





### **TEST & INSPECTION**

OTDRs | Certification Test Kits | Inspection | OPM | OLS | Cleaning | Light Brigade Training









### **Buyer's Guide**

January 15, 2016

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### **Release Highlights**

### **ROGUE**<sup>™</sup> | ACROS<sup>™</sup> Test Suite

Only available to customers in North America and Europe!



### aeRos — Cloud Workflow Management Solution

aeRos is an open, cloud-based, workflow management platform that is the heart of the solution. It facilitates two-way communication and data exchange from engineering to project management to a technician in the field. aeRos allows project managers to send jobs directly to technicians, defining tests, configurations and criteria as needed. Data is stored immediately and securely in the cloud enabling access to test results when and where needed.

See section "ROGUE™ | aeRos™ Test Suite" on page 8.



#### **ROGUE** — Modular Hardware Platform

ROGUE is the modular hardware platform that works seamlessly with aeRos. Like aeRos, it is an open system. By unbundling software and hardware, the ROGUE platform allows you to invest only in the application-specific tests you really need. By pairing ROGUE modules with apps running on a smart device, you can create the test capability that a technician requires for a specific job. AFL's Patent Pending architecture enables technicians to control their test hardware directly from any Android or iOS smart device.

See section "ROGUE™ | aeRos™ Test Suite" on page 8.



### **ROGUE Modules: OLTS/Certification**

Each ROGUE test module uses state-of-the-art technology to produce the most accurate results in the shortest amount of time. Modules contain Bi-directional test ports as well as an optical power meter port and Visual Fault locator.

All Multimode ports are Encircled Flux compliant as required by ANSI/TIA and ISO/IEC.

ROGUE users can easily turn the OLTS solution into a full Tier 1 certifier through a separate certification app.

See section "ROGUE™ | aeRos™ Test Suite" on page 8.



#### Multi-fiber Switch

AFL'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 making the testing of your network more efficient, saving you both time and money.

See section "Multi-fiber Switch" on page 9.





**NEW** 

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### FlexScan Pocket-sized OTDR with SmartAuto™ and LinkMap™

Introducing AFL's new FlexScan pocket-sized OTDR! Combining SmartAuto network-optimized event detection and analysis with its intuitive LinkMap view of the tested network, FlexScan enables even novice technicians to quickly and easily troubleshoot or fully characterize optical fiber networks. Available in either 1550 nm or 1310/1550 nm single-mode OTDR configurations, FLEXSCAN includes integrated VFL, optional loss test set (source and power meter), Wi-Fi and Bluetooth® communications.

See section "FlexScan Pocket-sized OTDR with SmartAuto™ and LinkMap™" on page 12.



### OFI-BI and OFI-BIPM Optical Fiber Identifiers

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

Our full featured OFI includes a touch screen, positive stop trigger and several easy to select options. This identifier can be used with any SM fiber – including bend insensitive fiber, bare fibers, ribbons and up to 3 mm jackets. The –BIPM model adds an integrated optical power meter. These units can also be customized for ONU detection.

See section "OFI-BI and OFI-BIPM Optical Fiber Identifiers" on page 37.



#### M310 OTDR Feature Enrichments

Our popular LinkMap<sup>™</sup> feature is now available on M310 OTDR. Along with standard TruEvent, macrobend detection, bi-directional averaging, integrated light source, power meter, and visual fault locator, we are offering the most feature enriched OTDR to date.

See section "M series Hand-held OTDR with TruEvent™ Technology" on page 22.



#### M710 OTDR Feature Enrichments

LinkMap<sup>™</sup> feature is now also available on M710 OTDR. Along with standard TruEvent, macrobend detection, bi-directional averaging, integrated power meter, and visual fault locator, this 6.5-inch screen OTDR will bring the most versatile user experience.

See section "M710 OTDR — with TruEvent™ Technology" on page 24.



## Introducing aeros<sup>™</sup> — **Rogue**<sup>™</sup> Test Suite



**ROGUE** Carrier with Module



aeRos — Cloud Workflow Management Solution



Smart Device Apps

### Testing Outside the Box — Building Better Networks

- Open, modular test suite built around the way you work
- aeRos cloud workflow and data management
- Pair ROGUE modules with smart device apps to create customizable test capabilities





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Cloud-based Workflow Management Solution



Carrier with Module



**ROGUE** Carrier



**ROGUE OLTS Module** 



ROGUE Kickstand

### **Test Workflow and Data Management Solution**

### ROGUE™ | aeRos™ Test Suite

#### Only available to customers in North America and Europe!

ROGUE and aeRos, are a suite of modular test products built completely around the way service providers build, operate, and maintain their networks.

aeRos is an open, cloud-based, workflow management platform that is the heart of the solution. It facilitates two-way communication and data exchange from engineering to project management to a technician in the field. aeRos allows project managers to send jobs directly to technicians, defining tests, configurations and criteria as needed. Throughout the job, managers can monitor a technician's progress and with real-time access to test results, challenges can be addressed immediately avoiding expensive retesting and unnecessary truck rolls. Data is stored immediately and securely in the cloud enabling access to test results when and where needed

ROGUE is the modular hardware platform that works seamlessly with aeRos. Like aeRos, it is an open system. By unbundling software and hardware, the ROGUE platform allows you to invest only in the application-specific tests you really need. Each clean-slate ROGUE test module uses state-of-the-art technology to produce the most accurate results in the shortest amount of time. By pairing ROGUE modules with apps running on a smart device, you can create the test capability that a technician requires for a specific job. AFL's Patent Pending architecture enables technicians to control their test hardware directly from any Android, IOS, or Windows smart device.

The combination of ROGUE and aeRos provide, unparalleled test time improvement and huge gains in overall setup and reporting efficiency, leading to a dramatic reduction in both CAPEX and OPEX.

#### **ROGUE Carrier**

AFL NO.	Description	Contains	
RG-C01	ROGUE Carrier	(1) ROGUE carrier, (1) battery, (1) power supply, (1) adjustable carry strap	
RGA-STND-01	ROGUE Carrier Kickstand	(1) Kickstand	

### **ROGUE Turbo OLTS Modules**

					Contains (e.a.)									
					R	ROGUE Turbo OLTS Modules					Test Port Adapters			
	Auto	Test Wav	elengths	(nm)	Quad Single Engine Dual Engine				OLS OPM					
AFL NO.	850	1300	1310	1550	MM/SM	MM	SM	MM	SM	SC	SC	LC		
RG-1100-Q01	•	•	•	•	1					2	1	1		
RG-1100-M01	<b>•</b>	<b>•</b>				1				1	1	1		
RG-1100-M01-D	•	•						1		2	1	1		
RG-1100-S01			<b>•</b>	<b>*</b>			1			1	1	1		
RG-1100-S01-D			•	•					1	2	1	1		

#### ROGUE / aeRos Software Licensing

AFL NO.	Description	Contains	
RGL-1100-01	ROGUE Tier 1 Certification License	(1) account	
aeRos	aeRos Basic account	(1) account	
aeRos-PRO-MTH	aeRos PRO account	(1) account, 30 days	
aeRos-PRO-YRL	aeRos PRO account	(1) account, 1 year	
aeRos-PRO-LFT	aeRos PRO account	(1) account, lifetime subscription	



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#### **ROGUE Certification Kits**



**ROGUE Carry Case** 

- Each ROGUE Certification kit includes two (2) of each: ROGUE Carrier, battery, adjustable carry strap, power supply, carry case, kickstand.
- Each ROGUE Certification kit also includes kit-specific ROGUE Modules and Certification license(s) (see table below).
- All ROGUE Certification kits include (1) One-Click Cleaner SC/2.5 mm and switchable test port adapters and test accessories (see table below).

			Contains (e.a.)											
						Refe	rence	Mating	Test P					
		ROGU	E Modu	les		Test	Cords	Adapters	OLS	OF	M			
		Ouad	<b>Dual Engine</b>				50 µm							
AFL NO.	ROGUE Certification Kits	SM/MM	SM	ММ	License	SM	MM	SC	sc	sc	LC			
RGK-CERT01	Quad SM/MM	2			2	2	2	2	2	2	2			
RGK-CERT02	Dual Engine SM and MM		2	2	4	4	4	4	8	4	4			
RGK-CERT03	Dual Engine SM		2		2	4		2	4	2	2			
RGK-CERT04	Dual Engine MM			2	2		4	2	2	2	2			

# PARL

MFS in Carry Holster



2 MFS units in Carry Case



MFS- Multi-fiber Switch



ROGUE and MFS

#### **ROGUE MFS Certification Add-on Kits**

• Each ROGUE MFS (Multi-fiber Switch) Certification Add-on kit include (2) Multi-fiber Switches, (2) 6 in. USB-USB mini cables, (1) One-Click Cleaner MPO, (2) MFS carry holsters, (2) MFS kit carry cases plus test cords and mating adapters (see table below).

			(	Contains (e.a.)	
				Test Cords	МРО-МРО
AFL NO.	Add-On Kit	12F MFS Switch	SC-SC, 0.3 m.	12F MPO-MPO, 2 m.	Mating Adapters
RGK-MPO-SM-CERT-ADD	SM, SC/UPC-MPO/APC	(2) SM, SC/UPC-MPO/APC	(2) SM	(2) SM, type A unpinned (1) SM, type A pinned (1) SM, type B pinned	(2) key Up / key Down
RGK-MPO-MM-CERT-ADD	MM, SC/UPC-MPO/UPC	(2) MM, SC/UPC-MPO/UPC	(2) MM	(2) OM4, type A unpinned (1) OM4, type A pinned (1) OM4, type B pinned	(2) key Up / key Up (2) key Up / key Down

### **Multi-fiber Switch**

AFL'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 making the testing of your network more efficient, saving you both time and money.

AFL's Multi-fiber Switch is compatible with your existing OTDR, OLTS and Certification equipment.

Model	Wavelength	Insertion Loss	Optical Return Loss (ORL)	Power
MEC	1310/1550 nm, SM dual-wavelength	2.8 dB typ. – 3.3 dB max.	50 dB	2 x AA or USB
MFS	850/1300 nm, MM dual-wavelength	1.8 dB typ. – 2.3 dB max.	50 dB	2 x AA or USB

AFL NO.	Description	
MFS-12-SM-ASC-FR	Multi-fiber Switch, 12 fibers SM, APC—SC, MPO fiber ring (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	



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# OTDRs at a Glance (Networks, Applications, Performance) OTDR Selection Guide



	Point-to-Point FTTX Networks/Fiber Type PON													Periph	erals	2.0		ırta	
	MMF	/SMF		SMI	F	SM	F								₩ M		Support <sup>a</sup>		
Model	Data Center	LAN	Core	Metro	Access	Dark	Live	Wavelengths (nm)	Dynamic Range (dB)	Dead zone EDZ/ADZ (m)	LinkMap	PON OPM	OLS	ОРМ	VFL	Report Gen. TRM 2.0	Inspection	Languages Su	
M310-20	•	•	•	•	<b>♦</b>	•		1310/1550	38/37	0.8/3.5	•		•	•	•	•	DFS1	•	
M310-25	•	<b>♦</b>	<b>♦</b>	<b>♦</b>	<b>♦</b>	<b>♦</b>		850/1300/1310/1550	30/30/38/37	0.8/2.5	•		•	<b>♦</b>	•	<b>♦</b>	DFS1	•	
M210e-20				•	•			1310/1550	34/34	1.0/4.0				•	•	•	DFS1	•	
M210e-22		•						850/1300	28/28	1.0/4.0				•	•	<b>♦</b>	DFS1	•	
M210e-25		•		•	<b>♦</b>			850/1300/1310/1550	28/28/34/34	1.0/4.0				•	•	•	DFS1	•	
<u>M710-20</u>		•	•	<b>♦</b>	<b>♦</b>			1310/1550	40/38	0.8/4				•	•	•	DFS1	<b>•</b>	
M710-21			•	•	<b>♦</b>			1310/1550/1625	40/38/38	0.8/4				•	•	•	DFS1	•	
M710-24	•	<b>♦</b>	•	•	<b>♦</b>			850/1300/1310/1550	24/24/39/37	0.8/4	<b>♦</b>			•	<b>♦</b>	<b>♦</b>	DFS1	<b>♦</b>	
M710-40		•	•	•	<b>♦</b>			1310/1550	44/42	0.8/4				•	•	<b>*</b>	DFS1	•	
FS200-50				<b>♦</b>	<b>♦</b>			1550	30	0.8/3.6	<b>♦</b>		<b>♦</b>	<b>♦</b>	<b>♦</b>	<b>♦</b>	FOCIS	<b>♦</b>	
FS200-100				•	<b>♦</b>	•		1310/1550	32/30	0.8/3.6	•		•	•	•	<b>♦</b>	FOCIS	•	
FLX380-300			<b>♦</b>	<b>♦</b>	<b>♦</b>	•		1310/1550	42/42	0.8/2.5	•		•	<b>♦</b>	•	<b>♦</b>	FOCIS	<b>♦</b>	
FLX380-302			•	•	<b>♦</b>	•		1310/1490/1550	41/38/41	0.8/2.5	•		•	•	•	•	FOCIS	•	
FLX380-303			•	•	<b>♦</b>	•	•	1310/1550/1625	41/41/38	0.8/2.5	<b>♦</b>	•	•	•	•	<b>♦</b>	FOCIS	•	
FLX380-304			•	•	<b>♦</b>	•	<b>♦</b>	1310/1550/1650	41/41/38	0.8/2.5	<b>*</b>	•	•	•	•	<b>*</b>	FOCIS	•	
OFL280-100				<b>♦</b>	<b>♦</b>	<b>♦</b>		1310/1550	34/32	0.8/3.5	<b>•</b>		•	<b>♦</b>	<b>♦</b>	•	FOCIS	<b>♦</b>	
OFL280-102				•	<b>♦</b>	•		1310/1490/1550	34/32/32	0.8/3.5	•		•	<b>♦</b>	•	•	FOCIS	•	
OFL280-103				•	<b>♦</b>	•	<b>♦</b>	1310/1550/1625	34/32/30	0.8/3.5	•	<b>♦</b>	•	<b>♦</b>	<b>♦</b>	•	FOCIS	<b>♦</b>	
CS260-10				•	•	•	<b>♦</b>	1625 filtered	35	0.8/3.5	•	•			•	<b>*</b>	FOCIS	<b>*</b>	

### Note:

a. For a list of Supported International Languages, see specific product pages.





### Pocket-sized, Performance-packed, User-friendly, and Affordable

- Pocket-sized and rugged Ideal for field installation and maintenance
- SmartAuto™ OTDR with LinkMap™ Simplifies test setup and results
- Automated connector inspection with FOCIS Flex Fast, easy pass/fail analysis





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### **Hand-held OTDRs/Multifunction Testers**

### NEW



FLEXSCAN OTDR



FLEXSCAN Basic Kit



FLEXSCAN Plus Kit



FLEXSCAN PRO Kit

### FLEXSCAN Pocket-sized OTDR with SmartAuto™ and LinkMap™

Combining SmartAuto™ network-optimized event detection and analysis with its intuitive LinkMap™ view of the tested network, AFL's new FlexScan OTDRs enable even novice technicians to quickly and easily troubleshoot or fully characterize optical fiber networks. FlexScan FS200 is available in 1550 nm only and 1310/1550 nm versions with integrated VFL and two USB ports plus optional source, power meter, Bluetooth® and Wi-Fi communications.

FLEXSCAN are available in three kit configurations: Basic, Plus, and PRO.

