable
PLUS	Includes: BAS Kit plus upgrade to FlexReports Power

#### Notes:

- a. On 50/125 µm multimode fiber.
- b. On 9/125 µm single-mode fiber.
- c. Test results can be off-loaded via USB cable to FlexReports Basic, which provides result viewing and a 60-day trail of the FlexReports Power license. User can opt to upgrade FlexReports Basic to FlexReports Power after purchase. FlexReports Power provides professional reports generation for AFL power meters.

## FlowScout OPM8 and OLS8 Adapter Caps

AFL NO.	Connector Adapter Type	Usage Test Port Usage	
2900-63-0002MR	2.5 mm Universal		
2900-63-0001MR	1.25 mm Universal		
2900-63-0003MR	SC	OPM8	
2900-63-0006MR	FC	OPINI8	
2900-63-0005MR	ST®		
2900-63-0004MR	LC simplex		
2900-63-0007MR	SC		
2900-63-0010MR	FC	OLCO	
2900-63-0009MR	ST®	OLS8	
2900-63-0008MR	LC simplex		







# **Encircled Flux (EF) Compliant Test Kit and Light Source**

Since adoption by the IEC, Encircled Flux (EF) multimode launch requirements are increasingly specified into fiber loss testing job requirements. Meeting EF specification requires technicians use EF qualified test sets. It is important to note IEC 61280-1-4 and TIA-568-14-B, specify EF multimode launch conditions at the end of an EF qualified Reference Grade Test Cord (RGTC) — not directly out source test port. EF compliance requires an EF source and RGTC used together.

#### AFL EF compliant loss test kit

Multimode Test Port: Light Source with designed in Encircled Flux (EF) optics paired with one EF qualified RGTC; 50/125 µm receive test cord

Single-mode Test Port: Light Source with two 9/125 µm test cords (launch/receive)

					Available C	Connectors <sup>a</sup>	Included 2-mete		
AFL NO.	Power Meter	Light Source	WL - λ (nm)	Dynamic Range (dB)	Source Port	Test Cord	Launch (µm)	Receive (µm)	
SMLP5-5-EF-XX-YY	OPM5-2D	OLS4-EF	850, 1300	40 @850/1300 nm	FC, SC	FC, SC, ST, LC	MM: RGTC, 50/125	MM: 50/125	
			1310, 1550	60 @1310/1550 nm			SM: 9/125	SM: 9/125	

#### Notes:

- a. Select one of the available connector options for the Source Port (FC, SC) and Test Cord (FC, SC, ST, LC) to insure you receive the proper test cords.
- b. See section "Encircled Flux (EF) Reference Grade Test Cords" (below) to order additional Reference Grade Test Cords (RGTC).

#### EF compliant light source

Afl offers OLS4 light source with designed in Encircled Flux (EF) optics supplied with EF qualified Reference Grade Test Cords (RGTC). Specify RGTC connectors at time of order. OLS4 EF is supplied with one multimode RGTC and one standard 9/125 µm single-mode test cord.

AFL NO.	Wavelengths	Test Cords Included	
OLS4-EF-XX-YY	MM 850/1300 nm; SM 1310/1550 nm	(1) RGTC, 50 μm, MM, 2-meter; (1) 9/125 μm, SM, 2-meter	

#### Notes:

- c. Select one of the available options for the Source Port UCI adapter style (FC, SC) and Output Connector of RGTC (FC, SC, ST, LC) to insure you receive the proper test cords.
- d. See section "Encircled Flux (EF) Reference Grade Test Cords" (below) to order additional Reference Grade Test Cords (RGTC).

## **Encircled Flux (EF) Reference Grade Test Cords**

Encircled Flux (EF) requirements (IEC 61280-1-4 and TIA-568-14-B) specify multimode launch conditions at the end of an EF qualified Reference Grade Test Cord (RGTC). Thus, compliance to EF standards requires both, a light source with EF compliant optics and a RGTC. AFL offers RGTCs with a range of connector options. RGTCs are qualified in one direction and marked accordingly (input/output). AFL Reference Grade Test Cords use 50 µm OM4 fiber, red jacketing, and come in 2-meter length. Red jacketing used to distinguish RGTCs from standard multimode fiber jumpers.

AFL NO.	Connectors	
8700-04-0001MR	FC to FC	
8700-04-0002MR	FC to SC	
8700-04-0003MR	FC to LC	
8700-04-0004MR	FC to ST	
8700-04-0005MR	SC to FC	

AFL NO.	Connectors	
8700-04-0006MR	SC to SC	
8700-04-0007MR	SC to LC	
8700-04-0008MR	SC to ST	
8700-04-0028MR	LC to LC	





OLS1-DUAL



OLS2-DUAL



OLS4



OLS7



CSS-SM

# **LED and Laser Light Sources (OLS and CSS1 Series)**

**Encircled Flux Options for multimode testing. See** "Encircled Flux (EF) Compliant Test Kit and Light Source", page 43 AC chargers are available (ordered separately), see table below.

				Outpu	t Wave	length	s (nm)		Output	Emitter	Output Power	G. 1.77.	Wave ID		
Model	AFL NO.	Connector	850	1300	1310	1490	1550	1625	Ports	Type (a)	(nominal, dBm)	Stability	Transmit	Power	Price
	LS1D-30-0900PR	ST													
OLS1-DUAL	LS1D-30-0901PR	SC	•						1	LED	-20	± 0.1 dB/8 hrs	•	(2) AA, AC	
OL3 I-DUAL	LS1D-30-0903PR	FC		_					'	LED	-20	± 0.1 ub/6 IIIS	_	(2) AA, AC	
	LS1D-30-0904PR	LC													
	LS2D-20-0900PR	FC									Ор				
OLS2-DUAL	LS2D-20-0902PR	ST			•		•		1	Laser		± 0.05 dB/1 hr	•	(2) AA, AC	
OL32-DUAL	LS2D-20-0904PR	SC			•		•		'	Lasei		± 0.05 ub/1 III	_	(2) AA, AC	
	LS2D-20-0906PR	LC													
	OLS4-10-0900PR	SC													
OLS4	OLS4-10-0901PR	ST			_		•		2	LED,	-20 @850 &1300 nm	± 0.05 dB/1 hr	•	(2)	
UL34	OLS4-10-0904PR	FC		_	•		_		2	Laser	0 @1310 & 1550 nm	± 0.05 dB/1 fil	_	(2) AA, AC	
	OLS4-10-0905PR	LC													
	OLS7-10-0901PR	FC													
OLS7-3	OLS7-10-0902PR	SC			•		•	•	1	Laser	-5	± 0.05 dB/1 hr	•	(2) AA, AC	
UL37-3	OLS7-10-0903PR	LC						•	'	Lasei	-5	± 0.05 ub/1 III	_	(2) AA, AC	
	OLS7-10-0904PR	ST													
	OLS7-11-0901PR	FC													
OLS7-FTTH	OLS7-11-0902PR	SC							1	Laser	-5	± 0.05 dB/1 hr	•	(2)	
OL37-FIIH	OLS7-11-0903PR	LC			•				'	Lasei	-5	± 0.05 ub/1 III	_	(2) AA, AC	
	OLS7-11-0904PR	ST													
CSS1-MM	CSS1-01-0902PR	SC	•	•					1	LED	-20	± 0.1 dB/1 hr		(2) AA	
	CSS1-10-0901PR	FC													
CCC1 CM	CSS1-10-0902PR	SC							1	Lacar	0	. O OE dD/1 hr		(2)	
CSS1-SM	CSS1-10-0903PR	LC			•		•		ı	Laser	0	± 0.05 dB/1 hr		(2) AA	
	CSS1-10-0904PR	ST													

#### Notes:

All Laser output powers are specified into 9/125  $\mu m$  single-mode fiber.

- a. Safety: Class I FDA 21 CFR 1040.10 and 1040.11, IEC 60825-1: 2007-03.
- b. Adjustable 2 dB.