- Basic: User-selected FlexScan with AC charger, soft carry case, USB cable, TRM® 2.0 Basic and quick reference guide.
- Plus: Save over \$300 on Basic Kit plus 150 m fiber ring, One-Click Cleaner and upgrade to TRM 2.0 Advanced.
- PRO: Save over \$500 on Basic Kit with FOCIS Flex connector inspection system plus two user-selected inspection adapter tips, 150 m fiber ring, One-Click Cleaner and upgrade to TRM 2.0 Advanced.
- BI Complete: Save over \$800 on Complete Kit with OFI-BI bend-insensitive fiber identifier, FOCIS Flex connector inspection system plus two user-selected inspection adapter tips, 150 m fiber ring, One-Click cleaner and upgrade to TRM 2.0 Advanced.
- **BIPM Complete**: Save over \$800 on Complete Kit with OFI-BIPM bend-insensitive fiber identifier with power meter, FOCIS Flex connector inspection system plus two user-selected inspection adapter tips, 150 m fiber ring, One-Click cleaner and upgrade to TRM 2.0 Advanced.

		λ (ι	Source nm)	OLS /	BT /	FOCIS			Fiber	One-		
AFL NO.	Kit	1310	1550	OPM	WiFi	Flex	OFI-BI	OFI-BIPM	Ring	Click	TRM 2.0	
FS200-50-BAS-P0-W0			•								Basic	
FS200-50-BAS-P1-W1	Basic		<b>♦</b>	•	<b>*</b>						Basic	
FS200-100-BAS-P0-W0	Dasic	•	•								Basic	
FS200-100-BAS-P1-W1		<b>♦</b>	<b>♦</b>	•	<b>*</b>						Basic	
FS200-50-PLUS-P0-W0			<b>♦</b>						150 m	<b>♦</b>	Advanced	
FS200-50-PLUS-P1-W1	Plus		<b>♦</b>	•	<b>*</b>				150 m	<b>♦</b>	Advanced	
FS200-100-PLUS-P0-W0	rius	<b>♦</b>	<b>♦</b>						150 m	<b>♦</b>	Advanced	
FS200-100-PLUS-P1-W1		<b>♦</b>	<b>♦</b>	•	<b>*</b>				150 m	<b>♦</b>	Advanced	
FS200-50-PRO-P0-W0			<b>♦</b>			•			150 m	<b>♦</b>	Advanced	
FS200-50-PRO-P1-W1	PRO		<b>♦</b>	•	<b>*</b>	<b>♦</b>			150 m	<b>♦</b>	Advanced	
FS200-100-PRO-P0-W0	FNU	<b>♦</b>	<b>♦</b>			<b>♦</b>			150 m	<b>♦</b>	Advanced	
FS200-100-PRO-P1-W1		<b>♦</b>	<b>♦</b>	•	<b>*</b>	<b>♦</b>			150 m	<b>♦</b>	Advanced	
FS200-50-BI-P1-W1	BI		<b>♦</b>	•	•	•	•		150 m	<b>♦</b>	Advanced	
FS200-100-BI-P1-W1	Complete	<b>♦</b>	<b>♦</b>	<b>*</b>	<b>*</b>	<b>♦</b>	<b>♦</b>		150 m	<b>♦</b>	Advanced	
FS200-50-BIPM-P1-W1	BIPM		<b>♦</b>	•	<b>*</b>	•		•	150 m	<b>♦</b>	Advanced	
FS200-100-BIPM-P1-W1	Complete	<b>♦</b>	•	<b>♦</b>	<b>♦</b>	<b>♦</b>		<b>*</b>	150 m	<b>♦</b>	Advanced	





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### FlexScan FS200 Order Entry

FS200-[MOD]-[KIT]-[PW]-[C]-[LNG]-[AC]-[FR]-[TIP] where:

[MOD]	FS200 FLEXSCAN OTDR Configuration
50	1550 nm only Troubleshooting OTDR
100	1310/1550 nm Verification & Troubleshooting OTDR

[KIT]	FS200 FLEXSCAN Kit Configuration
BAS	Basic kit with soft case, TRM 2.0 Basic, USB cable
PLUS	PLUS kit adds 150 m SMF Fiber Ring and One-Click cleaner
PRO	PRO kit adds Fiber Ring, One-Click cleaner, FOCIS Flex
BI	BI Complete kit adds OFI-BI fiber identifier to PRO Kit (requires -P1-W1 option)
BIPM	BIPM Complete kit adds OFI-BIPM fiber identifier with power meter to PRO Kit (requires -P1-W1 option)

[PW]	Power Meter / Wireless option
P0-W0	No Source, Power Meter, or Bluetooth/Wi-Fi
P1-W1	Includes Source, Power Meter, and Bluetooth/Wi-Fi

[C]	OTDR / Source Connector Type
Α	APC
U	UPC

[LNG]	Language Option
ENG	English
CHS	Simplified Chinese
DEU	German
FIN	Finnish
FRA	French
ITA	Italian
POL	Polish
SPA	Spanish

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

[FR]	150 m SMF Fiber Ring
Blank	N/A in Basic kits
SC/SC	FR1-SM-150-SC-SC
SC/FC	FR1-SM-150-SC-FC
SC/LC	FR1-SM-150-SC-LC
SC/ST	FR1-SM-150-SC-ST
SC/ASC	FR1-SM-150-SC-ASC
SC/AFC	FR1-SM-150-SC-AFC
SC/ALC	FR1-SM-150-SC-ALC
LC/LC	FR1-SM-150-LC-LC
LC/ASC	FR1-SM-150-LC-ASC
LC/ALC	FR1-SM-150-LC-ALC

[FR]	150 m SMF Fiber Ring
ASC/FC	FR1-SM-150-ASC-FC
ASC/ST	FR1-SM-150-ASC-ST
ASC/ASC	FR1-SM-150-ASC-ASC
ASC/AFC	FR1-SM-150-ASC-AFC
ASC/ALC	FR1-SM-150-ASC-ALC
ALC/ALC	FR1-SM-150-ALC-ALC
FC/FC	FR1-SM-150-FC-FC
FC/ST	FR1-SM-150-FC-ST
FC/LC	FR1-SM-150-FC-LC
FC/AFC	FR1-SM-150-FC-AFC
AFC/AFC	FR1-SM-150-AFC-AFC

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



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NS Bench Top Model, page 28



NSR Rack-mountable Model, page 28

#### **FlexScan Accessories**

AFL NO.	Description	
6000-00-0031MR	Cable, USB-micro B, 5 pin, 6 ft	
4050-00-0931PR	AC adapter 100-240 VAC to 5 VDC (specify [AC] option, see "FlexScan FS200 Order Entry" on page 13 ).	
1400-01-0111PZ	Soft carry case with foam insert	
TRM-00-0920PR	TRM® 2.0 upgrade from Basic to Advanced software	
1400-05-0230PZ	FLEXSCAN wrist strap	
1400-05-0231PZ	FLEXSCAN neck strap, 36"	
Fiber Rings	Coiled lengths of multimode or single-mode fiber packaged in compact rings for use as OTDR test cords	See page 28
<b>Network Simulators</b>	Custom-designed bench top or rack mountable boxes intended to duplicate installed fiber optic networks	See page 28

**Note:** Did you know free software updates for your OTDR are available for download on the <a href="https://www.AFLglobal.com">www.AFLglobal.com</a> -> <a href="https://www.aFLglobal.com">Software</a> web page?

### FlexScan Connector Adapters

AFL NO.	Description	
2900-50-0002MR	FC adapter for OTDR/OLS port	
2900-50-0003MR	SC adapter for OTDR/OLS port	
2900-50-0004MR	ST adapter for OTDR/OLS port	
2900-50-0006MR	LC 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	



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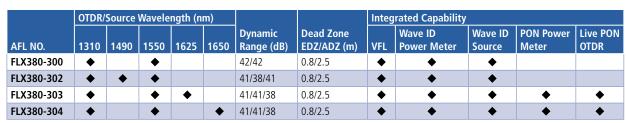


FLX380 with LinkMap Software Upgrade

### FLX380 FlexTester - High-performance OTDR/Multifunction Tester

The AFL FLX380 FlexTester is the world's smallest, lightest, most complete single mode fiber optic test set. It combines high-performance, multi-wavelength OTDR/PON OTDR, Source, Power Meter, VFL and PON Power Meter in a rugged, hand-held package. FlexTesters offer best-in-class dead zones, easy to interpret LinkMap and pass/fail screens as well as unique ServiceSafe® and Wave ID features. Combine these valuable features with its full complement of test functions and the FlexTester provides unsurpassed value that is so easy to use.

Each FLX380 FlexTester comes with a carry case, (1) SC and (1) FC adapter for the OTDR/OLS port, (1) 2.5 mm Universal adapter for the OPM port, (1) 2.5 mm Universal adapter for the VFL port, One-Click Cleaner SC/ST/FC (2.5 mm), USB cable (connects with type A USB port on a PC), TRM® 2.0 Test Results Manager trace analysis and reporting PC software (Basic License), and AC power adapter (specify power cord, see page 49, Table 1).





FLX380 Basic Kit

#### FLX380 FlexTester PRO2 Kits

### FlexTester with FOCIS Flex Connector Inspection and Cleaning.

Each FLX380 FlexTester PRO2 Kit includes user-selected FLX380-30x FlexTester with LinkMap, FOCIS Flex connector inspection with IEC pass/fail analysis, UPC or APC inspection adapter tips, cleaning supplies, and standard FlexTester accessories conveniently packaged in a rugged, waterproof hard carry case.



FlexTester PRO2 and Complete 2 Kits include FOCIS Flex Inspection

#### FLX380 FlexTester Complete2 Kits

#### Everything you need for complete optical network verification and troubleshooting at significant savings!

Each FLX380 FlexTester Complete2 Kit includes user-selected FLX380-30x FlexTester with LinkMap, FOCIS Flex connector inspection with IEC pass/fail analysis, UPC or APC inspection adapter tips, optical fiber identifier (OFI), 150 m fiber ring, cleaning supplies, and standard FlexTester accessories conveniently packaged in a rugged, waterproof hard carry case. For OFI-BI or OFI-BIPM in place of OFI-200D or OFI-400, select the appropriate BI or BIPM Kit.

#### FLX380 LinkMap plus TRM 2.0 Advanced Upgrade Kits

Using the FLX380's new LinkMap capability, even novice users can troubleshoot optical networks like a pro! LinkMap interprets the tested network and presents an icon-based view of network elements clearly identifying fiber start, end, connectors, splices, splitters, and macrobends. Loss and reflectance of network elements is compared to user-settable pass/fail thresholds and displayed with clear pass/fail indications. Users can instantly toggle between LinkMap and Trace view at the press of a button. FlexTester OTDRs also provide a Link Summary showing end-to-end link length, loss, loss/distance and ORL.

AFL NO.	Description	
FLX380-1XX-LM	FLX380-100 Series LinkMap upgrade with Pass/Fail on USB, plus TRM 2.0 Advanced upgrade CD	
FLX380-3XX-LM	FLX380-300 Series LinkMap upgrade with Pass/Fail on USB, plus TRM 2.0 Advanced upgrade CD	
FLX380-1XX-LM-EML	FLX380-100 Series LinkMap upgrade with Pass/Fail, plus TRM 2.0 Advanced upgrade, Email delivery	
FLX380-3XX-LM-EML	FLX380-300 Series LinkMap upgrade with Pass/Fail, plus TRM 2.0 Advanced upgrade, Email delivery	







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### FLX380 FlexTester Series Order Entry

Order Entry Format including Options	Kit Configuration
FLX380-3xx[C]-[LNG]-[AC]	FLX380-3xx Basic Kit
FLX380-3xx[C]-LM-[LNG]-[AC]	FLX380-3xx Basic Kit with LinkMap™ Upgrade with Pass/Fail plus TRM® 2.0 Advanced
FLX380-3xx[C]-PRO2-[LNG]-[AC]-[TIP]-[FR]	FLX380-3xx PRO2 Kit (with FOCIS Flex, fiber ring and cleaning supplies)
FLX380-3xx[C]-CMP2-[LNG]-[AC]-[TIP]-[FR]-[OFI]	FLX380-3xx Complete2 Kit (with FOCIS Flex, OFI choice, fiber ring and cleaning supplies)
FLX380-3xx[C]-CMP2-BI-[LNG]-[AC]-[TIP]-[FR]	FLX380-3xx Complete2 Kit (with FOCIS Flex, OFI-BI, fiber ring and cleaning supplies)
FLX380-3xx[C]-CMP2-BIPM-[LNG]-[AC]-[TIP]-[FR]	FLX380-3xx Complete2 Kit (with FOCIS Flex, OFI-BIPM, fiber ring and cleaning supplies)

### **Select FLX380 Model and Options:**

Зхх	FLX380 FlexTester Model
300	FLX380-300 (1310/1550)
302	FLX380-302 (1310/1490/1550)
303	FLX380-303 (1310/1550/1625F)
304	FLX380-304 (1310/1550/1650F)

[C]	OTDR/Source Connector Type
U	UPC
Α	APC

[LNG]	Language Option
ENG	English
CHS	Simplified Chinese
CHT	Traditional Chinese
DEU	German
FRA	French
ITA	Italian

[LNG]	Language Option
JPN	Japanese
KOR	Korean
POL	Polish
POR	Portuguese
SPA	Spanish
TUR	Turkish

	Destination	AC Plugs	
[AC]	Country	FlexTester	FOCIS Flex
US	USA	3-wire, 115V, Type K	2-pin, US
EU	European Union	3-wire, 250V, Type B	2-pin, EU
UK	United Kingdom	3-wire, 250V, Type D	3-pin, UK
CN	China, Australia	3-wire, 250V, Type C	2-pin, CN
DK	Denmark	3-wire, 250V, Type E	2-pin, EU
JP	Japan	3-wire, 125V, Type M	2-pin, US
СН	Switzerland	3-wire, 250V, Type L	2-pin, EU
IT	Italy	3-wire, 250V, Type I	2-pin, EU
IL	Israel	3-wire, 250V, Type H	Select (US, EU, UK)
IN	India	3-wire, 250V, Type G	Select (US, EU, UK)

### Select FLX380 PRO2, CMP2 Kit Options:

[TIP]	FOCIS Flex Tips & Cleaning (PRO2 and CMP2 kits only)
Blank	Option not available in standard soft case, PRO and CMP kits
SC	SC-UPC bulkhead tip, 2.5 mm UPC ferrule tip, 2.5 mm cleaning
FC	FC-UPC bulkhead tip, 2.5 mm UPC ferrule tip, 2.5 mm cleaning
LC	LC-UPC bulkhead tip, 1.25 mm UPC ferrule tip, 1.25 mm cleaning
ASC	SC-APC bulkhead tip, 2.5 mm APC ferrule tip, 2.5 mm cleaning
AFC	FC-APC bulkhead tip, 2.5 mm APC ferrule tip, 2.5 mm cleaning
ALC	LC-APC bulkhead tip, 1.25 mm APC ferrule tip, 1.25 mm cleaning

[FR]	150 m SMF Fiber Ring
Blank	N/A in PRO kits
SC/SC	FR1-SM-150-SC-SC
SC/FC	FR1-SM-150-SC-FC
SC/LC	FR1-SM-150-SC-LC
SC/ST	FR1-SM-150-SC-ST
SC/ASC	FR1-SM-150-SC-ASC
SC/AFC	FR1-SM-150-SC-AFC
SC/ALC	FR1-SM-150-SC-ALC
LC/LC	FR1-SM-150-LC-LC
LC/ASC	FR1-SM-150-LC-ASC
LC/ALC	FR1-SM-150-LC-ALC

[FR]	150 m SMF Fiber Ring
ASC/FC	FR1-SM-150-ASC-FC
ASC/ST	FR1-SM-150-ASC-ST
ASC/ASC	FR1-SM-150-ASC-ASC
ASC/AFC	FR1-SM-150-ASC-AFC
ASC/ALC	FR1-SM-150-ASC-ALC
ALC/ALC	FR1-SM-150-ALC-ALC
FC/FC	FR1-SM-150-FC-FC
FC/ST	FR1-SM-150-FC-ST
FC/LC	FR1-SM-150-FC-LC
FC/AFC	FR1-SM-150-FC-AFC
AFC/AFC	FR1-SM-150-AFC-AFC

[OFI]	Optical Fiber Identifier Option Description (CMP2 kit only)
Blank	Option only available in CMP2 kit
200D	OFI-200D - Jacketed & buffered fiber; 2 kHz only
400	OFI-400 - Jacketed & buffered fiber; power & tone display
400C	OFI-400C - Jacketed fiber only OFI-400
400HP	OFI-400HP - High-power OFI-400
FTTx	OFI-FTTx - Active ONT Detector (FTTx PON systems)





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NSR Rack-mountable Model, page 28

**Accessories** 

AFL NO.	Description	
AFL NO.	•	
6000-00-0024MR	Cable, USB-MINI B (connect to PC)	
4050-00-0123PR	Vehicle charger/supply, 15 V, 5.0 A, 75 W	
4050-00-0927PR	AC adapter 100-240 VAC to 15 VDC (specify power cord, see page 49, Table 1)	
4050-30-0005MR	Li-Ion battery charger 90-260 VAC (specify power cord, see page 49 – Table 2)	
3900-05-0003ME	Li-Ion battery pack	
1400-01-0045	Soft carry case	
1400-01-0119PZ	Hard carry case: accepts FlexTester, FOCIS Flex, OFI200/400 plus accessories	
1400-01-0120PZ	Hard carry case: accepts FlexTester, FOCIS Flex, OFI-BI/BIPM plus accessories	
TRM-00-0920PR	TRM® 2.0 upgrade from Basic to Advanced software	
Fiber Rings	Coiled lengths of multimode or single-mode fiber packaged in compact rings for use as OTDR test cords	See page 28
Network Simulators	Custom-designed bench top or rack mountable boxes intended to duplicate installed fiber optic networks	See page 28

FLX380, OFL280, CS260 Series Accessories and Connector Adapters

**Note:** Did you know free software updates for your OTDR are available for download on the <a href="https://www.AFLglobal.com">www.AFLglobal.com</a> -> Resources -> Software web page?

### **Connector Adapters**

AFL NO.	Description		
2900-50-0002MR	FC adapter for OTDR/OLS port		
2900-50-0003MR	SC adapter for OTDR/OLS port		
2900-50-0004MR	ST adapter for OTDR/OLS port		
2900-50-0006MR	LC 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	T 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		



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OFL280 with LinkMap Software Upgrade

OFL280 Basic Kit



FlexTester PRO2 and Complete2 Kits include FOCIS Flex Inspection

### OFL280 FlexTester - Multifunction OTDR and Loss Test Set

The AFL OFL280-10x FlexTester family offers an unmatched combination of optical fiber test functions, ease-of-use, portability, and value. All OFL280 FlexTester models include an OTDR with PON-optimized and standard test modes, optical power meter, 1310/1550 nm laser source, and visual fault locator.

With new LinkMap, pass/fail analysis, macro-bend and splitter detection, launch quality check, plus AFL's unique ServiceSafe and Wave ID features, OFL280 FlexTesters enable even novice users to troubleshoot like pros.

OFL280 hand-held FlexTester comes with a carry case, (1) SC & (1) FC adapter for the OTDR/OLS port, (1) 2.5 mm Universal adapter for the OPM port, (1) 2.5 mm Universal adapter for the VFL port, One-Click Cleaner SC/ST/FC (2.5 mm), USB cable (connects with type A USB port on a PC), TRM® 2.0 Test Results Manager trace analysis and reporting PC software (basic license), and AC power adapter (specify power cord, see page 49, Table 1).

AFL NO.	OTDR/Source Wavelength (nm)				Integrated Capability						
	1310	1490	1550	1625	Dynamic Range (dB)	Dead Zone EDZ/ADZ (m)	VFL	Wave ID Power Meter		PON Power Meter	Live Fiber OTDR
OFL280-100	•		<b>♦</b>		34/32	0.8/3.5	•	<b>♦</b>	<b>♦</b>		
OFL280-102	•	<b>♦</b>	<b>♦</b>		34/32/32	0.8/3.5	<b>*</b>	<b>♦</b>	<b>♦</b>		
OFL280-103	•		<b>♦</b>	<b>*</b>	34/32/30	0.8/3.5	•	<b>♦</b>	<b>*</b>	<b>♦</b>	<b>♦</b>

#### **OFL280 FlexTester PRO2 Kits**

#### FlexTester with FOCIS Flex Connector Inspection and Cleaning.

Each OFL280 FlexTester PRO2 Kit includes user-selected OFL280-10x FlexTester with LinkMap, FOCIS Flex connector inspection with IEC pass/fail analysis, UPC or APC inspection adapter tips, cleaning supplies, and standard FlexTester accessories conveniently packaged in a rugged, waterproof hard carry case.

#### **OFL280 FlexTester Complete2 Kits**

#### Everything you need for complete optical network verification and troubleshooting at significant savings!

Each OFL280 FlexTester Complete2 Kit includes user-selected OFL280-10x FlexTester with LinkMap, FOCIS Flex connector inspection with IEC pass/fail analysis, UPC or APC inspection adapter tips, optical fiber identifier (OFI), 150 m fiber ring, cleaning supplies, and standard FlexTester accessories conveniently packaged in a rugged, waterproof hard carry case. For OFI-BI or OFI-BIPM in place of OFI-200D or OFI-400, select the appropriate BI or BIPM Kit.

#### OFL280 LinkMap plus TRM 2.0 Advanced Upgrade Kits

Using the OFL280's new LinkMap capability, even novice users can troubleshoot optical networks like a pro! LinkMap interprets the tested network and presents an icon-based view of network elements clearly identifying fiber start, end, connectors, splices, splitters, and macro-bends. Loss and reflectance of network elements is compared to user-settable pass/fail thresholds and displayed with clear pass/fail indications. Users can instantly toggle between LinkMap and Trace view at the press of a button. OFL280s also provide a Link Summary showing end-to-end link length, loss, loss/distance and ORL.

AFL NO.	Description	
OFL280-XXX-LM	OFL280 - Series LinkMap upgrade with Pass/Fail on USB, plus TRM 2.0 Advanced upgrade CD	
OFL280-XXX-LM-EML	OFL280 - Series LinkMap upgrade with Pass/Fail, plus TRM 2.0 Advanced upgrade, Email delivery	





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### **OFL280 FlexTester Series Order Entry**

Order Entry Format including Options	Kit Configuration
OFL280-1xx[C]-[LNG]-[AC]	OFL280-1xx Basic Kit
OFL280-1xx[C]-LM-[LNG]-[AC]	OFL280-1xx Basic Kit with LinkMap™ Upgrade with Pass/Fail plus TRM® 2.0 Advanced
OFL280-1xx[C]-PRO2-[LNG]-[AC]-[TIP]-[FR]	OFL280-1xx PRO2 Kit (with FOCIS Flex, fiber ring, cleaning supplies)
OFL280-1xx[C]-CMP2-[LNG]-[AC]-[TIP]-[FR]-[OFI]	OFL280-1xx Complete2 Kit (with FOCIS Flex, OFI choice, fiber ring, cleaning supplies)
OFL280-1xx[C]-CMP2-BI-[LNG]-[AC]-[TIP]-[FR]	OFL280-1xx Complete2 Kit (with FOCIS Flex, OFI-BI, fiber ring and cleaning supplies)
OFL280-1xx[C]-CMP2-BIPM-[LNG]-[AC]-[TIP]-[FR]	OFL280-1xx Complete2 Kit (with FOCIS Flex, OFI-BIPM, fiber ring and cleaning supplies)

### **Select OFL280 Model and Options:**

1xx	FLX380 FlexTester Model
100	OFL280-100 (1310/1550)
102	OFL280-102 (1310/1490/1550)
103	OFL280-103 (1310/1550/1625F)

[C]	OTDR/Source Connector Type
U	UPC
Α	APC

[LNG]	Language Option	
ENG	English	
CHS	Simplified Chinese	
CHT	Traditional Chinese	
DEU	German	
FRA	French	
ITA	Italian	

[LNG]	Language Option
JPN	Japanese
KOR	Korean
POL	Polish
POR	Portuguese
SPA	Spanish
TUR	Turkish

	Destination	AC Plugs			
[AC]	Country	FlexTester	FOCIS Flex		
US	USA	3-wire, 115V, Type K	2-pin, US		
EU	European Union	3-wire, 250V, Type B	2-pin, EU		
UK	United Kingdom	3-wire, 250V, Type D	3-pin, UK		
CN	China, Australia	3-wi18e, 250V, Type C	2-pin, CN		
DK	Denmark	3-wire, 250V, Type E	2-pin, EU		
JP	Japan	3-wire, 125V, Type M	2-pin, US		
СН	Switzerland	3-wire, 250V, Type L	2-pin, EU		
IT	Italy	3-wire, 250V, Type I	2-pin, EU		
IL	Israel	3-wire, 250V, Type H	Select (US, EU, UK)		
IN	India	3-wire, 250V, Type G	Select (US, EU, UK)		

### Select OFL280 PRO2, CMP2 Kit Options:

(ED)	450 CHEET D
[FR]	150 m SMF Fiber Ring
Blank	N/A in PRO kits
SC/SC	FR1-SM-150-SC-SC
SC/FC	FR1-SM-150-SC-FC
SC/LC	FR1-SM-150-SC-LC
SC/ST	FR1-SM-150-SC-ST
SC/ASC	FR1-SM-150-SC-ASC
SC/AFC	FR1-SM-150-SC-AFC
SC/ALC	FR1-SM-150-SC-ALC
LC/LC	FR1-SM-150-LC-LC
LC/ASC	FR1-SM-150-LC-ASC
LC/ALC	FR1-SM-150-LC-ALC

[FR]	150 m SMF Fiber Ring
ASC/FC	FR1-SM-150-ASC-FC
ASC/ST	FR1-SM-150-ASC-ST
ASC/ASC	FR1-SM-150-ASC-ASC
ASC/AFC	FR1-SM-150-ASC-AFC
ASC/ALC	FR1-SM-150-ASC-ALC
ALC/ALC	FR1-SM-150-ALC-ALC
FC/FC	FR1-SM-150-FC-FC
FC/ST	FR1-SM-150-FC-ST
FC/LC	FR1-SM-150-FC-LC
FC/AFC	FR1-SM-150-FC-AFC
AFC/AFC	FR1-SM-150-AFC-AFC

[TIP]	FOCIS Flex Tips & Cleaning (PRO2 and CMP2 kits only)	
Blank	Option not available in standard soft case, PRO and CMP kits	
SC	SC-UPC bulkhead tip, 2.5 mm UPC ferrule tip, 2.5 mm cleaning	
FC	FC-UPC bulkhead tip, 2.5 mm UPC ferrule tip, 2.5 mm cleaning	
LC	LC-UPC bulkhead tip, 1.25 mm UPC ferrule tip, 1.25 mm cleaning	
ASC	SC-APC bulkhead tip, 2.5 mm APC ferrule tip, 2.5 mm cleaning	
AFC	FC-APC bulkhead tip, 2.5 mm APC ferrule tip, 2.5 mm cleaning	
ALC	LC-APC bulkhead tip, 1.25 mm APC ferrule tip, 1.25 mm cleaning	

[OFI]	Optical Fiber Identifier Option Description (CMP2 kit only)
Blank	Option only available in CMP2 kit
200D	OFI-200D - Jacketed & buffered fiber; 2 kHz only
400	OFI-400 - Jacketed & buffered fiber; power & tone display
400C	OFI-400C - Jacketed fiber only OFI-400
400HP	OFI-400HP - High-power OFI-400
FTTx	OFI-FTTx - Active ONT Detector (FTTx PON systems)

For OFL280 FlexTester Accessories and Connector Adapters, see section "FLX380, OFL280, CS260 Series Accessories and Connector Adapters" on page 17.





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CS260-10

### CS260-10 FTTx PON Activation and Troubleshooting OTDR

CS260-10 FTTx PON Activation and Troubleshooting OTDRs enable cost-effective troubleshooting of FTTx PONs and point-to-point metro/access networks. The CS260-10's 1625 nm Live PON OTDR provides 35 dB dynamic range, best-in-class 0.8 3.5 m event and attenuation dead zones, integrated PON power meter plus Visual Fault Locator (VFL).

	OTDR Wavelength	Dynamic				Integra	ted	Trace Storage		
	(nm)	Range Emitter		Color			PON		Transfer	
Model	1625	(dB)	Type <sup>a</sup>	Power	Display	VFL	Meter	Storage Medium	to PC	
CS260-10	<b>*</b>	35	Laser	Li-lon, AC	¼ VGA	<b>*</b>	<b>♦</b>	Internal >1000	USB	

#### Notes:

**FRA** = French

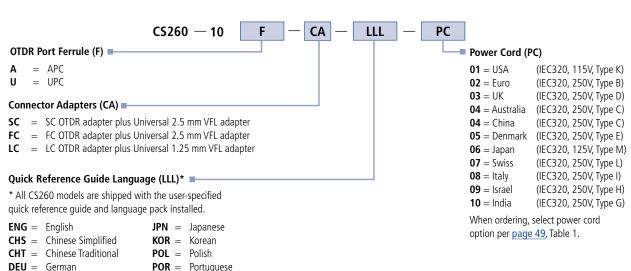
ITA = Italian

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

**SPA** = Spanish **TUR** = Turkish

The CS260 OTDR comes with a soft carry case, user-specified connector adapters for OTDR and VFL ports, USB cable (connects with Type A USB port on your PC), AC power adapter with a country-specific power cord, rechargeable replaceable Li-Ion battery, and TRM® 2.0 Test Results Manager trace analysis and reporting PC software (Basic License).

When placing an order, select options as follows: OTDR port ferrule type (F), connector adapter (CA), Language Pack (LLL)\*, country-specific Power Cord (PC). Example: CS260-10U-SC-ENG-01 indicates a CS260-10, 1625 nm Live PON OTDR with UPC port ferrule, SC OTDR connector adapter, 2.5 mm Universal VFL adapter, English/Euro language pack, quick reference guide in English, and US power cord.



**For CS260-10 FlexTester Accessories and Connector Adapters, see section** "FLX380, OFL280, CS260 Series Accessories and Connector Adapters" on page 17.





### M310 and M710 OTDR with LinkMap™

### Simplify network troubleshooting



### **LinkMap: Visualize your network!**

- With LinkMap, even novices can troubleshoot like pros!
- Color-coded icons indicate passing/failing splices, connectors, macro-bends or breaks.
- Apply user-definable pass/fail limits.
- Industry leading TruEvent™ analysis





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### M series Hand-held OTDR with TruEvent™ Technology

The M series OTDR has TruEvent Technology — software that was specifically designed to assure accurate reporting of loss events in these networks. TruEvent is a product of extensive research into the things that cause optical loss in a network — connectors, splices and macro/microbends and provides an unmatched level of accuracy and reliability in field test equipment. Combine TruEvent with short dead zone accuracy and the M series OTDR is THE solution for testing Data Center networks. Rugged and lightweight, the M series OTDR has a Touch and Test® user interface that makes it easy for experts or novices to test and document fiber networks accurately and quickly.

- M310 Models with LinkMap™ Feature: LinkMap with Pass/Fail enables even novice users to easily and accurately troubleshoot optical networks. LinkMap presents an icon-based view of the tested network clearly identifying fiber start, end, connectors, splices and macro-bends. A LinkMap Summary provides end-to-end link length, loss, and ORL. Loss and reflectance of detected events is compared to industry-standard or user-settable pass/fail thresholds and displayed with clear pass/fail indications. With an integrated optical light source, optical power meter and visual fault locator at NO extra cost, the M310 provides a complete Tier 1 and Tier 2 test solution. Using pre-set Industry ISO/TIA standards or user set Pass/Fail thresholds, technicians are provided with the right information about the magnitude and location of failures saving valuable troubleshooting time. The M310 single-mode and QUAD models come standard with an Advanced Analysis software option that includes macro/microbend detection and bi-directional trace analysis.
- The M210e Models provide an alternative choice without optical light source, Advanced Analysis, and LinkMap feature.