# **OLS AC Power Supply**

AFL NO.	Description	OLS1-DUAL	OLS2-DUAL	OLS4	OLS7	
4050-00-0919PR	100-240 VAC to 9 VDC, (specify power cord, see page 55, Table 2)	<b>*</b>	<b>*</b>	<b>*</b>	<b>•</b>	

# **Connector Adapters (D models starting February 2006)**

AFL NO.	Description	OLS1-DUAL	OLS2-DUAL	OLS4	OLS7	CSS1-SM	
2900-50-0002MR	FC adapter	•	<b>•</b>	<b>*</b>	•	<b>•</b>	
2900-50-0003MR	SC adapter	<b>*</b>	<b>*</b>	<b>*</b>	<b>*</b>	<b>*</b>	
2900-50-0004MR	ST adapter	•	<b>*</b>	<b>*</b>	<b>*</b>	<b>*</b>	
2900-50-0006MR	LC adapter	<b>•</b>	<b>*</b>	<b>*</b>	<b>*</b>	<b>*</b>	
8800-00-0072PR	Universal flip-top dust cap for UCI outputs	•	<b>•</b>	<b>*</b>	<b>*</b>		

# 5 YEAR WARRANTY



OPM4



OPM5



CSM1

# **Optical Power Meters (OPM and CSM1 Series)**

## All Models Key Features:.

- All models feature 'Set Reference' functionality
- Measurement units: insertion loss in dB; power measurements in dBm,  $\mu W$
- Multiple test tone detection for fibre identification: 270 Hz, 330 Hz, 1 kHz, and 2 kHz tone
- For a list of all available adapter caps, see page 54.

## OPM5 Models:.

• OPM5 models include TRM® 3 PC Reporting software (Basic License).

					Calibra	ited Wa	veleng	ths (nm	)			Detector	Measurement		Feat	ures	
Model	AFL Numbera	650	660	780	850	980	1300	1310 <sup>b</sup>	1490	1550	1625	Туре	Range (dBm)	Power	PC S/W	Wave ID	
OPM4-1D	OPM4-31-0900PR	•	•	•	•							Silicon	+6 to -70	(2) AA, USB		<b>*</b>	
OPM4-2D	OPM4-32-0900PR				•		•	<b>♦</b>	•	<b>♦</b>		Germanium	+6 to -60	(2) AA, USB		<b>♦</b>	
OPM4-3D	OPM4-33-0900PR				•		•	<b>♦</b>	•	•	•	InGaAs	+10 to -75	(2) AA, USB		•	
OPM4-4D	OPM4-34-0900PR				•	<b>♦</b>	<b>♦</b>	<b>♦</b>	<b>♦</b>	<b>♦</b>	<b>♦</b>	InGaAs	+26 to -50	(2) AA, USB		<b>♦</b>	
OPM5-2D	OPM5-32-0900PR				•		•	•	•	•		Germanium	+6 to -60	(2) AA, USB	USB	•	
OPM5-3D	OPM5-33-0900PR				•		•	<b>♦</b>	•	<b>♦</b>	•	InGaAs	+10 to -75	(2) AA, USB	USB	<b>♦</b>	
OPM5-4D	OPM5-34-0900PR				•	•	•	•	•	•	•	InGaAs	+26 to -50	(2) AA, USB	USB	•	
CSM1-3	CSM1-03-0900PR				•		<b>♦</b>	<b>♦</b>	<b>♦</b>	<b>♦</b>	•	InGaAs	+6 to -70	(2) AA			
CSM1-4	CSM1-04-0900PR				•	•	•	<b>♦</b>	•	•	•	InGaAs	+26 to -50	(2) AA			

#### Notes:

- a. Please specify Adapter Cap option at time of ordering: 2.5 mm, 1.25 mm, FC, ST, SC, or LC. One per order!
- b. Optical Power Meters use a common calibration point for 1300 nm (multimode) and 1310 nm (single-mode).

## **OPM Accessories**

AFL NO.	Description	OPM4D	OPM5D	
6000-00-0024MR	USB Cable: PC (USB-A) to OPM (USB-MINI B):	External	Connect to PC and	
	Connect OPM to PC for data upload to TRM® 3	power only	external power	
	External Power for OPM (when used with customer supplied USB-A power source)			
	<b>Note:</b> OPM/OLS don't charge any rechargeable batteries!			





SLP5-6



SMLP5-5



CKSM-2

# **Optical Loss Test Kits (SLP, SMLP, and CK Series)**

For Encircled Flux Options for multimode testing see "Encircled Flux (EF) Compliant Test Kit and Light Source", page 43.

Specify one source/adapter cap connector type when ordering. All test kits include an optical power meter, optical light source, adapter cap, user's guide, and carry case. Additional adapter caps may be ordered separately (see page 54). For available AC chargers see page 44. SLP and SMLP5 kits also include mandrel, USB cable, and TRM® 3 Test Results Manager trace analysis/reporting and certification or OPM loss reporting PC software (Basic License).

			Power	Light	Fiber	Lo	ss Mea	sureme	ents (n	m)	Dynamic Range		Fea	tures	D.1
Model	AFL NO.	Connector	Meter	Source	Туре	850	1300	1310	1490	1550	(dB)	Set Ref	PC S/W	Auto Dual λ Test	Price
	SLP5-30-0904PR	ST													
SLP5-6	SLP5-30-0905PR	SC	OPM5-3D	OLS2D	SM					•	70 <b>b</b>	•	•	_	
3LF 3-0	SLP5-30-0906PR	FC	OF IVI 3-3D	OLJZD	21/1			•		•	70	_	•	_	
	SLP5-30-0907PR	LC													
	SLP5-11-0910PR	FC													
CLDE ETTU	SLP5-11-0911PR	SC	ODME 4D	OLCZ ETTU	SM						45 <b>b</b>			_	
SLP5-FTTH	SLP5-11-0912PR	ST	OPM5-4D	OLS7-FTTH	21/1			•	•	•	45*	•	•	-	
	SLP5-11-0913PR	LC													
	SMLP-55-0902PR	LC									40 @050/4300 3				
CMI DE E	SMLP-55-0907PR	SC	ODME 3D	OLCA	MM						40 @850/1300 nmª		•	_	
SMLP5-5	SMLP-55-0908PR	ST	OPM5-2D	OLS4	SM	•	•	•		•	60 @1310/1550 nmb	_	•	▼	
	SMLP-55-0909PR	FC			31/1						00 @ 15 10/ 1550 11111"				
CKM-2	CKM2-00-0902PR	SC	CSM1-3	CSS1-MM	MM	•	•				40ª	•			
cuc 2	CKS3-00-0901PR	FC	66144.2	6664 614	61.4						70 04240/4550				
CKS-3	CKS3-00-0902PR	SC	CSM1-3	CSS1-SM	SM			•		•	70 @1310/1550 nm	•			
CKCM 3	CKD3 00 0003DB	SC	CCM1 2	CSS1-MM	MM					•	40 @850/1300 nmª				
CKSM-2	CKD2-00-0902PR	SC	CSM1-3	CSS1-SM	SM		•	•		•	60 @1310/1550 nmb	•			

#### Notes:

a. On  $62.5/125 \, \mu m$  multimode fiber.

b. On  $9/125 \mu m$  single-mode fiber.

# **FIBER IDENTIFICATION**





MFT Multi-Fiber Tracer

# **MFIS Multi-Fiber Identification System**

MFIS Multi-Fiber Identification System is an award-winning, innovative product family to help users verify network construction quickly, accurately and efficiently. MFIS provides 100% multi-fiber network continuity assurance and senior management peace-of-mind.