1240

### M series OTDR Base Models and Included Adapters

	W	avelen	gths (n	m)		OTDR Performance		А	dapters		
Model	850	1300	1310	1550		Dynamic Range (dB)	LinkMap	OTDR Port	OPM Port	Power	Internal / USB Trace Storage
M310-20			•	•	Laser	38/37	<b>*</b>	SC, LC	SC, 2.5 & 1.25 mm	Li-lon, AC	<b>*</b>
M310-25	•	<b>♦</b>	•	<b>♦</b>	Laser	30/30/38/37	<b>*</b>	(2) SC, LC, ST	SC, 2.5 & 1.25 mm	Li-lon, AC	<b>*</b>
M210e-20			•	•	Laser	34/34		SC, LC	SC, 2.5 & 1.25 mm	Li-lon, AC	<b>*</b>
M210e-22	•	•			Laser	28/28		SC, ST	SC, 2.5 & 1.25 mm	Li-lon, AC	<b>*</b>
M210e-25	•	•	•	•	Laser	28/28/34/34		(2) SC, LC, ST	SC, 2.5 & 1.25 mm	Li-lon, AC	<b>*</b>

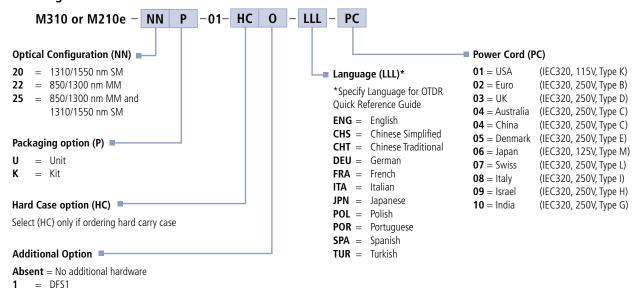


a. Safety: Class I FDA 21 CFR 1040.10 and 1040.11, IEC 60825-1: 2007-03.



M series with DFS1

#### **Ordering Information**



### Example: M310-20K-01-HC2-ENG-10

= DFS1 and OLS

This order is for the M310 single-mode OTDR with 1310/1550 optical configuration. It's a kit with hard carry case, DFS1, and OLS. DFS1 and OLS are additional hardware. Its quick reference guide is in English and it comes with a power cord suitable for India. For your ordering convenience, see "M series Ordering Information Table" on page 23.





**Buyer's Guide** 

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### **M series Ordering Information Table**

		Integrated Optio	n	Additio	onal Option	Case (	Option	
AFL NO.a, c	VFL	ОРМ	OLS	DFS1	OLS	Hard	Soft	
M310-20U-01	<b>•</b>	<b>*</b>	•				<b>•</b>	
M310-25U-01	<b>*</b>	<b>*</b>	<b>*</b>				<b>*</b>	
M310-20U-01-HC	<b>*</b>	<b>*</b>	<b>*</b>			<b>*</b>		
M310-25U-01-HC	<b>*</b>	<b>*</b>	<b>*</b>			<b>*</b>		
M310-20K-01-HC1 <sup>b</sup>	<b>*</b>	<b>*</b>	<b>*</b>	<b>*</b>		<b>*</b>		
M310-25K-01-HC1 <sup>b</sup>	<b>*</b>	<b>*</b>	<b>*</b>	<b>*</b>		<b>*</b>		
M310-20K-01-HC2 <sup>b</sup>	<b>•</b>	<b>*</b>	•	<b>*</b>	OLS2-DUAL	<b>*</b>		
M310-25K-01-HC2 <sup>b</sup>	<b>*</b>	<b>*</b>	<b>*</b>	<b>*</b>	OLS4	<b>*</b>		
M210e-20U-01	<b>•</b>	<b>*</b>					<b>*</b>	
M210e-22U-01	<b>•</b>	<b>*</b>					<b>*</b>	
M210e-25U-01	<b>•</b>	<b>*</b>					<b>*</b>	
M210e-20U-01-HC	<b>*</b>	<b>*</b>				<b>*</b>		
M210e-22U-01-HC	<b>*</b>	<b>*</b>				<b>*</b>		
M210e-25U-01-HC	<b>*</b>	<b>•</b>				<b>*</b>		
M210e-25K-01-HC1 <sup>b</sup>	<b>•</b>	<b>•</b>		<b>•</b>		•		
M210e-25K-01-HC2 <sup>c</sup>	<b>•</b>	<b>*</b>		•	OLS4	<b>*</b>		

#### Notes

- a. Specify Language for OTDR Quick Reference Guide: English, Chinese Simplified, Chinese Traditional, German, French, Italian, Polish, Portuguese, Spanish, Turkish, and Japanese.
- b. When ordering HC1 or HC2 kits, specify DFS1 model. The DFS1 FiberScope kit is available as either PC/UPC (DFS1-00-04XU model) or APC inspection kit (DFS1-004XA model).
- c. Specify Language for OTDR operating environment: English, Chinese (Simplified and Traditional), and Japanese.

### **M series OTDR Accessories and Connector Adapters**

AFL NO.	Description	
DFS1-00-xxxx	DFS1 USB Digital FiberScope kits. See page 42.	
4050-00-0122PR	Vehicle charger/supply, 18 V, 6.7 A, 120 W	
1400-01-0075PZ	Hard carry case for M series OTDR with 6 compartment connector case	
3900-05-0001PE	Li-Ion battery	
4050-00-0918PR	AC adapter 100-240 VAC to 18 VDC, (specify power cord, see page 49, Table 1)	
6000-00-0024MR	Cable, USB-MINI B (connect to PC)	
TRM-00-0920PR	TRM® 2.0 upgrade from Basic to Advanced software	
2900-50-0002MR	FC adapter for OTDR port	
2900-50-0003MR	SC adapter for OTDR port	
2900-50-0004MR	ST adapter for OTDR port	

AFL NO.	Description	
2900-50-0006MR	LC adapter for OTDR 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	
2900-50-0007MR	2.5 mm Universal for VFL port	
2900-50-0010MR	1.25 mm Universal for VFL port	
8800-00-0072PR	Universal flip-top dust cap for UCI outputs	

**Note:** Did you know free software updates for your OTDR are available for download on the www.AFLglobal.com -> Resources -> Software web page?

M210e OTDR Mining Test and Inspection Kits

### M series OTDR Kit for Mining

AFL NO.	Description	
M210E-MNG	(1) M210e QUAD OTDR, (1) VS300 scope, (1) CleanConnect 500, (1) One-Click Cleaner SC/ST/FC, (2) SC-ST fiber	
	rings SM, (2) SC-ST fiber rings MM 62.5 µm, (2) ST/SC mating adapters	







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### **Compact OTDRs**

# M710

M710



M710



M710 in a soft case



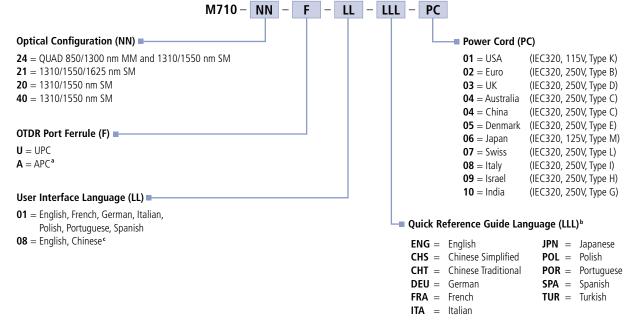
M710 with DFS1



DFS1 Digital FiberScope (see page 42)

### M710 OTDR — with TruEvent™ Technology

The M710's TruEvent identifies and reports the details and location of loss events more accurately. The M710's LinkMap™ with Pass/Fail enables even novice users to easily and accurately troubleshoot optical networks. LinkMap presents an icon-based view of the tested network clearly identifying fiber start, end, connectors, splices and macro-bends. A LinkMap Summary provides end-to-end link length, loss, and ORL. Loss and reflectance of detected events is compared to industry-standard or user-settable pass/fail thresholds and displayed with clear pass/fail indications. The M710 OTDRs include an integrated visual fault locator, optical power meter, and a 6.5" transflective touchscreen display suitable for both indoor and outdoor operation. All models come with TRM® 2.0 Test Results Manager PC software (Basic License), USB Flash drive, AC adapter (specify power cord, page 49, Table 1), switchable test port adapters, and cleaning accessories in a soft carry case. The M710 OTDR is inspection ready with the addition of our DFS1 Digital FiberScope (see page 42). Standard UPC adapters for -20/-21/-40 models are SC, FC, LC, 2.5 mm & 1.25 mm universal. Standard UPC adapters for -24 model are (2) SC, FC, LC, 2.5 mm, and 1.25 mm universal.



### Example: M710-20U-08-ENG-04

This model number indicates M710 QUAD OTDR with UPC OTDR port ferrule, and English language option. This model number indicates M710 SM OTDR English/Chinese (Simplified & Traditional) User Interface Language option in a soft carry case. Its quick reference guide is in Chinese Simplified and it comes with a power cord suitable for China.

	Wavelengths (nm)					Emitter	Dynamic			Integra	ted	Internal / USB	
Model	850	1300	1310	1550	1625	Typed	Range (dB)	LinkMap	Power	VFL	ОРМ	Trace Storage	
M710-20			•	<b>♦</b>		Laser	41/39		Li-lon, AC	•	<b>♦</b>	<b>*</b>	
M710-21			<b>♦</b>	<b>♦</b>	<b>♦</b>	Laser	41/39/39		Li-lon, AC	<b>♦</b>	<b>♦</b>	<b>*</b>	
M710-40			<b>♦</b>	<b>♦</b>		Laser	44/42		Li-lon, AC	<b>♦</b>	<b>♦</b>	<b>*</b>	
M710-24	•	•	<b>♦</b>	<b>♦</b>		Laser	25°/24°/40/38	<b>♦</b>	Li-lon, AC	<b>♦</b>	<b>♦</b>	<b>*</b>	

#### Notes

- a. Available on the SM port for -20, -21, -24 models only.
- b. When ordering OTDR, specify Language option for the OTDR Quick Reference Guide.
- c. The M710 OTDR User Interface in Chinese (Simplified and Traditional) is available for -20, -21, and -40 models only.
- d. Safety: Class I FDA 21 CFR 1040.10 and 1040.11, IEC 60825-1: 2007-03.
- e. 62.5 µm fiber.





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#### **M710 OTDR Accessories**

AFL NO.	Description	
DFS1-00-xxxx	DFS1 USB Digital FiberScope kits. See page 42	
4050-00-0122PR	Vehicle charger/supply, 18 V, 6.7 A, 120 W	
1400-01-0090PZ	M710 hard carry case	
4050-00-0918PR	AC adapter 100-240 VAC to 18 VDC, (specify power cord, see page 49, Table 1)	
3900-05-0004ME	Li-Ion battery	
4050-30-0005MR	Li-Ion battery charger 90-260 VAC (specify power cord, see page 49 – Table 2)	
6000-00-0027MR	Cable, USB-MINI B (connect to PC)	
TRM-00-0920PR	TRM® 2.0 upgrade from Basic to Advanced software	

Note: Did you know free software updates for your OTDR are available for download on the <a href="https://www.AFLglobal.com">www.AFLglobal.com</a> -> Resources -> Software web page?



M710 in a hard case

#### **Carry Case Option**

- The M700-H1 hard transit case has wheels and a retractable pull handle.
- Custom kits may be created by ordering an M710 OTDR, the M700-H1 hard carry case and accessories such as Fiber Rings, cleaning accessories, Optical Light Source, and DFS1 Digital FiberScope.
- The M700-H1 hard carry case is the 1400-01-0090PZ hard carry case with cleaning supplies added.

Model	Description	
M700-H1	Hard carry case with One-Click Cleaner SC/ST/FC (2.5 mm), One-Click Cleaner LC/MU (1.25 mm), CleanConnect 500	

### **M710 OTDR Connector Adapters**

AFL NO.	Description								
2900-50-0002MR	FC adapter for OTDR port								
2900-50-0003MR	Cadapter for OTDR port								
2900-50-0004MR	ST adapter for OTDR port								
2900-50-0006MR	LC adapter for OTDR port								
8800-00-0200	Cadapter 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								
8800-00-0214	2.5 mm Universal adapter for OPM port								
8800-00-0224	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								





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### **Certification Products**

The C840 and C880 User Interface is available in English, French, German, Italian, Polish, Portuguese and Spanish. Encircled Flux Options for multimode testing. See "Encircled Flux (EF) Modal Conditioners" on page 48.

### **C840 QUAD Certification Tester**

The C840 QUAD Certification Tester works with the DFS1 Digital FiberScope (see <u>page 42</u>; the DFS1 includes software update for the C840 Tester). The C840 includes an integrated single-mode (Laser 1310/1550 nm) and multimode (LED 850/1300 nm) Optical Light Sources (OLS), Optical Power Meter (OPM), and Visual Fault Locator (VFL, 650 nm). The C840 may be paired with another C840 for Certification testing or used alone as a traditional power meter, light source or visual fault locator.

	Auto Test Wavelengths (nm)				Auto Test Wavelengths (nm) Int						Integrated			Features		Trace Sto	orage
Model	850	1300	1310	1550	Emitter Type <sup>a</sup>	Detector Type	OLS	OPIM	VFL	Auto Dual λ Bi-Dir. Testing	PC S/W	Power	Internal	USB			
C840	•	<b>♦</b>	•	•	LED-MM/Laser-SM	InGaAs 2 mm	<b>♦</b>	<b>♦</b>	•	•	•	Li-lon, AC	<b>*</b>	<b>♦</b>			

### **C880 QUAD Certification Test Kit**

Each C880 kit includes two (2) hand-held C840 QUAD Certification Testers.

All C series products include USB Flash drive, TRM® 2.0 Test Results Manager trace analysis/reporting and certification or OPM loss reporting PC software (Basic License), (2) AC adapters (specify power cord, see page 49, Table 1), switchable test port adapters, and accessories (see table below).

	Carry	Test Port A	dapters				
AFL NO.	Case	OLS	ОРМ	VFL	Cleaning Products	Test Cords <sup>b</sup>	
C840-100-LP1-S1	Soft case	SC, ST, LC	SC, 2.5, 1.25 mm	2.5, 1.25 mm	One-Click Cleaner SC/ST/FC, 2.5 mm		
C880-100-LP1-S1	Soft case	SC, ST, LC	SC, 2.5, 1.25 mm	2.5, 1.25 mm	One-Click Cleaner SC/ST/FC, 2.5 mm One-Click Cleaner LC, 1.25 mm	SC/LC	
C880-100-LP1-S2	Soft case	SC, ST, LC	SC, 2.5, 1.25 mm	2.5, 1.25 mm	One-Click Cleaner SC/ST/FC, 2.5 mm	SC/ST	

#### Notos

- a. Safety: Class I FDA 21 CFR 1040.10 and 1040.11, IEC 60825-1: 2007-03.
- b. (4) each 2 m (62.5 μm, 50 μm, SM).

#### **C840** and **C880** Accessories and Connector Adapters

AFL NO.	Description	
DFS1-00-xxxx	DFS1 USB Digital FiberScope kits. See page 42.	
4050-00-0122PR	Vehicle charger/supply, 18 V, 6.7 A, 120 W	
4050-00-0918PR	AC adapter 100-240 VAC to 18 VDC, (specify power cord, see page 49, Table 1)	
3900-05-0001PE	Li-Ion battery	
6000-00-0027MR	Cable, USB-MINI B (connect to PC)	
2900-50-0002MR	FC adapter for OLS port	
2900-50-0003MR	SC adapter for OLS port	
2900-50-0004MR	ST adapter for OLS port	
2900-50-0006MR	LC adapter for 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	
2900-50-0007MR	2.5 mm Universal adapter for VFL port	
2900-50-0010MR	1.25 mm Universal adapter for VFL port	
8800-00-0072PR	Universal flip-top dust cap for UCI outputs	



C840 with DFS1



C840



C880



C880



DFS1 Digital FiberScope (see page 42)





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FTK1-01-0900PR

### **FTK PRO Installer Kits**

Available with multimode and single-mode test equipment, the kit also includes a broad array of cleaning and inspection equipment in a convenient hard carry case. The Pro Installer Kit is ideal for TIA Tier 1 and Tier 2 testing of premises (building and campus) networks or certification and troubleshooting.