MFT Multi-Fiber Tracer	Wavelength	Output Power		Connector Type		Power
MFT	1550 nm ±20 nm	+3 dBm ±1 dB peak into 9/125 μι	m fiber	MTP®/MPO/APC (unpini	ned) 12-fiber	2 X AA
		•				
MFI Multi-Fiber Identifier	Calibrated Fiber S	ize and Wavelength	Data	Detection Range	Working Fiber Size	Power
MFI	250 μm @1550 nm	(SMF-28/28E) ribbon fiber	+2 to	-35 dBm	250 μm ribbon fiber	2 X AAA
MFP Multi-Fiber Power Meter	Calibrated Wavel	ength	Tone	Detection	Measurement Range	Power
MFP	Fiber ID mode: 1550	nm	270 H	z, 330 Hz, 1 kHz, 2 kHz	Fiber ID mode: +10 to -35 dBm	2 X AA
	OPM mode: 850, 13	00, 1310, 1490, 1550, 1625 nm			OPM mode: +10 to -75 dBm	

# **MFIS Ordering**

	Includes							
	Multi-Fiber Tester			Acces				
AFL NO.	MFT Tracer	MFI Identifier	MFP Power Meter	12-fiber Cable	One-Clicks	Soft Carry Case		
MFTI-12-BAS	<b>•</b>	•		<b>♦</b>	<b>♦</b>	<b>•</b>		
MFTP1-12-BAS	<b>*</b>		<b>•</b>	<b>•</b>	<b>♦</b>	<b>*</b>		
MFTIP1-12-BAS	<b>*</b>	•	<b>*</b>	<b>•</b>	<b>•</b>	<b>*</b>		
MFI1-00-0900MR		<b>•</b>						
MFP1-12-0900MR			<b>*</b>					

MFIS Kits Order Entry: MFTI-12-BAS-[C] MFTP1-12-BAS-[C] MFTIP1-12-BAS-[C]

[C]	Cable type
ASC	MPO to 12-fiber SC/APC fan-out cable, One-Click Cleaner MPO, One-Click Cleaner Mini-100 SC, ST, FC
USC	MPO to 12-fiber SC/UPC fan-out cable, One-Click Cleaner MPO, One-Click Cleaner Mini-100 SC, ST, FC
ULC	MPO to 12-fiber LC/UPC fan-out cable, One-Click Cleaner MPO, One-Click Cleaner Mini-100 LC/MU

## **MFIS Accessories**

AFL NO.	Description			
8700-00-0198MR	Cable, MPO/APC(M)-SC/APC, 12-fiber, SM, fan-out, 3 meters			
8700-00-0200MR	Cable, MPO/APC (M) - SC/UPC, 12-fiber, SM, fan-out, 3 meters			
8700-00-0201MR	Cable, MPO/APC (M) - LC/UPC, 12-fiber, SM, fan-out, 3 meters			
8500-05-0005MZ	One-Click Cleaner Mini-100 SC, ST, FC (100+ cleans)			
8500-05-0006MZ	<b>D5-0006MZ</b> One-Click Mini-100 MU/LC (100+ cleans)			
8500-05-0030MZ	One-Click Cleaner MPO (500+ cleans)			



MFI Multi-Fiber Identifier



MFP Multi-Fiber Power Meter



# **OFI-BIPM & OFI-BIPMe Optical Fiber Identifiers**



**Specifications** 

Insertion Loss: 0.2 dB @1310 m

• Detection Sensitivity: -64 dBm @1310 nm, 250 μm fiber

• Detect up to four tones: 270Hz, 330Hz, 1KHz, and 2KHz

• Power Measurement: +10 to -73 dBm @1550 nm, 250 μm fiber

• Power Supply: 2 x AA batteries; 1.2 to 1.5 V DC

• Battery Life: 8 hours

• Dimensions (W x H x D): 5.0 x 11.5 x 21.2 cm (1.9 x 4.5 x 8.3 in)

• Weight: 230 g (8.1 oz) including battery

AFL's OFI-BIPMe is an easy-to-use hand-held device that determines if a fiber is live, the transmission direction, carrying up to four tones, and the relative core power. Its best-in-breed sensitivity makes it the only OFI that works on bend insensitive fiber and in a bright sunlight.

A favorite of technicians in the field, OFI-BIPMe has a universal head which means there are no adapters to change or lose. The slim front profile makes checking tightly packed fibers easier and the positive-stop trigger ensures the perfect amount of pressure is applied every time.

The OFI-BIPMe is nicknamed the "job saver" because it eliminates the possibility of unplugging a live fiber and interrupting service to customers which could cause expensive network outages. And its ergonomic design has been described as stunning.



OFI-BIPM

OFI-BIPMe



# **OFI-BIPM & OFI-BIPMe Optical Fiber Identifiers**

## Only available to customers in North America, Central America and the Caribbean, China, Vietnam, and Malaysia!

The OFI-BIPM/-BIPMe optical fiber identifier is an easy-to-use tool that determines if a fiber is live, the transmission direction, and the relative core power on standard and bend-insensitive single-mode and multimode fibers. Its positive-stop trigger mechanism provides the right amount of pressure every time to assure proper detection, while keeping loss to a minimum. This ensures that traffic will not be interrupted and the fiber will not be damaged. Our full featured OFI-BIPM/-BIPMe includes a touch screen, an integrated optical power meter, and several easy-to-select options. The OFI-BIPM/-BIPMe includes carry case, batteries, and user's quide.

Model	Fiber Type	Wavelength Range	Power	Detectable Signals	
OFI-BIPM	MM fiber, 0.25 mm SM and SM ribbon fiber (up to 12 ribbon)	900-1700 nm	(2) AA	CW, Traffic or 270 Hz ,1 kHz, 2 kHz	
OFI-BIPMe	1.1 / 1.5 / 1.7 / 2.0 / 3.0 mm SM jacketed fiber	900-1700 nm	(2) AA	CW, Traffic or 270 Hz, 330 Hz, 1 kHz, 2 kH	

# **OFI-BIPM/-BIPMe Power Meter Port Adapters**

AFL NO.	Adapter Type	Test Port	
BIPM-00-FC	FC	OPM (power meter)	
BIPM-00-SC	SC	OPM (power meter)	
BIPM-00-ST	TZ	OPM (power meter)	
BIPM-00-LC	LC	OPM (power meter)	
BIPM-00-25	2.5 Universal	OPM (power meter)	

# OFI-200D and OFI-400 Optical Fiber Identifiers

All OFI models include carry case, batteries, and user's guide.

		Wavelength	Insertion Lo	ss (dB) @			Tone	(Hz)		Traffic	
Model	Fiber Coating Type (recommended)	Range (nm)	1310 (nm)	1550 (nm)	Power	270	330	1000	2000	Direction	
OFI-200D	250 um 000 um sibbon 2 mm os 2 mm	800 - 1700	0.6	2.5	9V				<b>♦</b>	<b>*</b>	
OFI-400	250 μm, 900 μm, ribbon, 2 mm or 3 mm	800 - 1700	0.6	2.5	(2) AAA	<b>♦</b>	<b>♦</b>	<b>♦</b>	•	•	
OFI-400C	2 mm or 3 mm jacketed	800 - 1700	1.0	2.8	(2) AAA	<b>♦</b>	<b>♦</b>	<b>♦</b>	•	•	
OFI-400HP	2 mm or 3 mm jacketed	800 - 1700	0.2 to 0.5	0.8 to 1.3	(2) AAA	•	•	•	•	<b>♦</b>	

## OFI-200D and OFI-400 Accessories

AFL NO.	Test Port	
OFI1-10-0102PR	OFI 200D and OFI-400 plunger, head	
OFI1-10-0216PR	OFI 200D and OFI-400 plunger cover	



## **VFI4 Visual Fault Identifiers**



Visualize defects in your single-mode and multimode fiber optic cables with the press of a button!

## **Specifications**

• Wavelength: 650 nm ±15 nm

• Modulation: 2 Hz or CW selected

• Output Power: VFI4 model - 5 mW (maximum)

VFI4-L model - 1 mW (maximum)

• Power 1 AA battery, VFI4 model - <30 hours (flash mode)

VFI4-L model - <50 hours (flash mode)

• Size (H x W x D) 7.9 x 4.7 x 2.2 cm (3.1 x 1.8 x 0.8 in)

• Weight 43 g (1.5 oz)

Visual Fault Identifiers (VFIs), or Visual Fault Locators (VFLs), are used to inject visible light energy into a fiber. AFL's compact VFI4 injects high-powered red-laser light to provide exceptional brightness and range for locating sharp bends, breaks, faulty connectors, and other faults.

The VFI4 is about the size of an automotive key-fob and packs a powerful Class 3R red laser with a 10 km range. It is powered by one universally available AA battery which will last for more than 30 hours in flashing mode for VFI4 model and up to 50 hours for VFI4-L model.

The VFI4 features a 2.5 mm universal adapter that accepts PC and angled FC, SC, ST, etc. connectors. There is an option for 1.25 mm universal adapter for LC and MU connectors.

Built with the quality you expect from AFL, a leading global supplier of passive fiber optic components for over 30 years, the VFI4 can easily handle the rigors of the field test environment.

Contact your local AFL representative to learn more about the VFI4 and other essential tools for installing, activating and maintaining fiber optic networks.



VFI4



VFI4-L

## **VFI4 Visual Fault Identifiers**

#### Now a low power version is also available!

AFL's compact VFI4 injects high-powered red-laser light to provide exceptional brightness and range for locating defects in single-mode and multimode fibers. During installation and activation, the VFI4 is used for quick continuity checks, fiber tracing, splice verification, and Pass/Fail validation for mechanical connectors. The VFI4 is also an essential troubleshooting tool to find sharp bends, breaks, faulty connectors, and other defects that "leak" light - enabling technicians to quickly spot them. The rugged VFI4 is designed for the rigors of real-life field testing. It has a range of up to 10 km, fits on a key-chain, and features extensions that protect the red-laser port. It has both CW and pulsating modes and is powered by a single AA battery for up to 30 hours of operation for VFI4 model and up to 50 hours for VFI4-L model.

Model	Wavelength	Output Power (into single-mode fiber)	Emitter Type	Connector Type	Power
VFI4	650 nm	5 mW, 2 Hz, CW	Lasera	Universal 2.5 mm; 1.25 mm	1 x AA
VFI4-L	650 nm	1 mW, 2 Hz, CW	Laserb	Universal 2.5 mm; Optional 1.25 mm	1 x AA

#### Notes:

- a. Safety: Class IIIa FDA 21 CFR 1040.10 and 1040.11, Class 3R IEC 60825-1:2007-03.
- b. Safety: Class II FDA 21 CFR 1040.10 and 1040.11, Class 2 IEC 60825-1:2007-03.

AFL NO.	Description	
VFI4-01-0900PR	VFI4 with 2.5 mm and 1.25 mm adapters	
VFI4-02-0900PR	VFI4-L, with 2.5 mm adapter	

## **VFI4 Accessories**

The VFI4 uses one-piece thread-on adapters with a captivated alignment sleeve. For replacements, use part numbers 2900-50-0013MR and 2900-50-0012MR.

AFL NO.	Description	
2900-50-0013MR	2.5 mm Universal adapter for VFI port	
2900-50-0012MR	1.25 mm Universal adapter for VFI port	



MT Tracer Kit

# MT Tracer (12-fiber VFI and Display)

The MT Tracer Kit includes an MT Tracer Source, MT Tracer Display, and carry case. The MT Tracer Source, which may be used as a multifiber Visual Fault Identifiers provides 12 separately controlled visible lasers. The MT Tracer Display uses passive optics to show the light received on each fiber being traced. The MT Tracer can illuminate a selected fiber or automatically sequence through all 12 fibers. When used together, the MT Tracer Source and Display provide a fast way to trace (verify connectivity) a 12-fiber link. Both Source and Display are equipped with male (pinned) 12-fiber MTP® connectors.

Model	Wavelength	Output Power (into SMF)	Emitter Type*	Connector Type	Power
MT Tracer Source	650 nm	1 mW, 2 Hz or CW	Laser	MTP®	2 AA (40 hours)

<sup>\*</sup> Safety: Class II FDA 21 CFR 1040.10 and 1040.11, IEC 60825-1:2007-03.

AFL NO.	Model	Description	
TRCR-90-0900	MT Tracer Kit	MT Tracer Source, MT Tracer Display, and carry case	
TRCR-20-0900	MT Tracer Source	MT Tracer Source	
TRCR-10-0900	MT Tracer Display	Provides eye-safe viewing of visible light	

## **REPORTING SOFTWARE**



## Reporting and analyzing field test data has never been easier!

- Single software platform supporting AFL test and inspection testers
- Wireless field upload of test data using the FlexApp mobile App
- Results viewing, editing, reporting using the FlexReports PC software
- Simple 3-step configuration and extremely fast cloud-based reporting
- Comprehensive Bi-directional OTDR, OLTS, and Inspection reporting capability
- PDF and Excel report formats
- Simple report navigation with hyperlinked test reports
- Report flexibility and customization with Report Wizard configurations

AFL's FlexReporter<sup>™</sup> software suite is an all-in-one viewer, test data transfer, analysis, and cloud-based reporting tool designed for use with AFL fiber optic test and inspection products. Designed for speed and simplicity, FlexReporter enables you to generate clear and easy-to-read reports quickly and easily.

FlexReporter includes FlexApp for mobile sharing of field test results and FlexReports for generating clear and ultra-quick reports for large or small fiber projects. While reporting from the field, technicians benefit from FlexApp's auto-sync technology and a single App regardless of which AFL's test or inspection device is used.

FlexReports is the fastest cloud reporting engine available and can deliver large fiber reports in under 3 minutes. Its clean interface and large icons enable reports to be generated and viewed quickly and smoothly. View and analyze Bi-directional OTDR traces, loss or certification results, fiber end-face inspection results, and batch-edit OTDR traces uploaded from all AFL FlexScans and FOCIS inspection devices.

Available in either Basic or Advanced versions, reporting and analyzing field test results has never been easier.



# FlexReporter Software Suite









Bi-directional OTDR reporting



**Excel Report format** 

**FlexReporter Software Suite** is a cloud-based reporting platform that provides tools for wireless test data transfer and cloud-enabled reporting for AFL test and inspection products. FlexReporter combines FlexApp - a mobile App that wirelessly transfer test results to Reporter-Cloud and cloud-based, extremely fast reports generator - FlexReports PC software. The FlexReporter suite was developed to make the complicated task of reporting faster, simpler, and easy- to- use.

**FlexReports PC software** is integrated with the cloud to provide remote results download and a 3-click fast cloud-based reporting tool. The FlexReports mobile companion FlexApp provides on-site wireless cloud upload and sharing of test results from AFL OTDRs and Inspection products. FlexReports is a Windows®-compatible PC software that is available in Basic and Advanced versions.

**FlexReports Basic** enables users to quickly view and analyze results. It provides for simple single fiber OTDR and OLTS reports and includes a 60-day Advanced Reporter and batch editor license trial.

## **Basic and Advanced Software Comparison**

FlexReports Features	Basic License	Advanced License
OTDR Trace Viewer, OLTS Viewer/Editor	•	<b>♦</b>
OTDR Trace Analysis with the Bi-directional and Macrobend analysis	<b>♦</b>	<b>•</b>
OTDR Add/Delete events from the Trace Viewer	•	•
Single Fiber reporting for OTDR and OLTS results	<b>♦</b>	<b>•</b>
60-Day Reporting and Batch Editor License Trial	•	
Download of test results stored in the FlexReporter cloud		<b>•</b>
Reports Wizard, compatible with TRM		<b>♦</b>
3-click reporting using new fast FlexReporter cloud report service		<b>•</b>
Bi-directional OTDR, OLTS, Inspection reports		•
Hyperlinked PDF test reports with clear Pass/Fail indicators		<b>•</b>
PDF and Excel format OTDR reports		•
Batch editing of OTDR .SOR files for renaming results, correcting Pass/ Fail limits and launch cable settings		<b>*</b>

**FlexReports Advanced** is a full featured reporting and post processing solution for generation of professional Bi-directional OTDR, OLTS, and Inspection reports using industry standards. It offers a full featured Batch Edit functionality for updating OTDR pass/fail limits and correcting OTDR events. FlexReports supports AFL FlexScan OTDRs, FOCIS connector inspection products, OPM power meters,

**FlexApp** is a mobile Android and iOS App that supports AFL's FlexScan OTDRs and FOCIS connector inspection products (FOCIS Flex, FOCIS Lightning). FlexApp wirelessly transfers test results from any FlexScan OTDR or FOCIS inspection probe directly to FlexReporter-Cloud for analysis, editing, and reports generation with FlexReports PC software. FlexApp features 'print-to-PDF" functionality and supports FlexScan FS200 OTDR firmware auto updates.

## Ordering

and OLTS products.