AFL NO.	Kit Contents (partial list)	
FTK1-01-0902PR	OPM5-2D, OLS4, OFS300, fiber rings, jumpers, adapters, cleaning supplies (wet and dry), reporting software, etc.	
FTK1-01-0900PR	M210e OTDR with AC adapter (specify power cord, see page 49, Table 1), OPM5-2D, OLS4, OFS300, fiber rings,	
	jumpers, adapters, cleaning supplies (wet and dry), reporting software, etc.	



FTK1-02-0900PR

### **AFL Fiber Splice and Verify Test Kits**

### (Only available to customers in North America)

Everything needed to splice and test your fiber cable – in one easy to order part number!

Demanding environments require robust equipment. AFL delivers industry leading solutions designed to withstand these environments and provide reliable performance for years of use.

### FTK Splicer/OTDR Test Kits

All kits include Cleaning kit (FCP2-00-0900 Cleaning kit).

AFL NO.	Fusion Splicer	OTDR	FOCIS Inspection	
FTK1-03-0900PR	12S kit with CT-30 Cleaver	OFL280 FlexTester 1310/1550 nm with LinkMap, UPC	FOCIS Flex PC/UPC kit	
FTK1-03-0901PR	12S kit with CT-30 Cleaver	OFL280 FlexTester 1310/1490/1550 nm with LinkMap, UPC	FOCIS Flex PC/UPC kit	
FTK1-03-0902PR	12S kit with CT-30 Cleaver	FLX380 FlexTester 1310/1550 nm with LinkMap, UPC	FOCIS Flex PC/UPC kit	
FTK1-03-0903PR	70S kit with CT-30A Cleaver	OFL280 FlexTester 1310/1550 nm with LinkMap, UPC	FOCIS Flex PC/UPC kit	
FTK1-03-0904PR	70S kit with CT-30A Cleaver	FLX380 FlexTester 1310/1550 nm with LinkMap, UPC	FOCIS Flex PC/UPC kit	
FTK1-03-0905PR	12S kit with CT-30 Cleaver	OFL280 FlexTester 1310/1550 nm with LinkMap, UPC,	FOCIS Flex	
		150 m fiber ring	with one connector	
FTK1-03-0906PR	70S kit with CT-30 Cleaver	OFL280 FlexTester 1310/1550 APC	FOCIS WiFi PRO	

### FTK Oil & Gas Combo Kit

AFL NO.	Fusion Splicer	OTDR	Accessory Kit	
FTK1-02-0900PR	70s kit with CT-30A Cleaver	M310-25K-01 QUAD OTDR	FTK1-01-0904PR Oil & Gas OTDR Accessory kit	

### FTK Oil & Gas OTDR Accessory Kit

AFL NO.	Description						
FTK1-01-0904PR	Oil & Gas OTDR Accessory kit includes: fiber rings, test cords, cleaning supplies, connector adapters, and more in a						
	rugged hard carry case.						



Fiber Length

150 m (492 ft)

500 m (1640 ft)

1000 m (3280 ft)

150 m (492 ft)

500 m (1640 ft)

1000 m (3280 ft)



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### **OTDR Fiber Rings and Network Simulators**

### OTDR Launch and Receive/Tail Cords - Fiber Rings

Configuration

Standard, one fiber

Standard, one fiber

Standard one fiber

Standard, one fiber

Standard, one fiber

Standard, one fiber, Laser Optimized

Standard, one fiber, Laser Optimized

Standard, one fiber, Bend Insensitive

Standard, one fiber, Bend Insensitive

Standard, one fiber, Bend Insensitive

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 over 1 km in length. Because very long test jumpers are impractical to transport and use, AFL offers coiled lengths of 50 µm multimode (standard and Laser Optimized), 62.5 µm multimode, or single-mode fiber, 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.

**Fiber Type** 

Single-mode

Single-mode

Single-mode

Multimode, 50 µm, OM2

Multimode, 50 µm, OM3

Multimode, 50 µm, OM4

Single-mode, G.657.A2 BIF

Single-mode, G.657.A2 BIF

Single-mode, G.657.A2 BIF

Multimode, 62.5 µm





NS Bench Top Model



Model

Other fiber types, connector styles, and custom lengths are available by request Notes:

Fiber Rings

FR1-M5-150-x1-x2

FR1-M6-150-x1-x2

FR1-SM-150-y1-y2

FR1-SM-500-y1-y2

FR1-SM-1000-y1-y2

FR1-BIF-150-y1-y2

FR1-BIF-500-y1-y2

FR1-BIF-1000-y1-y2

FR1-OM3-150-x1-x2

FR1-OM4-150-x1-x2

AFL NO.

- a. x1, x2 connectors for multimode cables, specify type [ST, SC, ASC (angled SC), FC, AFC (angled FC), LC].
- b. y1, y2 connectors for single-mode cables, specify type [ST, SC, ASC (angled SC), FC, AFC (angled FC), LC].
- c. Other fiber types, connector styles, and custom lengths are available by request.

### **Custom-Designed Network Simulators**

AFL network simulators from AFL are custom-designed bench top or rack mountable boxes intended to duplicate installed fiber optic networks. Training classes and laboratory testing are just a couple of the many applications for these units. Network simulators may be ordered with customer-specified 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. Each network simulator comes with full documentation for insertion loss, attenuation/km, and event location/value. The bench top models can accommodate up to 15 km of fiber and the rack mountable cases can hold up to

Please call Customer Service (800-321-5298 or 603-528-7780) with your specifications to get a quote on your custom network simulator.



FTTx PON Simulator Kit

#### 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	FTTx PON Simulator kit includes: (1) FTTx PON splitter box, (4) fiber rings, (3) SC/APC jumpers, (2) hybrid jumpers, (1) PON demo procedure, (1) carry case.	
PONS-00-0900PZ	FTTx PON Simulator kit includes: (1) FTTx PON splitter box, (4) fiber rings, (3) SC/APC jumpers, (2) hybrid jumpers, (1) OLS7-FTTH, (1) PON demo procedure, (1) carry case.	





### **Buyer's Guide**

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### **DWDM and CWDM Testers**

AFL understands that the same WDM technologies that make high capacity Cell Backhaul, Metro Ethernet and Broadband Triple-play services possible also present complex testing challenges. We've seen how technicians and engineers have struggled to apply legacy measurement products to test or troubleshoot today's cutting edge Metro and Access networks. In response, we've developed innovative new products, like the WDM900 Lightwave Test Set, that incorporate exclusive features designed to simplify WDM testing and enable even first time users to identify, document and resolve the cause of WDM network issues or outages.



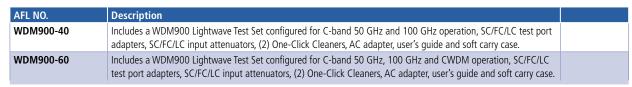
WDM900-40 kit

### WDM900 Lightwave Test Set

The WDM900 is the world's first rugged, portable and easy-to-use optical test set that simplifies in-service testing of live DWDM and CWDM networks. Within just seconds of connecting to a network port, WDM900 users know the status of each channel, which channels require attention and exactly what action is required. The WDM900 is engineered to perform under the harsh conditions typically found in a central office, headend, network node and other outside plant locations. Its highly-integrated solid state design features a hermetically-sealed optical engine and no moving parts. A real-time internal wavelength reference and temperature-stabilized mechanism eliminates long warm-up periods and accuracy drifts induced by sudden temperature and humidity changes. The WDM900 is the only portable WDM measurement system that satisfies Telcordia GR-2952-CORE environmental specifications.

Two different models of WDM900 are available.

- WDM900-40 designed for commissioning, testing and troubleshooting of DWDM Access/Metro network links
- WDM900-60 designed for commissioning, testing and troubleshooting of CWDM and DWDM Access/Metro network links





WDM900-60 kit





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

Quick Ref Guides (PDF format) are available in Chinese Simplified, Chinese Traditional, French, German, Italian, Japanese, Korean, Portuguese, Spanish and Turkish on <a href="https://www.AFLglobal.com">www.AFLglobal.com</a>.



OPM5

#### OPM models.

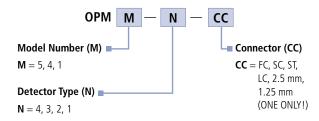
- Select one of the following adapter caps when ordering power meters: 2.5 mm, 1.25 mm, FC, SC, ST, LC.
- OPM5 models include TRM® 2.0 software (Basic License).
- For a list of all available adapter caps, see page 48.

When placing an order, select options as follows:

- Model Number (M)
- Detector Type (N)
- Connector Configuration (CC)



OPM4

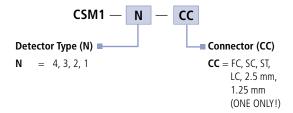


#### CSM1 models

- Select one of the following adapter caps when ordering power meters: 2.5 mm, 1.25 mm, FC, SC, ST, LC.
- For a list of all available adapter caps, see page 48.

When placing an order, select options as follows:

- Detector Type (N)
- Connector Configuration (CC)





OPM1



	Calibrated Wavelengths (nm)						Features												
Model	650	099	780	850	086	1300	1310ª	1490	1550	1625	Detector Type	Measurement Range (dBm)	Units of Measure	Power	Set Ref.	PC S/W	Wave ID	Tone <sup>b</sup>	
OPM1-2C				•		<b>♦</b>	<b>♦</b>		<b>♦</b>		Germanium	+6 to -60	dBm	9 volt					
OPM1-3C				<b>♦</b>		<b>♦</b>	<b>♦</b>		<b>♦</b>	<b>♦</b>	InGaAs	+6 to -70	dBm	9 volt					
OPM4-1D	•	•	<b>♦</b>	•							Silicon	+6 to -70	dB, dBm, W	(2) AA, USB	•		<b>♦</b>	•	
OPM4-2D				<b>♦</b>		<b>♦</b>	<b>♦</b>	<b>♦</b>	<b>♦</b>		Germanium	+6 to -60	dB, dBm, W	(2) AA, USB	•		<b>♦</b>	<b>♦</b>	
OPM4-3D				<b>♦</b>		<b>♦</b>	<b>♦</b>	<b>♦</b>	<b>♦</b>	<b>♦</b>	InGaAs	+10 to -75	dB, dBm, W	(2) AA, USB	•		<b>♦</b>	<b>♦</b>	
OPM4-4D				<b>♦</b>	<b>♦</b>		•	<b>♦</b>	•	•	InGaAs	+26 to -50	dB, dBm, W	(2) AA, USB	•		<b>♦</b>	<b>♦</b>	
OPM5-2D				<b>♦</b>		<b>♦</b>	•	•	•		Germanium	+6 to -60	dB, dBm, W	(2) AA, USB	•	USB	<b>♦</b>	<b>♦</b>	
OPM5-3D				<b>♦</b>		<b>♦</b>	<b>♦</b>	<b>♦</b>	<b>♦</b>	<b>♦</b>	InGaAs	+10 to -75	dB, dBm, W	(2) AA, USB	•	USB	<b>♦</b>	<b>♦</b>	
OPM5-4D				<b>♦</b>	<b>♦</b>		<b>♦</b>	<b>♦</b>	•	<b>♦</b>	InGaAs	+26 to -50	dB, dBm, W	(2) AA, USB	•	USB	<b>♦</b>	•	
CSM1-1		<b>♦</b>	<b>♦</b>	<b>♦</b>							Silicon	+6 to -70	dB, dBm, W	(2) AA	•			<b>♦</b>	
CSM1-2				<b>♦</b>		<b>♦</b>	<b>♦</b>		<b>♦</b>		Germanium	+6 to -60	dB, dBm, W	(2) AA	•			<b>♦</b>	
CSM1-3				<b>♦</b>		<b>♦</b>	<b>♦</b>	<b>♦</b>	<b>♦</b>	•	InGaAs	+6 to -70	dB, dBm, W	(2) AA	•			<b>♦</b>	
CSM1-4				•	•		<b>♦</b>	•	<b>♦</b>	•	InGaAs	+26 to -50	dB, dBm, W	(2) AA	•			•	

#### Notes

- a. Optical Power Meters use a common calibration point for 1300 nm (multimode) and 1310 nm (single-mode).
- b. 270 Hz, 330 Hz, 1 kHz, and 2 kHz Tone detection.

#### **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® 2.0	power only	external power	
	- External Power for OPM (when used with customer supplied USB-A power source)			



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### **FTTx PON Power Meter**

The OPM4-FTTx measures downstream signals in FTTH and other passive optical networks (PON) that use 1490 nm for data and 1550 nm for video traffic. Equipped with PON specific wavelength filters and a dual photo detector, the OPM4-FTTx can separately and simultaneously measure 1490 and 1550 nm power at the ONT or other points in an FTTx PON. The OPM4-FTTx PON power meter comes with a protective rubber boot, SC adapter for power meter port, 2.5 mm Universal adapter for VFL port, user's guide and carry case.

	Calibrate	Calibrated $\lambda$ (nm)		Measurement Range	Units of		Set Ref.	VFL	BPON, GPON,	
AFL NO.			Туре	(dBm)	Measure	Power	Feature <sup>a</sup>	(650 nm)	EPON compatible	
OPM4-FTTx	•	•	Filtered	+10 to -50 @1490 nm	dB, dBm,	(2) AA	<b>♦</b>	•	<b>*</b>	
			InGaAs	+20 to -50 @1550 nm	W					

#### Notes:

a. The "Set Reference" feature may be used to measure the difference between two power (dBm) levels, in units of dB measured at different parts of the network

### **OPM-FTTx Test Port Adapters**

AFL NO.	Description							
2900-50-0002MR	FC adapter for power meter port							
2900-50-0003MR	OO3MR SC adapter for power meter port							
2900-50-0004MR ST adapter for power meter port								
2900-50-0006MR	LC adapter for power meter port							
2900-50-0007MR	2.5 mm Universal adapter for VFL port							
2900-50-0010MR	1.25 mm Universal adapter for VFL port							
8800-00-0072PR	Universal flip-top dust cap for UCI outputs							





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

Quick Ref Guides (PDF format) are available in Chinese Simplified, Chinese Traditional, French, German, Italian, Japanese, Korean, Portuguese, Spanish and Turkish www.AFLglobal.com.

Encircled Flux Options for multimode testing. See "Encircled Flux (EF) Modal Conditioners" on page 48.

When ordering, specify connector type at the end of model number (e.g. OLS2-DUAL-SC).

All OLS models include protective rubber boot and carry case.

AC adapters are available (ordered separately), see table below.



OLS7



OLS4



OLS2-DUAL

	Output Wavelengths (nm)				ım)	ţ									
Model	099	850	1300	1310	1490	1550	1625	Output Ports	Emitter Type <sup>a</sup>	Output Power (nominal, dBm)	Stability	Wave ID Transmit	Available Connectors	Power	
OLS1-1C	•	•						2	LED	-10 @660 <sup>b</sup> nm -20 @850 nm	± 0.1 dB/8 hrs		ST	9 volt, AC	
OLS1-2C		•	•					2	LED	-20	± 0.1 dB/8 hrs		ST	9 volt, AC	
OLS1-DUAL		•	•					1	LED	-20	± 0.1 dB/8 hrs	<b>♦</b>	FC, SC, ST, LC	(2) AA, AC	
OLS2-DUAL				•		•		1	Laser	0 c	± 0.05 dB/1 hr	<b>♦</b>	FC, SC, ST, LC	(2) AA, AC	
OLS4		•	•	•		•		2	LED & Laser	-20 @850 &1300 nm 0 @1310 & 1550 nm	± 0.05 dB/1 hr	<b>*</b>	FC, SC, ST, LC	(2) AA, AC	
OLS7-3				•		•	<b>♦</b>	1	Laser	-5	± 0.05 dB/1 hr	<b>♦</b>	FC, SC, ST, LC	(2) AA, AC	
OLS7-FTTH				•	•	•		1	Laser	-5	± 0.05 dB/1 hr	<b>*</b>	FC, SC, ST, LC	(2) AA, AC	
OLS7-FTTx				•	•		<b>♦</b>	1	Laser	-5	± 0.05 dB/1 hr	<b>*</b>	FC, SC, ST, LC	(2) AA, AC	
CSS1-MM		•	<b>♦</b>					1	LED	-20	± 0.1 dB/1 hr		SC (fixed)	(2) AA	
CSS1-SM				<b>♦</b>		<b>♦</b>		1	Laser	0	± 0.05 dB/1 hr		FC, SC, ST, LC	(2) AA	

#### 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: 2007-03.
- b. 660 nm LED output power specified into 1000 µm fiber. All other LED output powers specified into 62.5 µm fiber.