AFL NO.	Description		
RPTS-AD-USB-1	FlexReports Advanced, one seat license on USB		
RPTS-UP-TRM3-1	LexReports Advanced, one seat, Upgrade from TRM® 3 Advanced on USB. Users must have TRM-3 Advanced license		
FlexReports Basic	FlexReports Basic, available for download on AFL Software Resources website		
FlexApp	FlexApp data transfer mobile App, available on Google Play and Apple App Store		





# TRM® 3 Test Results Manager

TRM Test Results Manager, a PC-based software, provides comprehensive test results (OTDR trace, connector inspection, optical loss) test results analysis and reporting. Designed for use with AFL test and inspection products, TRM is available in Basic and Advanced versions. TRM Basic allows technicians to quickly view test results, analyze OTDR traces, view loss or certification results, batch-edit OTDR traces and create acceptance reports conforming to industry guidelines. Reports can be generated showing dual wavelength traces and event tables, end-face image, event map and loss data for each fiber. Users can apply pass/fail thresholds to OTDR events and OLTS measurement; create and apply application rules per industry standards. The OTDR Batch editor allows user to edit and analyze multiple trace files simultaneously. TRM Advanced software includes all Basic software features and adds bi-directional OTDR trace averaging, macrobend detection, and export of .SOR files to .CSV file format. Users may download a TRM full working version (Basic plus Advanced features) and try it for 30 days. Once the evaluation period ends, users will need to acquire TRM Basic or TRM Advanced software to continue to use TRM Test Results Manager.

## Ordering (for use with OPM5 Power Meters)

AFL NO.	Description	
TRM3-BASIC	TRM 3.0 with Basic License (OTDR Trace/OLTS Viewer, Batch Editor and Reports), USB delivery	
TRM3-BA-EMAIL	TRM 3.0 with Basic License (OTDR Trace/OLTS Viewer, Batch Editor and Reports), email delivery	
TRM3-ADVANCED	TRM 3.0 with Advanced License (TRM 3.0 Basic plus Advanced Analysis), USB delivery	
TRM3-AD-EMAIL	TRM 3.0 with Advanced License (TRM 3.0 Basic plus Advanced Analysis), email delivery	
TRM3-UPGRADE	E TRM 3.0 upgrade from Basic to Advanced License, USB delivery	
TRM3-UP-EMAIL	TRM 3.0 upgrade from Basic to Advanced License, email delivery	

## **ADAPTER CAPS & ACCESSORIES**

## Adapter Caps for OPM Ports and OFS300-200

Standard thread-on adapter caps are used to mate non-angled and angled single-fiber and dual-fiber connectors to optical ports on OPM/CSM and OFS300-200C products.

AFL NO.	Description	
8800-00-0214	2.5 mm Universal (accepts FC, SC, and ST ferrules)	
8800-00-0224	1.25 mm Universal (accepts LC and MU ferrules)	
8800-00-0200	FC	
8800-00-0209	SC	
8800-00-0202	ST®	
8800-00-0225	LC simplex only	
8800-00-0273PR	LC duplex only <sup>a</sup>	
8800-00-0221	E2000	
8800-00-0203	SMA	

## Adapter Caps for OFS300-200 Only

Note: Do not use the following adapter caps with our optical power meters or other test sets to measure optical power!

AFL NO.	Description	
8800-00-0218	Angled FC	
8800-00-0233	MTP®/MPO flat ferrule (0°), typically MM	
8800-00-0236	1.25 mm open Universal <sup>b</sup>	
8800-00-0219	2.5 mm open Universal.(accepts SC duplex, OptiTap)	
8800-00-0248	2.0 mm ferrule (pin)	
8800-00-0226	MU simplex	
8800-00-0219	2.5 mm open Universal.(accepts SC duplex, OptiTap)	
8800-00-0230	MT-RJ (A side only)	
8800-00-0231	MT-RJ (A side or B side)	

#### Notes:

- a. When it is used on OPM, it's recommended for single-mode testing only. The loss measured with this adapter can be up to 1 dB.
- b. For Inspecting backplane and duplex connectors with 1.25 mm ferrules such as LC and MU. Not recommended for measuring optical power.



## **Test Jumpers**

AFL NO.	Description			
Multimode Test Jumpers (62.5/125 μm - 2 meters)				
8700-00-0053MR	SC/SC			
8700-00-0045	SC/ST			
8700-00-0003	ST/ST			
Single-mode Test J	umpers (9/125 µm - 2 meters)			
8700-00-0005	FC/FC			
8700-00-0016	FC/ST			
8700-00-0017	ST/ST			
8700-00-0018	SC/SC, G.657) BIF			
8700-00-0021	FC/SC			
8700-00-0022	SC/ST			
8700-00-0032	FC/APC-FC/UPC			
8700-00-0033	SC/APC-FC/UPC			
8700-00-0034	SC/APC-SC/UPC			
8700-00-0046	LC/SC			
8700-00-0192MR	SC/SC			
MPO Test Jumpers				
8700-00-0156MR	MPO(F)-MPO(F), APC, SM, type A, 2 meters			
8700-00-0158MR	MPO(M)-MPO(F), APC, SM, type A, 2 meters			
8700-00-0159MR	MPO(F)-MPO(F), APC, SM, type B, 2 meters			
8700-00-0167MR	MPO(M)-MPO(M), APC, SM, type A, 300 mm			
8700-00-0168MR	MPO(M)-MPO(M), APC, SM, type B, 300 mm			

# **Power Supply Cords for AC Chargers**

# 3-Conductor Power Cords (for C, CS, FLX, M, OFL Series and FTS, OLTS5, OLS1-1C/2C, T400/500B, VFS2, VOA5)

Please specify power cord type (country) when ordering an AC charger. One power cord is included with each AC charger at no charge. Additional power cords may be purchased separately.

Table 1

AFL NO.	Country	lmage	Description	
6000-00-0001MR	USA	3-conductor	IEC320, 115V, Type K	
6000-00-0012MR	Euro		IEC320, 250V, Type B	
6000-00-0015MR	UK		IEC320, 250V, Type D	
6000-00-0016MR	Australia, China		IEC320, 250V, Type C	
6000-00-0017MR	Denmark		IEC320, 250V, Type E	
6000-00-0018MR	Japan		IEC320, 125V, Type M	
6000-00-0019MR	Swiss		IEC320, 250V, Type L	
6000-00-0020MR	Italy		IEC320, 250V, Type I	
6000-00-0021MR	Israel		IEC320, 250V, Type H	
6000-00-0022MR	India		IEC320, 250V, Type G	

## Mating Adapters for both MMF and SMF testing

AFL NO.	Description	
8400-00-0083MR	LC/LC, Simplex	
8400-00-0004MR	FC/FC	
8400-00-0020	ST/ST	
8400-00-0029MR	SC/FC	
8400-00-0045MR	SC/SC	
8400-00-0054	SC/ST	
8400-00-0093MR	MPO-12, key-up/key-up (aligned notch)	
8400-00-0094MR	MPO-12, key-up/key-down (opposed notch)	
8400-00-0105PR	MPO-16, key-up/key-up (aligned notch)	
8400-00-0106PR	MPO-16, key-up/key-down (opposed notch)	

# **Mandrels for Multimode Link Testing**

Mandrels are used to meet the transmit jumper mandrel-wrap requirements of TIA/EIA-568 B.3 (Section 7.1) when testing multimode links using an LED source.

AFL NO.	Description	
5400-00-0201PZ	Mandrel, 62.5 µm fiber, 3 mm jacket	
5400-00-0202PZ	Mandrel, 50 μm fiber, 3 mm jacket	
5400-00-0900PZ	Two mandrels: 62.5 & 50 µm fiber, 3 mm jacket	

## **Return Loss Test Sets Accessories**

AFL NO.	Description	
2475-20-0001MZ	Index Matching Block, simplifies tests (5-pack)	

## 2-Conductor Power Cords (for OLS1-DUAL, OLS2-DUAL, OLS4, and OLS7)

Please specify power cord type (country) when ordering an AC charger. One power cord is included with each AC charger at no charge. Additional power cords may be purchased separately.