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

c. Adjustable 2 dB.

### **OLS AC Adapters**



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>	•	•	
2900-50-0006MR	LC adapter	•	<b>•</b>	<b>♦</b>	<b>♦</b>	•	
8800-00-0072PR	Universal flip-top dust cap for UCI outputs	•	<b>♦</b>	<b>*</b>	•		



OLS1-DUAL



CSS-SM



### **Buyer's Guide**

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

Quick Ref Guides (PDF format) are available in Chinese Simplified, Chinese Traditional, French, German, Italian, Japanese, Korean, Portuguese, Spanish and Turkish on www.AFLglobal.com.

#### Encircled Flux Options for multimode testing. See "Encircled Flux (EF) Modal Conditioners" on page 48.

Specify one source/adapter cap connector type when ordering. All test kits include an optical power meter, optical light source, adapter cap, protective rubber boots, user's guide, and carry case. Additional adapter caps may be ordered separately (see page 48). For available AC adapters see page 32. SMLP5 and MLP5 kits also include TRM® 2.0 Test Results Manager trace analysis/reporting and certification or OPM loss reporting PC software (Basic License). Other test kit configurations are available upon request.













				Los	Loss Measurements (nm)			Features								
AFL NO.	Power Meter	Light Source	Fiber Type	099	850	1300	1310	1490	1550	1625	Dynamic Range (dB)	Available Connectors	Set Ref.	PC S/W	Auto Dual λ Test	
MLP1-1S	OPM1-2C	OLS1-1C	MM		•						40 @850 nm²	ST				
MLP1-2	OPM1-2C	OLS1-2C	MM SM		•	•					40 @850/1300 nm <sup>a</sup> 20 @1300 nm <sup>b</sup>	ST				
MLP4-1D	OPM4-1D	OLS1-1C	MM	•	•						40 @850 nm <sup>a</sup>	ST	•			
MLP4-2D	OPM4-2D	OLS1-DUAL	MM SM		•	•					40 @850/1300 nm <sup>a</sup> 22 @1300 nm <sup>b</sup>	FC, SC, ST, LC	•		•	
MLP5-2D	OPM5-2D	OLS1-DUAL	MM SM		•	•					40 @850/1300 nm <sup>a</sup> 22 @1300 nm <sup>b</sup>	FC, SC, ST, LC	•	•	•	
SLP4-6	OPM4-3D	OLS2-DUAL	SM				<b>♦</b>		<b>♦</b>		70 <sup>b</sup>	FC, SC, ST, LC	•		•	
SLP4-6D	OPM4-4D	OLS2-DUAL	SM				<b>♦</b>		<b>♦</b>		50 <sup>b</sup>	FC, SC, ST, LC	•		•	
SLP4-7	OPM4-4D	OLS7-3	SM				•		•	•	45 <sup>b</sup>	FC, SC, ST, LC	•		•	
SLP4-FTTH	OPM4-4D	OLS7-FTTH	SM				•	•	•		45 <sup>b</sup>	FC, SC, ST, LC	•		•	
SLP4-FTTx	OPM4-3D	OLS7-FTTx	SM				•	<b>♦</b>		<b>♦</b>	70 <sup>b</sup>	FC, SC, ST, LC	•		<b>♦</b>	
SLP5-6	OPM5-3D	OLS2-DUAL	SM				•		•		70 <sup>b</sup>	FC, SC, ST, LC	•	•	•	
SLP5-6D	OPM5-4D	OLS2-DUAL	SM				<b>♦</b>		•		50 <sup>b</sup>	FC, SC, ST, LC	•	•	<b>♦</b>	
SLP5-7	OPM5-4D	OLS7-3	SM				•		•	•	45 <sup>b</sup>	FC, SC, ST, LC	•	•	•	
SLP5-FTTH	OPM5-4D	OLS7-FTTH	SM				•	<b>♦</b>	<b>♦</b>		45 <sup>b</sup>	FC, SC, ST, LC	•	•	<b>♦</b>	
SLP5-FTTx	OPM5-3D	OLS7-FTTx	SM				<b>♦</b>	•		<b>♦</b>	70 <sup>b</sup>	FC, SC, ST, LC	•	•	<b>♦</b>	
SMLP4-4	OPM4-2D	OLS4	MM SM		<b>♦</b>	•	•		<b>♦</b>		40 @850/1300 nm <sup>a</sup> 60 @1310/1550 nm <sup>b</sup>	FC, SC, ST, LC	•		•	
SMLP5-5	OPM5-2D	OLS4	MM SM		•	•	•		•		40 @850/1300 nm <sup>a</sup> 60 @1310/1550 nm <sup>b</sup>	FC, SC, ST, LC	•	•	•	
CKM-2	CSM1-2	CSS1-MM	MM		<b>♦</b>	<b>♦</b>					40ª	SC (fixed)	<b>♦</b>			
CKS-2	CSM1-2	CSS1-SM	SM				<b>♦</b>		<b>♦</b>		60 @1310/1550 nm	FC, SC	<b>♦</b>			
CKS-3	CSM1-3	CSS1-SM	SM				<b>♦</b>		•		70 @1310/1550 nm	FC, SC	•			
CKSM-2	CSM1-2	CSS1-MM CSS1-SM	MM SM		•	<b>♦</b>	•		•		40 @850/1300 nm <sup>a</sup> 60 @1310/1550 nm <sup>b</sup>	SC	•			

- a. On  $62.5/125~\mu m$  multimode fiber.
- b. On  $9/125 \, \mu m$  single-mode fiber.

SLP4-6 \$2,149.00 \$1,845.00





January 15, 2016

### **Encircled Flux (EF) Compliant Sources & Test Kits**

### **Encircled Flux (EF) Compliant Light Sources**

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. Thus, EF compliance requires an EF Light Source and RGTC used together.

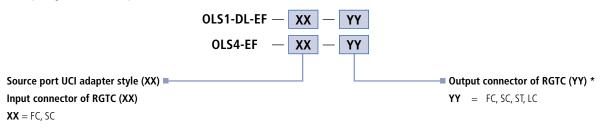
AFL offers multimode Light Sources with designed in Encircled Flux (EF) optics supplied with EF qualified RGTC. Specify RGTC connectors at time of order.

OLS1-DUAL EF is supplied with one multimode RGTC

OLS4 EF is supplied with one multimode RGTC and one standard 9/125 single-mode test cord.

AFL NO.	Wavelengths	Test Cords Included	
OLS1-DUAL-EF-XX-YY	MM 850/1300 nm	(1) RGTC, 50 μm, MM, 2-meter	
OLS4-EF-XX-YY	MM 850/1300 nm	(1) RGTC, 50 µm, MM, 2-meter	
	SM 1310/1550 nm	(1) 9/125 μm, SM, 2-meter	

When placing an order, select options as follows:



#### Notes:

For Encircled Flux (EF) Mode Conditioning Cords that can be used with non-EF Compliant Sources, see "Encircled Flux (EF) Modal Conditioners" on page 35'





### **Encircled Flux (EF) Compliant Test Kits**

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. Thus, EF compliance requires an EF Light Source and RGTC used together.

AFL EF compliant loss test kits include:

Multimode Test Ports: (SMLP and MLP kits)

- Light Source with designed in Encircled Flux (EF) optics paired with one EF qualified RGTC.
- 50/125 µm receive test cord

Single-mode Test Ports (SMLP kits)

• Light Source with two 9/125 µm test cords (launch/receive)

					Available Connectors		Included 2-meter 1		
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 1310, 1550	40 @850/1300 nm 60 @1310/1550 nm	FC, SC	FC, SC, ST, LC	MM: RGTC, 50/125 SM: 9/125	MM: 50/125 SM: 9/125	
SMLP4-4-EF-XX-YY	OPM4-2D	OLS4-EF	850, 1300 1310, 1550	40 @850/1300 nm 60 @1310/1550 nm	FC, SC	FC, SC, ST, LC	MM: RGTC, 50/125 SM: 9/125	MM: 50/125 SM: 9/125	
MLP5-2-EF-XX-YY	OPM5-2D	OLS1-DL-EF	850, 1300	40 @850/1300 nm 22 @1300 nm	FC, SC	FC, SC, ST, LC	MM: RGTC, 50/125	MM 50/125	
MLP4-2-EF-XX-YY	OPM4-2D	OLS1-DL-EF	850, 1300	40 @850/1300 nm 22 @1300 nm	FC, SC	FC, SC, ST, LC	MM: RGTC, 50/125	MM 50/125	

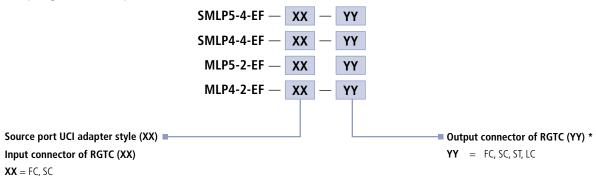
<sup>\*</sup> See section "Encircled Flux (EF) Reference Grade Test Cords" on page 35 to order additional Reference Grade Test Cords,



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When placing an order, select options as follows:



#### Notes:

For Encircled Flux (EF) Mode Conditioning Cords that can be used with non-EF Compliant Sources, see "Encircled Flux (EF) Modal Conditioners" on page 35.

### **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. Note: RGTCs are qualified in one direction and marked accordingly (input/output). Order RGTCs with all output connectors encountered in network testing.

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	

### **Encircled Flux (EF) Modal Conditioners**



**Encircled Flux Modulator** 

Industry specifications TIA-526-14-B and IEC 61280-4-1 Ed. 2.0 define multimode test launch conditions required for testing multimode networks. Modal conditioners provide a convenient and reliable means of bringing multimode sources into compliance with encircled flux specification requirements. Modal Conditioners are available in both 50 micron and 62.5 micron configurations. Each conditioner is supplied with one meter pigtails.

AFL NO.	Description: Fiber Size, Connectors	
8700-06-0001MR	50/125 μm, FC input to FC output	
8700-06-0002MR	62.5/125 μm, FC input to FC output	
8700-06-0003MR	50/125 μm, SC input to SC output	
8700-06-0004MR	62.5/125 μm, SC input to SC output	
8700-06-0005MR	50/125 μm, SC input to LC output	
8700-06-0006MR	62.5/125 μm, SC input to LC output	

<sup>\*</sup> See table below, "Encircled Flux (EF) Reference Grade Test Cords" to order additional Reference Grade Test Cords.



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### TRM® 2.0 Test Results Manager

The TRM 2.0 User Interface is available in English, French, German, Italian, Polish, Portuguese, Spanish, Turkish, Japanese, Simplified and Traditional Chinese.

TRM 2.0 Test Results Manager is Windows-compatible PC software, which provides comprehensive OTDR trace, connector inspection, and optical loss test results analysis and reporting. Designed for use with AFL test and inspection products, TRM 2.0 is available in Basic and Advanced versions.

TRM 2.0 Basic Software permits technical personnel to quickly view results, generate acceptance reports, analyze OTDR traces, loss or certification results or batch edit OTDR traces uploaded from all AFL M-Series, C-Series, CS-Series, OFL-Series, FLX-Series OTDRs and OPM products. TRM® 2.0 Basic Software also supports industry standard Telcordia (GR-196 v1.1, SR-4731 issue 1 & 2) .SOR formats and permits fiber inspection images from the AFL FOCIS inspection system to be included in test reports. TRM 2.0 Advanced version adds automatic Macro/Microbend detection, Bi-directional trace averaging and export to .CSV.

TRM 2.0 Basic software is included with M-Series, OFL-Series, FLX-Series, CS-Series OTDRs and OPM5 (five fulfillments included at no additional charge). Users may download TRM 2.0 full working version (Basic plus Advanced features) and try it for 30 days. Once the evaluation period ends, users will need to acquire TRM 2.0 Basic or TRM 2.0 Advanced software package to continue to use TRM.

The TRM 2.0 Basic and Advanced software part numbers are listed below.

AFL NO.	Description	
TRM-00-0900PR	TRM 2.0 Basic software (OTDR Trace/OLTS Viewer, Batch Editor and Reports)	
TRM-01-0900PR	TRM 2.0 Basic software (OTDR Trace/OLTS Viewer, Batch Editor and Reports) delivered by email	
TRM-00-0910PR	TRM 2.0 Advanced software (TRM 2.0 Basic plus Advanced Analysis)	
TRM-01-0910PR	TRM 2.0 Advanced software (TRM 2.0 Basic plus Advanced Analysis) delivered by email	
TRM-00-0920PR	TRM 2.0 upgrade from Basic to Advanced software	
TRM-01-0920PR	TRM 2.0 upgrade from Basic to Advanced software delivered by email	

### **Visual Fault Identifiers**



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.

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	

		Output Power	Emitter	Safety Class			
Model	Wavelength	(into single-mode fiber)	Туре	FDA	IEC	Connector Type	Power
MT Tracer Source	650 nm	1 mW, 2 Hz or CW	Laser	2	2	MTP®	2 AA (40 hours)



# WARRANTY



/FI2 HiLit

#### **HiLite and VFI2 Series**

Visual fault identifiers (VFI) use powerful red lasers to trace and troubleshoot single-mode or multimode optical fiber links. A VFI can identify bends and breaks in 3 mm and 900 mm jacketed patch cords as well as bare fiber in splice trays.

Model	Wavelength	Output Power (into single-mode fiber)	Emitter Type*	Connector Type	Power
HiLite	650 nm	1 mW, 2 Hz	Laser	Universal 2.5 mm	1 x AAA (16 hours)
VFI2	650 nm	1 mW, 2 Hz or CW	Laser	Universal 2.5 mm	2 x AA (60 hours)

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





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# **HiLite and VFI2 Series**

AFL NO.	Description	
HiLite Models		
VFI3-00-0900PR	HiLite visual fault identifier with 2.5 mm adapter	
VFI3-01-0900PR	HiLite visual fault identifier with 2.5 mm and 1.25 mm adapters	
VFI2 Models		
VFI2-00-0900PR	VFI2 visual fault identifier with 2.5 mm adapter	
VFI2-01-0900PR	VFI2 visual fault identifier with 2.5 mm and 1.25 mm adapters	

### **VFI2 and HiLite Accessories**

- · Current models of HiLite and VFI2 products use one-piece thread-on adapters with a captivated alignment sleeve. For replacements, use part numbers 2900-50-0007MR and 2900-50-0010MR.
- Older units with multi-part adapters accept replacement alignment sleeves (8100-00-0004MR). If customers prefer, the entire adapter can be replaced with the new one-piece adapters thereby enabling the unit to accept both 2.5 mm and 1.25 mm ferrules.

AFL NO.	Description	HiLite	VFI2	
2900-50-0007MR	2.5 mm Universal for VFI port	<b>♦</b>	<b>*</b>	
2900-50-0010MR	1.25 mm Universal for VFI port	<b>*</b>	<b>♦</b>	
8100-03-0004MR	Bronze split sleeve	For older models with 2-piece adap	oters	

# **Optical Fiber Identifiers**

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

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

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

# OFI-200D OFI-400

# OFI-BI and OFI-BIPM Optical Fiber Identifiers

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

Our full featured OFI includes a touch screen, positive stop trigger and several easy to select options. This identifier can be used with any SM fiber – including bend insensitive fiber, bare fibers, ribbons and up to 3 mm jackets. The -BIPM model adds an integrated optical power meter. These units can also be customized for ONU detection. Both models include carry case, batteries, and user's guide.