Table 2

AFL NO.	Country	Image	Description	
6000-12-0001MR	USA	2-conductor	IEC 320-C7, Type N	
6000-12-0002MR	Euro		IEC 320-C7, Type A	
6000-12-0003MR	UK	( )	IEC-320-C7, Type D	
6000-12-0004MR	Australia, China		IEC-320-C7, Type P	
6000-12-0005MR	India		IEC-320-C7, Type G	
6000-12-0006MR	Japan		IEC-320-C7, Type M	



# **ACCESSORIES FOR DISCONTINUED PRODUCTS**

AFL NO.	Description	Model	
C850 OTDR, C840 and	C880 Accessories and Connector Adapters		
4050-00-0122PR	Vehicle charger/supply, 18 V, 6.7 A, 120 W		
4050-00-0918PR	AC charger 100-240 VAC to 18 VDC (a)		
4050-30-0005MR	C850 Li-lon battery charger 90-260 VAC (b)		
3900-05-0001PE	C840, C880 Li-Ion battery		
6000-00-0027MR	Cable, USB-MINI B (connect to PC)		
TRM-00-0920PR	TRM® 2.0 software upgrade, Basic to Advanced		
8800-00-0072PR	Universal flip-top dust cap for UCI outputs		
2900-50-0002MR	FC adapter for OTDR/OLS port		
2900-50-0003MR	SC adapter for OTDR/OLS port	C850,	
2900-50-0004MR	ST adapter for OTDR/OLS port	C840, C880	
2900-50-0006MR	LC adapter for OTDR/OLS port		
8800-00-0200	FC adapter for OPM port		
8800-00-0209	SC adapter for OPM port		
8800-00-0202	ST® adapter for OPM port		
8800-00-0225	LC adapter for OPM port	C850	
8800-00-0214	2.5 mm adapter for OPM port	C630	
8800-00-0224	1.25 mm adapter for OPM port		
2900-53-0001MR	2.5 mm adapter for VFL port		
2900-53-0002MR	1.25 mm adapter for VFL port		
2900-52-0001MR	FC adapter for OPM port		
2900-52-0002MR	SC adapter for OPM port		
2900-52-0003MR	ST adapter for OPM port		
2900-52-0004MR	LC adapter for OPM port	C840,	
2900-52-0005MR	2.5 mm Universal adapter for OPM port	C880	
2900-52-0006MR	1.25 mm Universal for OPM port		
2900-50-0007MR	2.5 mm Universal adapter for VFL port		
2900-50-0010MR	1.25 mm Universal adapter for VFL port		
CS260 <sup>a</sup> , FLX380, OFL25	0, OFL280 Series Accessories and Connecto	or Adapters	
6000-00-0024MR	Cable, USB-MINI B (connect to PC)		
4050-00-0927PR	AC charger 100-240 VAC to 15 VDC (a)		
4050-30-0005MR	Li-lon battery charger 90-260 VAC (b)		
3900-05-0003ME	Li-lon battery pack		
TRM-00-0920PR	TRM® 2.0 upgrade from Basic to Advanced		
2900-50-0002MR	FC adapter for OTDR/OLS port		
2900-50-0003MR	SC adapter for OTDR/OLS port		

AFL NO.	Description	Model
2900-50-0004MR	ST adapter for OTDR/OLS port	
2900-50-0006MR	LC adapter for OTDR/OLS port	
2900-50-0011MR	SC/APC adapter for OTDR/OLS port	
2900-52-0001MR	FC adapter for OPM port	
2900-52-0002MR	SC adapter for OPM port	
2900-52-0003MR	ST adapter for OPM port	
2900-52-0004MR	LC adapter for OPM port	
2900-52-0005MR	2.5 mm Universal adapter for OPM port	
2900-52-0006MR	1.25 mm Universal adapter for OPM port	
2900-53-0001MR	2.5 mm Universal adapter for VFL port	
2900-53-0002MR	1.25 mm Universal adapter for VFL port	
8800-00-0072PR	Universal flip-top dust cap for UCI outputs	

## **FOCIS Duel Adapter Tips**

FOCIS Due Port 1 I uses both the APC adapter tips listed below as well as the full set of adapter tips qualified for FOCIS Flex and FOCIS WiFi2, see "FOCIS Series Inspection Adapter Tips", page 23. The Port 2 of FOCIS Duel uses very specific tips (listed below) used only for Port 2 of FOCIS Duel.

AFL NO.	Port	Description	Tip ID	
FFLX-4S-ASC	1	SC/APC bulkhead adapter tip, quad-slotted	XASC	
FFLX-4S-AFC	1	FC/APC bulkhead adapter tip, quad-slotted	XAFC	
FFLX-4S-ALC	1	LC/APC bulkhead adapter tip, quad-slotted	XALC	
FDUO-01-ULC	2	LC/UPC ferrule adapter tip, single-slotted female "click-in"	SULC	
FDUO-01-ALC	2	LC/APC ferrule adapter tip, single-slotted female "click-in"	SALC	
FDUO-01-USC	2	SC/UPC ferrule adapter tip, single-slotted female "click-in"	SUSC	
FDUO-01-ASC	2	SC/APC ferrule adapter tip, single-slotted female "click-in"	SASC	
FDUO-01-U125	2	Universal 1.25 mm UPC ferrule adapter tip, single-slotted	U1	
FDUO-01-A125	2	Universal 1.25 mm APC ferrule adapter tip, single-slotted	A1	
FDUO-01-U25	2	Universal 2.5 mm UPC ferrule adapter tip, single-slotted	U2	
FDUO-01-A25	2	Universal 2.5 mm APC ferrule adapter tip, single-slotted	A2	

FOCIS Duel Accessories	FOCIS Duel Accessories				
1400-01-0172PZ	Easy Access carry case				
1400-05-0230PZ	Vrist strap				
3900-04-0008ME	Battery, 3.6V, NiMH, rechargeable				
4050-00-0931PR AC charger. Select power plug option.					
4050-00-0030USMR	US power plug for AC charger				
4050-00-0030UKMR	UK power plug for AC charger				

## Notes:

- a. Specify power cord, see page 55, Table 1.
- b. Specify power cord, see page 55, Table 2



# **Accessories for Discontinued Products**

AFL NO.	Description	Model			
FOCIS Duel Accessories	5				
4050-00-0030EUMR	EU power plug for AC charger				
4050-00-0030SAAMR	CN power plug for AC charger				
6000-00-0031MR	USB – Micro-B cable, 5 pin, 6 ft				
8800-02-0074MZ	Dust cap for the Inspection Port 1				
8800-02-0082MZ	Dust cap for the Inspection Port 2				
8800-02-0280MR	Dust cap for the LC (both UPC and APC) adapted	r tips; Port 2			
8800-02-0281MR	Dust cap for the SC (UPC / APC) adapter tips; Ins	spection Port 2			
6000-00-0034PR	5V USB charging cable (1.5 m), type A to barrel	(0.9 X 3.2 X 9 mm)			
1410-02-0228PZ	Rubber boot for FOCIS Flex, FOCIS Lightning, FO	CIS Duel			
FOCIS WiFi2 Accessorie	es & Adapter Tips				
1400-01-0172PZ	Easy Access carry case				
1400-05-0230PZ	Wrist strap				
8800-02-0074MZ	Dust cap for the Inspection Port				
4050-00-0931PR	AC charger. Select power plug option				
4050-00-0030USMR	US power plug for AC charger				
4050-00-0030UKMR	UK power plug for AC charger				
4050-00-0030EUMR	EU power plug for AC charger				
4050-00-0030SAAMR	SAA power plug for AC charger				
6000-00-0034PR	5V USB charging cable (1.5 m), type A to barrel	(0.9 X 3.2 X 9 mm)			
	Inspection Adapter Tips", page 23.				
	710 OTDR Accessories and Connector Adap				
4050-00-0918PR	AC charger <sup>a</sup> , 100-240 VAC to 18 VDC	M210e,			
4050-00-0122PR	Vehicle charger, 18 V, 6.7 A, 120 W	M310,			
8800-00-0072PR	Flip-top dust cap for UCI outputs	M700,			
TRM-00-0920PR	TRM 2.0 upgrade to Advanced software				
8800-00-0072PR	Flip-top dust cap for UCI outputs	M710			
1400-01-0075PZ	Hard carry case	M210e,			
3900-05-0001PE	Li-lon battery				
6000-00-0024MR	Cable, USB-MINI B (connect to PC)				
1400-01-0067	Soft Case	M310			
1400-01-0082PZ	Soft carry case	M700, M710			
4050-30-0005MR	Li-Ion battery charger 90-260 VAC (a)				
6000-00-0027MR	Cable, USB-MINI B (connect to PC)				