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



OFI-BIPM OFI-BI



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# **Optical Attenuator (SVA1)**



SVA1

Model SVA1

**Calibrated Wavelengths** or Range 1250 - 1650 nm

**Insertion Loss**  $\leq 1.5 \ dB \ @1310 \ nm$  $\leq$ 2 dB @1550 nm

When ordering SVA1, specify connector type at end of model number (e.g. SVA1-FC). All models include carry case and instruction card.

**Fiber** 

Type

 $\mathsf{SM}$ 

Attenuation Return Loss 60 dB 50 dB

Connectors FC, SC, ST APC (available<sup>a</sup>)

N/A

Power

#### Notes:

a. APC termination for the SVA1 is available for an additional \$100.

# **SVA1 Accessories and Connector Adapters**

AFL NO.	Description	
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	





# **Inspection Products for Every Need and Budget**

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

FOCIS Flex is the world's smallest, fastest, self-contained fiber connector inspection probe. Use FOCIS Flex alone for full inspection capability or send results, via Bluetooth, to our FlexScan and FlexTester OTDRs for easy report viewing. See <a href="mailto:page 40">page 40</a>.





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

Use the best interface you have, your own phone or tablet, to view, save and analyze connector cleanliness. FOCIS WiFi PRO uses AFL's FOCIS Mobile app (both Android and iOS) to clearly view connector end-face and completes full pass/fail analysis in less than 1 second! See <u>page 41</u>.



Our DFS1 makes fiber connector inspection fast and easy. Inspection is critical for verifying proper installation of fiber optic connectors and assuring the highest level of system performance. The DFS1 can also connect to AFL's M and C-series OTDRs/Testers for integrated inspection and testing. See <a href="mailto:page-42">page 42</a>.





### **OFS300 & VS300 Hand-held Microscopes**

Since connector cleanliness is an absolute requirement for today's networks, we offer cost effective solutions to help every field tech have at least a viewing tool for verification. AFL has two great scope options at an affordable price. See <a href="mailto:page-45">page-45</a>.



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# **Fiber Optic Connector Inspection**

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



**FOCIS Flex Connector Inspection Kits** 

FOCIS Flex is the world's smallest, fastest, 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 FlexTester OTDRs. The FOCIS Flex offers built-in pass/fail analysis to IEC 61300-3-35, IPC or user set criteria. The device can also be used for OptiTap and MTP/MPO inspections with AFL adapters.

AFL NO.	Description	
FOCIS-FLX-P4XN	FOCIS Flex, soft carry case/holster, AC charger, wrist strap, no tips	
FOCIS-FLX-P4XU	FOCIS Flex, soft case/holster, AC charger, wrist strap, UPC bulkhead and UPC ferrule tips (1 ea), One-Click cleaner	
FOCIS-FLX-P4XA	FOCIS Flex, soft case/holster, AC charger, wrist strap, APC bulkhead and APC ferrule tips (1 ea), One-Click cleaner	

**FOCIS Flex Order Entry** 

FOCIS-FLX-P4X K — PLUG —

Example: FOCIS-FLX-P4XA-US-ASC indicates a FOCIS Flex with the domestic AC plug and 2.5 mm APC ferrule adapter, SC-APC bulkhead adapter & 2.5 mm One-Click Cleaner.

FOCIS Flex with
FlexTester OTDR



FOCIS Flex with **Smart Device** 

K	Kit Type
N	No adapter tips
U	UPC adapter tips
Α	APC adapter tips

PLUG	Country-specific AC power plug
US	United States
UK	UK = United Kingdom
EU	European Union

TIP	User-selected adapter tips and One-Click cleaner				
FOCIS-I	FOCIS-FLX-P4XN Kits				
Blank	No adapter tips and One-Click cleaner				
FOCIS-I	FLX-P4XU Kits				
SC	2.5 mm UPC ferrule adapter, SC-UPC bulkhead adapter, 2.5 mm One-Click				
FC	2.5 mm UPC ferrule adapter, FC-UPC bulkhead adapter, 2.5 mm One-Click				
ST	2.5 mm UPC ferrule adapter, ST-UPC bulkhead adapter, 2.5 mm One-Click				
LC	1.25 mm UPC ferrule adapter, LC-UPC bulkhead adapter, 1.25 mm One-Click				
FOCIS-I	FLX-P4XA Kits				
ASC	2.5 mm APC ferrule adapter, SC-APC bulkhead adapter, 2.5 mm One-Click				
AFC	2.5 mm APC ferrule adapter, FC-APC bulkhead adapter, 2.5 mm One-Click				
ALC	1.25 mm APC ferrule adapter, LC-APC bulkhead adapter, 1.25 mm One-Click				

# **FOCIS Flex Connector Inspection Adapter Tips and Accessories**

AFL NO.	Description	
FFLX-01-SC	SC-UPC bulkhead adapter tip	
FFLX-01-FC	FC-UPC bulkhead adapter tip	
FFLX-01-ST	ST-UPC bulkhead adapter tip	
FFLX-01-LC	LC-UPC bulkhead adapter tip	
FFLX-01-U25	Universal 2.5 mm, UPC ferrule adapter tip	
FFLX-01-U125	Universal 1.25 mm, UPC ferrule adapter tip	
FFLX-01-ASC	SC-APC bulkhead adapter tip	
FFLX-01-AFC	FC-APC bulkhead adapter tip	
FFLX-01-ALC	LC-APC bulkhead adapter tip	
FFLX-01-A25	Universal 2.5 mm, APC ferrule adapter tip	
FFLX-01-A125	Universal 1.25 mm, APC ferrule adapter tip	
DFS1-00-0023MR	E2000 PC/UPC bulkhead adapter tip	
DFS1-01-0008MR	E2000 APC bulkhead adapter tip	
DFS1-01-0007MR	Tip for SC/APC (OptiTap®) bulkhead adapter	

AFL NO.	Description	
DFS1-01-0013MR	Tip for OptiTip® APC ferrule and bulkhead adapter	
DFS1-00-0050MR	Multi-row MTP/PC ferrule & bulkhead adapter extended tip kit (includes base plus multi-row MTP/ PC front end tip)	
1400-01-0107MZ	FOCIS Flex replacement soft carry case with strap	
1400-05-0230PZ	FOCIS Flex replacement wrist strap	
3900-04-0008ME	Replacement battery, 3.6V, NiMH, rechargeable	
4050-00-0030MR	FOCIS Flex replacement AC charger	
4050-00-0030USMR	Replacement US power plug for AC charger	
4050-00-0030UKMR	Replacement UK power plug for AC charger	
4050-00-0030EUMR	Replacement EU power plug for AC charger	
6000-00-0031MR	Replacement USB – Micro-B cable, 5 pin, 6 ft	
8800-02-0074MZ	FOCIS Flex replacement dust cap	
FOCIS-FLX-1ENG	FOCIS Flex replacement Quick Reference Guide	





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# **FOCIS WiFi PRO Fiber Optic Connector Inspection Systems**

The FOCIS WiFi PRO system combines AFL's powerful fiber connector inspection and analysis with the familiar ease of a smart device. FOCIS WiFi PRO works the way you do — connected to your phone or tablet. FOCIS WiFi PRO enables mobile workers to complete remote fiber optic connector inspection tasks while remaining connected to coworkers and managers.

The AFL FOCIS application software enables users to view live images on their smart devices, save, recall and share saved end-face images via e-mail, text of text attachment and mobile cloud applications like Dropbox and Google Drive.









# **FOCIS WiFi PRO Kits with Adapter Tips and Cleaners**

AFL NO.	Model and Description	
FMPR-00-04XU	<b>FOCIS WiFi PRO UPC kit.</b> Includes DFS1 Digital FiberScope, Portable Application Link (PAL) with FOCIS WiFi PRO firmware, adapter tips (1.25 & 2.5 mm Universal, SC/FC, LC), adapter tip box, One-Click Mini-100 SC/ST/FC, One-Click Mini-100 LC/MU, AC adapter, FOCIS WiFi holster, hard carry case.	
FMPR-00-04XA	<b>FOCIS WiFi PRO APC kit.</b> Includes DFS1 Digital FiberScope, Portable Application Link (PAL) with FOCIS WiFi PRO firmware, adapter tips (2.5 mm Universal, SC/APC, FC/APC), adapter tip box, One-Click Mini-100 SC/ST/FC, AC adapter, FOCIS WiFi holster, hard carry case.	
FMPR-00-04XM	<b>FOCIS WiFi PRO MPO kit.</b> Includes DFS1 Digital FiberScope, Portable Application Link (PAL) with FOCIS WiFi PRO firmware,MTP/PC and MTP/APC adapter tips, One-Click Cleaner MPO, AC adapter, FOCIS WiFi holster, hard carry case, adapter tip box.	
FMPR-00-04XD	<b>FOCIS WiFi PRO Data Center kit.</b> Includes DFS1 Digital FiberScope, Portable Application Link (PAL) with FOCIS WiFi PRO firmware, adapter tips (MTP/PC, MTP/APC, 1.25 mm Universal, LC/PC, One-Click MPO, One-Click Mini-100 LC/MU, AC adapter, FOCIS WiFi holster, hard carry case, adapter tip box.	



FOCIS WiFi soft case kit

# FOCIS WiFi PRO Kits in Soft Case without Adapter Tips and Cleaners

AFL NO.	Model and Description	
FMPR-00-04XN	<b>FOCIS WiFi PRO kit.</b> Includes DFS1 Digital FiberScope, Portable Application Link (PAL) with FOCIS WiFi PRO firmware, AC adapter, FOCIS WiFi holster, adapter tip box, soft carry case.	
FMPR-01-04XN	FOCIS WiFi PRO Upgrade kit for DFS1 owners. Includes Portable Application Link (PAL) with FOCIS WiFi PRO firmware, AC adapter, FOCIS WiFi holster, soft carry case.	



FOCIS WiFi hard case kit

# FOCIS WiFi PRO Kits in a Hard Carry Case without Adapter Tips and Cleaners

AFL NO.	Description	
FMPR-00-04XN-HC	<b>FOCIS WiFi PRO kit.</b> Includes DFS1 Digital FiberScope, Portable Application Link (PAL) with FOCIS WiFi PRO firmware, AC adapter, FOCIS WiFi holster, hard carry case, adapter tip box.	
FMPR-01-04XN-HC	FOCIS WiFi PRO Upgrade kit for DFS1 owners. Includes Portable Application Link (PAL) with FOCIS WiFi PRO firmware, AC adapter, FOCIS WiFi holster, hard carry case.	







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# **DFS1 Digital FiberScope**

The DFS1 Reference Guide is available in French, German, Italian, Portuguese and Spanish on www.AFLglobal.com.

The DFS1 Digital FiberScope supports magnified video inspection of optical fiber connector end-faces during fiber optic cable and connector installation and maintenance. The DFS1 connects via USB port to AFL's M-Series OTDRs) and C-Series OTDRs or Certification Testers to display and archive inspection images. An extensive array of adapter tips is available to support inspection of all commonly used fiber optic connectors. The DFS1 includes a software update for the M-Series OTDRs and C-Series OTDRs or Certification Testers. Fiber end-faces may also be viewed on a PC (using AFL SimpleView software) by connecting the DFS1 to the PC's USB port.

Model	Field of View	Adapter Mount	Focus	Power
DFS1 Digital FiberScope	~400 µm x 300 µm	Thread-on	Manual adjustment, 2 mm	USB port of M-Series OTDR or C-Series OTDR or
			max travel	C-Series Certification Tester



AFL SimpleView

# **AFL SimpleView™ Fiber Inspection Software**

AFL SimpleView Fiber Inspection Software is an application that permits the AFL DFS1 Digital FiberScope to be used with Windows® XP or Windows® 7 computers. AFL SimpleView software provides a live, high-resolution video image of the end-face of an optical fiber. This capability enables fiber installers and network technicians to inspect and troubleshoot optical fibers and verify that they are clean and undamaged.

AFL SimpleView software is available as a free download from AFL, www.AFLglobal.com.



DFS1-00-04XU

# **DFS1 Digital FiberScope and Inspection Kits**

The DFS1 is available in three different kits, which provide either PC/UPC adapters, APC adapters, or no adapters. All kits include soft carry case, a storage box to hold up to six adapter tips, FiberScope display software update for M series OTDRs and C840 Certification Tester and a Quick Reference Guide.

AFL NO.	Description	
DFS-00-04XU	DFS1 Digital FiberScope PC/UPC Inspection kit includes: (1) DFS1-00-04X0MR DFS1 USB Digital FiberScope (1) DFS1-00-0001MR Universal 1.25 mm male PC adapter tip (1) DFS1-00-0002MR Universal 2.5 mm male PC adapter tip (1) DFS1-00-0003MR SC and FC female bulkhead adapter tip (1) DFS1-00-0004MR LC female bulkhead adapter tip (1) DFS1-04-0001MZ soft carry case for scope and adapters (1) 8500-05-0001MZ One-Click Cleaner SC, ST, FC (1) 8500-05-0002MZ One-Click Cleaner LC/MU (1) 1400-01-0093MZ 6-compartment adapter tip storage box (1) Digital FiberScope display software update for M210e, M310, M710, C840, C880	
DFS-00-04XA	DFS1 Digital FiberScope APC Inspection kit includes:  (1) DFS1-00-04X0MR DFS1 USB Digital FiberScope  (1) DFS1-01-0002MR Universal 2.5 mm male APC adapter tip  (1) DFS1-01-0003MR SC/APC and FC/APC bulkhead adapter tip  (1) DFS1-01-0011MR SC/APC bulkhead adapter tip  (1) DFS1-04-0001MZ soft carry case for scope and adapters  (1) 8500-05-0001MZ One-Click Cleaner SC, ST, FC  (1) 1400-01-0093MZ 6-compartment adapter tip storage box  (1) Digital FiberScope display software update for M210e, M310, M710, C840, C880	
DFS-00-04XN	DFS1 USB Digital Fiber Inspection kit without adapters includes: (1) DFS1-00-004X0MR DFS1 USB Digital FiberScope (1) Soft carry case for scope and adapters (1) 6-compartment adapter tip box (1) Digital FiberScope display software update for M210e, M310, M710, C840, C880	
SP2-DFS1-04X	2-year Service Plan for DFS1 kits If your DFS1 kit is found defective, AFL will repair or replace at no additional charge. Includes free return shipping and free replacement of worn adapter tips.	



Tip ID



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## **DFS1 Accessories**

AFL NO.	Description	
DFS1-04-0001MZ	Soft carry case for DFS1 Digital FiberScope and adapters	
1400-01-0093MZ	6-compartment adapter tip storage box	
1400-01-0094MZ	11-compartment adapter tip storage box	
DFS1-001-00	Digital FiberScope display software update for M210e, M310, M710, C840, C880	
8500-05-0001MZ	One-Click Cleaner SC, ST, FC	
8500-05-0002MZ	One-Click Cleaner LC/MU	



DFS1-00-0001MR

# **DFS1 Adapter Tips**

Description

AFL NO.

Please see the DFS1 Adapter Tip Selection Guide (available on www.AFLqlobal.com) for additional information on how to select appropriate adapter tips to use with your DFS1 Digital FiberScope.

Following table identifies commonly required adapter tips. Other adapter tips available. Consult factory for additional adapter tips and prices.