AFL NO.	Description	Model	
2900-50-0002MR	FC adapter for OTDR port	M210e,	
2900-50-0003MR	SC adapter for OTDR port	M310,	
2900-50-0004MR	ST adapter for OTDR port	M700,	
2900-50-0006MR	LC adapter for OTDR port	M710	
2900-50-0011MR	SC/APC adapter for OTDR port	M710	
2900-52-0001MR	FC adapter for OPM port	M210e,	
2900-52-0002MR	SC adapter for OPM port		
2900-52-0003MR	ST adapter for OPM port		
2900-52-0004MR	LC adapter for OPM port		
2900-52-0005MR	2.5 mm Universal for OPM port		
2900-52-0006MR	1.25 mm Universal for OPM port		
2900-50-0007MR	2.5 mm Universal for VFL port		
2900-50-0010MR	1.25 mm Universal for VFL port	M310	
8800-00-0200	FC adapter for OPM port	M700,	
8800-00-0209	SC adapter for OPM port		
8800-00-0202	ST adapter for OPM port		
8800-00-0225	LC adapter for OPM port		
8800-00-0214	2.5 mm Universal for OPM port		
8800-00-0224	1.25 mm Universal or OPM port		
2900-53-0001MR	2.5 mm Universal adapter for VFL port		
2900-53-0002MR	1.25 mm Universal adapter for VFL port		
OFS300 Microscope Ac	cessories and Adapter Caps		
1400-01-0055	Soft Carry case		
1400-01-0025PZ	Holster		
2900-10-0001	Tripod Stand (table top)		
8800-00-0214	2.5 mm Universal (accepts FC, SC, and ST ferrule	s)	
8800-00-0224	1.25 mm Universal (accepts LC and MU ferrules)		
8800-00-0200	FC		
8800-00-0209	SC		
8800-00-0202	ST®		
8800-00-0225	LC simplex only		
8800-00-0273PR	LC duplex only <sup>(b)</sup>		
8800-00-0221	E2000		
8800-00-0226	MU simplex		

## Notes:

- a. Specify power cord, see page 55, Table 1.
- b. When it is used on OPM, it's recommended for single-mode testing only. The loss measured with this adapter can be up to 1 dB.
- c. Specify power cord, see page 55, Table 2.



# **Accessories for Discontinued Products**

AFL NO.	Description	Model
8800-00-0219	2.5 mm open Universal <sup>(c)</sup> (accepts SC duplex, Op	tiTap)
8800-00-0230	MT-RJ (A side only)	
8800-00-0231	MT-RJ (A side or B side)	
8800-00-0203	SMA	
8800-00-0211	DIN 47256	
8800-00-0218	Angled FC	
8800-00-0233	MTP®/MPO flat ferrule (0°), typically MM	
8800-00-0236	1.25 mm open Universal	
8800-00-0219	2.5 mm open Universal (accepts SC duplex, Opti	Tap)
8800-00-0248	2.0 mm ferrule (pin)	
8800-00-0223	1.0 mm bare fiber (plastic)	
SVA1 Accessories and	Connector Adapters	
2900-50-0002MR	FC adapter	
2900-50-0003MR	SC adapter	
2900-50-0004MR	ST adapter	
2900-50-0006MR	LC adapter	
8800-00-0072PR	Universal flip-top dust cap for UCI outputs	



## **CALIBRATION SERVICES**

Servicing your valuable AFL Test & Inspection Equipment at authorized AFL calibration facilities ensures you are getting the most out of your equipment and it is performing accurately. In keeping with ISO certification guidelines, AFL recommends the following calibration intervals for AFL Test & Inspection Equipment products:

- 3-year Calibration Interval for OPM, CSM1, OLS, CSS1, and OFI products
- 1-year Calibration Interval for BI Enhanced Optical Fiber Identifiers OFI-BI, OFI-BIPM, OFI-BIPM
- 1-year Calibration Interval for all other AFL Test & Inspection Equipment products

Authorized AFL calibration facilities are traceable to the National Institute of Standards and Technology or equivalent.

Category	Model
OTDRs, FlexTesters	C850*
	FlexScan® TS100, FS300, FS200-60/-300/-100/-303/-304 without OLS/OPM
	FlexScan TS100, FS300, FS200-60/-300/-100/-303/-304 with OLS/OPM
	FLX380*, M210*, M210e*, M310, M710, OFL280*, OFL250*, RG-2100
OTDR and Certification Kits	C860*
Certification and Loss/Return Loss Kits (Pairs)	C840*, C880*
ROGUE® OLTS Certifier Kits (Pairs)	RGK-CERTxx, RGK-CERTxxB1
ROGUE OLTS Certifier Modules	RG-1100-xxx
FlowScout PON Power Meter	TPPM-XG
Power Meters	CSM1, OPM, MFP
Light Sources	CSS1, OLS (except OLS1-2C* and OLS1-1C*), MFT
Light Sources - Encircled Flux (EF) Compliant	OLS1-DL-EF, OLS4-EF
Optical Fiber Identifiers	OFI, MFI
BI Enhanced Optical Fiber Identifiers	OFI-BI, OFI-BIPM, OFI-BIPMe

## Notes:

- 1. \*This product is supported for calibration service only. Repair service is no longer supported on this product due of the lack of availability of the components needed to make repairs. This product must be in fully functional condition in order to be calibrated. Any of these products that are sent in for calibration that are not in good working condition will be charged an evaluation fee and sent back to the customer without calibration.
- 2. The following products are no longer supported for repair or calibration:
- OTDRs: CS260, FLX380-1xx, M100, M200, M600, M650, M700, OFL100, OFL200,
- Inspection products VFS1, VFS2, DFD1, VFD2
- Fiber Identification: OFI-FTTx, HiLite/VFI3, VFI2
- Optical Light Sources (OLS): OLTS2, OLTS3, OLT4, OLTS5, OLS6, OLS3
- Optical Power Meters (OPM): OPM3, OPM4-FTTx, OPM6
- Optical Loss Testing: Turbo 500, T400, ORL3, ORL3B, T50B
- Miscellaneous: FTS, FTS1, FTS3, VOA4, VOA5, VOA6, VOA-SM, WSP, TACT1



# **Calibration and Repair Facilities**

AFL has an authorized calibration/repair facility for AFL products in the USA, Europe and Asia Pacific. Please contact customer service for a return authorization number prior to sending your AFL test equipment in for repair or calibration.

Fujikura Europe LTD is an Authorized European Repair and Calibration facility for AFL Test and Inspection products and should be contacted directly for service.

Fujikura Asia LTD is an Authorized Asia Pacific Calibration facility for AFL Test and Inspection products and should be contacted directly for product calibrations.

#### USA

AFL Attn: SR#:

Product Service Request Form 110 Hidden Lake Circle Duncan, SC 29334 (800) 235-3423

https://www.aflglobal.com

#### Canada

Simbol Test Systems Inc. 616 Auguste-Mondoux Gatineau QC J9J3K3 Canada (819)770-7771 sales@simbol.ca https://simbol.ca

#### Poland

INTERLAB
Kosiarzy 37/20 street
02-953 Warsaw, Poland
+48 692 092 617
service@interlab.pl
https://www.interlab.pl/service.html

#### Romania

TeleGrup 8A, Episcopul Radu Street Sector 2, 020753 Bucuresti, Romania +40 21 318 7431 vanzari@tele-grup.ro www.tele-grup.ro

## **Europe**

Fujikura Europe Ltd
C51 Barwell Business Park
Leatherhead Road
Chessington, Surrey, KT9 2NY
+44 208 240 2020
service@fujikura.co.uk
https://www.fujikura.co.uk

## Saudi Arabia

BrightWires
Qaatan Plaza 1st Floor
PO Box 56219
Sulimaniya Riyadh 11554
Saudi Arabia
+966 11 2176265
asim@brightwires.com.sa
http://www.brightwires.com.sa

#### Dubai

Lantern Fiber Electronic Instruments,
Devices & Equipment Repairing Est.
(Lantern Fiber)
M29, New Al Safiya Building (Opposite of
Abu hail Metro Station)
Hor Al Anz, Dubai, U.A.E
+971581102903
support@lanternfiber.com
www.lanternfiber.com

## Asia

Fujikura Asia Ltd
438A Alexandra Road, #08-03 Blk A,
Alexandra TechnoPark
Singapore 119967
+65 62711312
calibration.fal@sg.fujikura.com
http://www.fujikura.com.sg

#### Turkey

BS Telekom Ltd.
Erenkoy Mah. Igdelidere Cad. 1494. Sok. No. 12
38050 Melikgazi- Kayseri Turkey
+90 352 222 82 03
s.ugur@bstelekom.com
http://www.bstelekom.com

#### Australia / New Zealand

AFL Technical Services
93-97 Merrindale Drive
Croydon, Victoria
Australia, 3136
+61 3 9737 4209
austechservices@aflglobal.com
https://www.aflglobal.com



# **Extended Warranty Options**

# **Standard Warranty**

- CSM1, CSS1, OPM, OLS, OFI-200, OFI-400 products are warranted against defective material and workmanship for a period of (5)\* five years from the date of delivery to the end user.
- All other AFL products are warranted against defective material and workmanship for a period of (1) one year from the date of delivery to the end user.
- Any product that is found defective within the warranty period will, at the discretion of AFL, be repaired or replaced. Warranty will be voided if the product has been repaired or altered by other than an authorized AFL product repair facility, if the void sticker has been compromised, or which have been subject to misuse, negligence, or accident. In no case shall AFL liabilities exceed the original purchase price.
- \* Note: Wear items such as OFI plungers are warrantied for a period of (1) one year.

# **Extended Warranties for Products Offered with One Year Warranty**

		1 - Year Extended W	arranty	2 - Year Extended W	arranty	4 - Year Extended W	arranty
		Part Number		Part Number		Part Number	
		EW1Y-00-0907		EW2Y-00-0907		EW4Y-00-0907	
		EW1Y-00-0906		EW2Y-00-0906		EW4Y-00-0906	
		EW1Y-00-0905		EW2Y-00-0905		EW4Y-00-0905	
		EW1Y-00-0904		EW2Y-00-0904		EW4Y-00-0904	
		EW1Y-00-0903		EW2Y-00-0903		EW4Y-00-0903	
		EW1Y-00-0902		EW2Y-00-0902		EW4Y-00-0902	
		EW1Y-00-0901		EW2Y-00-0901		EW4Y-00-0901	

Extended warranties add to standard warranty providing complete warranty time period

Example: 1 year standard + 4 years extended = 5 years warranty coverage



## **TERMS & CONDITIONS**

- 1. **PRICES:** All prices set forth are suggested selling prices, FOB Duncan, SC for domestic shipments and FCA Duncan, SC for international shipments. All prices and specifications are subject to change without notice. Contact our Sales Department to confirm price and delivery.
- 2. ORDER ENTRY: Minimum order \$250.00.
- 3. **TERMS OF PAYMENT:** Terms of payment shall be net within thirty (30) days from date of invoice with approved credit.
- 4. **SHIPMENTS**: When a carrier is not specified, shipment will be made by the best surface-carrier available. RUSH ORDERS will be shipped as authorized. The customer shall bear the risk of in-transit loss or damage.
- 5. CANCELLATION: Unless otherwise agreed, in the event of cancellation, AFL shall be reimbursed for all expenses incurred.
- 6. PACKING: All instruments shall be packed for shipment in accordance with standard commercial practices for protection during shipment and storage.

#### 7. WARRANTY:

- OPM, OLS, OFI-200, OFI-400 products are warranted against defective material and workmanship for a period of (5)\* five years from the date of delivery to the end user.
- All other AFL products are warranted against defective material and workmanship for a period of (1) one year from the date of delivery to the end user.
- Any product that is found defective within the warranty period will, at the discretion of AFL, be repaired or replaced. Warranty will be voided if the product has been repaired or altered by other than an authorized AFL product repair facility, if the void sticker has been compromised, or which have been subject to misuse, negligence, or accident. In no case shall AFL liabilities exceed the original purchase price.
- \* Note: Wear items such as OFI plungers are warrantied for a period of (1) one year.
- 8. **RETURN:** A Return Materials Authorization (RMA) number must be issued to the customer prior to accepting any products for return. Credit will be issued only on current merchandise, in re-saleable condition. Obsolete or discontinued products may not be returned for credit. Any material returned after 30 days of the original invoice date will be subject to a 20% restocking fee. No materials may be returned beyond 6 months from the original invoice date.
- 9. **REPAIR/CALIBRATION:** All calibration and repair orders are accepted by phone and need to be confirmed by purchase order. When shipping equipment for repair/calibration please include the service request number issued by Customer Service/Technical Support, a complete description of the fault condition, all connector adapters and dust caps to protect the connectors and contact information in case additional information is required. All chemicals should be removed from equipment case before sending in for repair or calibration. Minimum repair evaluation fee \$150.

Some older AFL products are no longer supported or supported for calibration services only. Products supported for calibration services only must be in fully functional condition to be calibrated. Any of these products that are sent in for calibration that are not in good working condition will be charged an evaluation fee and sent back to the customer without calibration.

Upon completion of the service requested, prompt payment is expected. Completed service requests not paid within 60 days of request will be charged an additional storage fee of \$45 per month for each month or portion thereof that payment has not been received.

#### Notes:

- Unless otherwise specified all connectors are Ultra Physical Contact (UPC).
- ST is a registered trademark of Lucent Technologies.
- ESCON is a registered trademark of IBM.
- MTP is a registered trademark of US Conec Ltd.
- MPX is a registered trademark of TYCO Electronics Corp.



# **REVISION CHANGES HISTORY**

July 15, 2024

## **New Products and Services**

# FlowScout® OPM8 Optical Power Meters

Model	AFL NO.	Description		Page
OPM8-L	OPM8-SP3-[Kit]	FlowScout OPM8 Optical Power Meter		40
ОРМ8-Н	OPM8-SP4-[Kit]	FlowScout OPM8 Optical Power Meter		40

# FlowScout OLS8 Optical Light Sources

Model	AFL NO.	Description	Page
OLS8-SM Dual	OLS8-SL2-BAS	FlowScout OLS8 Optical Light Source	41
OLS8-Quad	OLS8-SL4-BAS	FlowScout OLS8 Optical Light Source	41
OLS8-SM XGS	OLS8-SL7-BAS	FlowScout OLS8 Optical Light Source	41

# FlowScout OLS8 and OPM8 Optical Loss Test Kits

Model	AFL NO.	Description		Page
SLP8-Dual	SLP8-02-[KIT]	FFlowScout® OLS8 and OPM8 Optical Loss Test Kit		42
SMLP8-Quad	SMLP8-04-[KIT]	FFlowScout® OLS8 and OPM8 Optical Loss Test Kit		42
SLP8-FTTX	SLP8-07-[KIT]	FFlowScout® OLS8 and OPM8 Optical Loss Test Kit		42

# FlowScout OPM8 and OLS8 Adapter Caps

AFL NO.	Connector Adapter Type	Usage Test Port Usage	Page
2900-63-0002MR	2.5 mm Universal		42
2900-63-0001MR	1.25 mm Universal		42
2900-63-0003MR	SC	ODMO	42
2900-63-0006MR	FC	OPM8	42
2900-63-0005MR	ST®		42
2900-63-0004MR	LC simplex		42
2900-63-0007MR	SC		42
2900-63-0010MR	FC	0150	42
2900-63-0009MR	ST®	OLS8	42
2900-63-0008MR	LC simplex		42



# **April 15, 2024**

## **New Products and Services**

AFL NO.	Description		Page	
FlowScout® SE100 Single-Ended Test Set				
8500-05-MMC16	One-Click Cleaner MMC for MMC-16 Connectors		31	
8500-05-MMC24	One-Click Cleaner MMC for MMC-24 Connectors		31	

# January 25, 2024

Editorial revision to 'New Products and Services, January 15 2024' table below: Corrected SE100-00-0901PR price to be as listed in FlowScout SE100 section on page 36.

# **January 15, 2024**

## **New Products and Services**

AFL NO.	Description		Page
FlowScout® SE100 Single-Ended Test Set			
SE100-00-0901PR	FlowScout SE100 Single-Ended Test Set Kit		36
8700-03-1430MZ	1430 nm Wavelength Optical Reflector, SC/APC, female-to-male, plug type		36
8700-00-0218MR	Single-mode test jumper, SC/APC to SC/APC, conical ferrule, 2 m, 3 mm jacketed		36

## **Removed Products**

AFL NO.	Description
Inspection Products	
OFS300-200C	OFS300 Microscope for Connectors on Patch Cords