DFS1-00-0002MR



DFS1-00-0004MR



DFS1-00-0013MR



 $\sim 150 \text{ mm}$ 

**PC Ferrule Connector Adapter Tips** DFS1-00-0001MR Universal 1.25 mm tip for PC ferrule connector U125 DFS1-00-0002MR Universal 2.5 mm tip for PC ferrule connector U25 U20 DFS1-00-0005MR Universal 2.0 mm tip for PC ferrule connector DFS1-00-0006MR Universal 1.6 mm tip for PC ferrule (termini) T16M DFS1-00-0038MR Slim 1.25 mm probe tip for LuxCis and termini T12M DFS1-00-0039MR Slim 2.5 mm PC ferrule tip for ELIO and termini T25M DFS1-00-0007MR Tip for Biconic ferrule connector ВΙ DFS1-00-0008MR Tip for ELIO 1.25 mm ferrule connector E12M DFS1-00-0009MR Tip for SMA 905 ferrule connector SMA SC/PC and FC/PC Bulkhead Adapter Tips DFS1-00-0003MR Tip for SC/PC and FC/PC bulkhead adapter FS DFS1-00-0010MR Short extended tip for SC/PC and FC/PC bulkhead adapter FS FS DFS1-00-0011MR Medium extended tip for SC/PC and FC/PC bulkhead adapter DFS1-00-0012MR Long 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, A6 60° angled tip for SC/PC bulkhead adapter SC, A6 DFS1-00-0040MR ST/PC Bulkhead Adapter Tips DFS1-00-0014MR Tip for ST/PC bulkhead adapter ST DFS1-00-0015MR Short extended tip for ST/PC bulkhead adapter ST DFS1-00-0016MR Medium extended tip for ST/PC bulkhead adapter ST DFS1-00-0017MR Long extended tip for ST/PC bulkhead adapter ST DFS1-00-0018MR 60° angled tip for ST/PC bulkhead adapter ST. A6 LC/PC Bulkhead Adapter Tips DFS1-00-0004MR Tip for LC/PC bulkhead adapter LC LC DFS1-00-0019MR Short extended tip for LC/PC bulkhead adapter DFS1-00-0020MR Medium extended tip for LC/PC bulkhead adapter LC Long extended tip for LC/PC bulkhead adapter LC DFS1-00-0021MR DFS1-00-0022MR 60° angled tip for LC/PC bulkhead adapter LC. A6 E2000/PC Bulkhead Adapter Tips DFS1-00-0023MR Short extended tip for E2000/PC bulkhead adapter E2K DFS1-00-0024MR Medium extended tip for E2000/PC bulkhead adapter E2K DFS1-00-0025MR Long extended tip for E2000/PC bulkhead adapter E2K



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# **DFS1 Adapter Tips (continued)**

Following table identify commonly required adapter tips. Other adapter tips available. Consult factory for additional adapter tips and prices.

AFL NO.	Description	Tip ID
MU/PC Bulkhead Ada	ppter Tips	<u>' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' </u>
DFS1-00-0026MR	Tip for MU/PC bulkhead adapter	MU
DFS1-00-0027MR	Short extended tip for MU/PC bulkhead adapter	MU
DFS1-00-0028MR	Medium extended tip for MU/PC bulkhead adapter	MU
DFS1-00-0029MR	Long extended tip for MU/PC bulkhead adapter	MU
DFS1-00-0030MR	60° angled tip for MU/PC bulkhead adapter	MU, A6
MTP/MPO Multi-fiber	r Adapter Tips (ferrule and bulkhead)	
DFS1-00-0037MR	MTP/PC ferrule and bulkhead adapter extended tip; includes base plus MTP/PC front end tip	MTP a, b
DFS1-00-0041MR	Front end tip for MTP/PC ferrule and bulkhead adapter	MTP <sup>b</sup>
DFS1-00-0042MR	MTP/PC and MTP/APC ferrule and bulkhead adapter extended tip kit; includes base plus MTP/PC and MTP/APC front end tips	MTP, MTPA a, b
DFS1-00-0050MR	Multi-row MTP/PC ferrule and bulkhead adapter extended tip kit;	MTP a, b
	Includes base plus multi-row MTP/PC front end tip.	
SC2 Bulkhead Adapto	er Tips	
DFS1-00-0043MR	Short extended tip for SC2 bulkhead adapter	SC2
DFS1-00-0044MR	Medium extended tip for SC2 bulkhead adapter	SC2
DFS1-00-0045MR	Long extended tip for SC2 bulkhead adapter	SC2
Miscellaneous PC Bu	lkhead Adapter Tips	
DFS1-00-0031MR	Tip for LEMO 2.0 mm bulkhead adapter	LEMO
DFS1-00-0032MR	Tip for LX.5/PC bulkhead adapter	LX
DFS1-00-0033MR	Tip for 2.0 mm termini bulkhead adapter	T20F
DFS1-00-0034MR	Tip for 1.6 mm termini bulkhead adapter	T16F
DFS1-00-0036MR	Tip for ELIO 1.25 mm bulkhead adapter	E12F
DFS1-00-0046MR	Tip for SMA 905 bulkhead adapter	SMAF
DFS1-00-0047MR	TFOCA II ferrule and bulkhead adapter tip + guide kit	TFO-U TFO-G
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
APC Tips		
DFS1-01-0001MR	Universal 1.25 mm tip for APC ferrule connector	U12A
DFS1-01-0002MR	Universal 2.5 mm tip for APC ferrule connector	U25A
DFS1-01-0003MR	Tip for SC/APC and FC/APC bulkhead adapter	FSA
DFS1-01-0011MR	Tip for SC/APC bulkhead adapter	SCA
DFS1-01-0004MR	Tip for LC/APC bulkhead adapter	LCA
DFS1-01-0005MR	Short extended tip for SC/APC bulkhead adapter	SCAX
DFS1-01-0006MR	60° angled tip for SC/APC bulkhead adapter	A6A
DFS1-01-0007MR	Tip for hardened SC/APC (OptiTap®) bulkhead adapter	OTAPA
DFS1-01-0008MR	Tip for E2000/APC bulkhead adapter	E2KA
DFS1-01-0009MR	Tip for LX.5/APC bulkhead adapter	LXA
DFS1-01-0010MR	MTP/APC ferrule and bulkhead adapter extended tip kit; includes base plus MTP/APC front end tip	MTPA <sup>a, b</sup>
DFS1-01-0012MR	Front end tip for MTP/APC ferrule and bulkhead adapter	MTPA <sup>b</sup>
DFS1-01-0013MR	Tip for OptiTip® APC ferrule and bulkhead adapter	OTIPA



DFS1-01-0002MR



DFS1-01-0003MR

#### Notes:

- 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.





# **Buyer's Guide**

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# Microscopes for Connectors on Patch Cords (OFS300, VS300)

The OFS300-200C and VS300 are hand-held microscopes used for inspecting fiber optic connectors on patch cords and test jumpers.

The OFS300-200C is a high-resolution optical microscope with integrated infrared safety filter. The VS300 is a video microscope with no direct optical path from the connector under inspection to the user.

Each scope includes a 2.5 mm Universal adapter cap and neck strap. VS300 models also include a carry case. The OFS300-200C and VS300 models use thread-on adapter caps (see page 48).

=77	
1/5200	

Model	Nominal Magnification	Adapter Mount	Infrared Safety Filter	Power	
OFS300-200C	200x	Thread-on	Schott KG3	(2) AA alkaline	
VS300	400x	Thread-on	Not required - no optical path to user	(2) AA alkaline	

# V\$300

# VS300 MTP/MPO Kit

# Low Cost, Basic MTP®/MPO Inspection and Cleaning Kits

AFL NO.	Description	
MPOK-AU-OPTX	OFS300 UPC/APC MTP/MPO Inspection and Cleaning kit	
MPOK-XU-OPTX	OFS300 UPC MTP/MPO Inspection and Cleaning kit	
MPOK-AX-OPTX	OFS300 APC MTP/MPO Inspection and Cleaning kit	
MPOK-AU-VIDX	VS300 UPC/APC MTP/MPO Inspection and Cleaning kit	
MPOK-XU-VIDX	VS300 UPC MTP/MPO Inspection and Cleaning kit	
MPOK-AX-VIDX	VS300 APC MTP/MPO Inspection and Cleaning kit	



OFS300 MTP/MPO Kit

# **MPO Upgrade Kits**

AFL NO.	Description	
MPOK-AU-OPTU	OFS300 UPC/APC MTP/MPO Upgrade kit	
MPOK-XU-OPTU	OFS300 UPC MTP/MPO Upgrade kit	
MPOK-AX-OPTU	OFS300 APC MTP/MPO Upgrade kit	
MPOK-AU-VIDU	VS300 UPC/APC MTP/MPO Upgrade kit	
MPOK-XU-VIDU	VS300 UPC MTP/MPO Upgrade kit	
MPOK-AX-VIDU	VS300 APC MTP/MPO Upgrade kit	



# **OFS300 Accessories**

AFL NO.	Description	
2460-10-0002	Spare LED for OFS300-200B	
1400-01-0055	Soft Carry case	
OFS1-00-0100	Hard Carry case	
2900-10-0001	Tripod Stand (table top)	
1400-01-0025PZ	Holster	
2900-10-0004	20X Eyepiece	

# **VS300 Accessories**

AFL NO.	Description	
1400-01-0055	Soft carry case	
VOS3-00-0109	Hard carry case	
VOS3-00-0104	Replacement eyepiece	
2900-10-0001	Tripod stand (table top)	
4050-00-0115	AC adapter 110 VAC/9 VDC	
VOS3-00-0108	Video cable, VS300 to RCA plug	







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# AFL's Solutions for OptiTap/OptiTip Connectors Inspection and Cleaning

OptiTap® (hardened SC/APC) and OptiTip® (hardened MPO/APC) connectors can be easily inspected and cleaned using AFL's Inspection and Cleaning solutions.



# **OptiTip Connectors**

The OptiTip connector can be easily inspected using either DFS1 Inspection Probe (included in FOCIS WiFi Inspection Systems) or FOCIS Flex with the DFS1-01-0013MR OptiTip adapter tip with OTIPM barrel attachment installed or removed. Cleaning of the OptiTip connector is made simple with the NEOCLEAN-M cleaner, which cleans all 12-fiber end-faces easily with a simple push action.

AFL NO.	Description	
FOCIS WiFi PRO	See section <u>"FOCIS WiFi PRO Fiber Optic Connector Inspection Systems" on page 41</u>	
FOCIS Flex	See section "FOCIS Flex Fiber Optic Connector Inspection System" on page 40	
<b>DFS1-01-0013MR</b> DFS1 adapter tip for OptiTip® APC ferrule and bulkhead adapter (Tip ID: OTIPA)		
8500-15-0909MZ	NEOCLEAN-M for MPO/MTP connectors, 600+ cleans. Cost per Clean: <\$0.15	



# OptiTap Connectors

The OptiTap connector can be easily inspected using either DFS1 Inspection Probe (included in FOCIS WiFi Inspection Systems) or FOCIS Flex with the DFS1-01-0002MR or FFLX-01-A25 adapter tip respectively. The OptiTap connector is easily cleaned using the 8500-00-0001MZ One-Click Cleaner.

AFL NO.	Description	
FOCIS WiFi PRO	See section <u>"FOCIS WiFi PRO Fiber Optic Connector Inspection Systems" on page 41</u>	
FOCIS Flex	See section "FOCIS Flex Fiber Optic Connector Inspection System" on page 40	
DFS1-01-0002MR	DFS1 adapter tip: Universal 2.5 mm tip for APC ferrule connector (Tip ID: U25A)	
FFLX-01-A25	FOCIS Flex adapter tip: Universal 2.5 mm, APC ferrule adapter tip	
8500-00-0001MZ	One-Click Cleaner SC, ST, FC (500+ cleans). Cost per Clean: <\$0.13	



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# **FTS2 Fiber Optic Talk Sets**

Fiber Optic Talk Sets are an inexpensive solution to meet your communication needs when testing multimode or single-mode fiber optic cables. Designed for voice communication over spare fibers, they provide full duplex, hands-free operation.

The FTS2 model is for long-range single-mode applications. This model includes a multiparty communication feature, which provides the connection of two talk sets at a common site to extend the range or to include three or more persons in the conversation. The FTS2 output connectors accept thread-on adapters. Specify connector type (e.g. FTS2-1310-SC). See table "FTS2 Connector Adapters" for available adapters.

FTS2 comes with a carry case and protective rubber boot. AC adapters are available, see table "FTS Accessories".



		Fiber Type &		Available		Features	Features		
Model	Wavelength (nominal)	Dynamic Range (dB)	Output	Connector Types	Power	One Fiber	Digital Modulation	Multiparty	
FTS2 – 1310	1310 nm	(SM) - 45 (MM) - 20 a	Class I	FC, SC, ST, LC	(4) AA, AC	•	<b>*</b>	•	
FTS2 – 1550	1550 nm	(SM) - 45 (MM) - 20 <sup>a</sup>	Class I	FC, SC, ST, LC	(4) AA, AC	•	<b>*</b>	•	

#### Note:

a. Typical.



Headset

## **FTS Accessories**

AFL NO.	Description	FTS1	FTS2	
1300-10-0102	Headset and adapter	<b>♦</b>	<b>♦</b>	
4050-00-0911	AC adapter 90-264VAC/9VDC, (specify power cord, see page 49, Table 1)	<b>*</b>	<b>*</b>	
8500-10-0900	FTS-20C clip-on coupler, FC connector only (for FTS2 only)		<b>*</b>	

# FTS2 Connector Adapters

AFL NO.	Description	
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	





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# **Adapter Caps**

# Adapter Caps for OPM Ports, OFS300-200, and VS300

AFL standard thread-on adapter caps are used to mate non-angled single-fiber and dualfiber connectors to optical power meter ports on OPM/CSM series power meters, C850/ M650 series OTDRs, and inspection ports on OFS300-200C and VS300 microscopes.

AEL NO	Book to the	
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/duplex	
8800-00-0221	E-2000	
8800-00-0226	MU simplex	
8800-00-0219	2.5 mm open Universal. Accepts SC duplex, OptiTap connector for measuring optical power.	
8800-00-0230	MT-RJ (A side only). When used for loss testing, "A side only" adapter verifies system polarity	
8800-00-0231	MT-RJ (A side or B side)	
8800-00-0203	SMA	
8800-00-0201	D4	
8800-00-0204	Biconic	
8800-00-0211	DIN 47256	
8800-00-0212	Radiall PFO/VFO	
Adapters for Plast	ic Optical Fiber (POF)	
8800-00-0223	1.0 mm bare fiber (plastic)	
8800-00-0271PR	HP-HFBR-45XX POF Universal	

# FTTx Wavelength Selective Adapter Cap (OPM Series)

The AFL FTTx wavelength selective adapter cap allows any AFL Optical Power Meter (OPM), including all OPM1, OPM4, and OPM5 models, to measure downstream signal power on FTTx networks carrying both 1490 nm and 1550 nm signals.

AFL NO.	Description	
8800-00-0270PR	SC, FTTX 3-WAVE, a selectable pass filter	
	- All Pass, - 1490 nm, - 1550 nm	

#### Adapter Caps for OFS300-200 and VS300 Only

AFL thread-on angled and multifiber adapter caps are used to mate angled single-fiber as well as angled or non-angled multifiber connectors to our OFS 300-200C and VS300 microscopes. Do not use the following adapter caps with our optical power meters or other test sets to measure optical power.

AFL NO.	Description	
8800-00-0220	Angled SC	
8800-00-0218	Angled FC	
8800-00-0229	Angled E-2000	
8800-00-0234	MTP®/MPO angled ferrule (8°), typically SM	
8800-00-0233	MTP®/MPO flat ferrule (0°), typically MM	
8800-00-0236	1.25 mm open Universal <sup>a</sup>	
8800-00-0219	2.5 mm open Universal <sup>b</sup>	
8800-00-0235	SMC 0°	
8800-00-0244	1.6 mm ferrule (pin)	
8800-00-0248	2.0 mm ferrule (pin)	
8800-00-0227	EC (Radiall)	
8800-00-0265	1.25/2.5 mm Universal sliding (2-position) adapter	

#### Notes:

- a. For Inspecting backplane and duplex connectors with 1.25 mm ferrules such as LC and MU. Not recommended for measuring optical power.
- b. For Inspecting backplane and duplex connectors with 2.5 mm ferrules such as FC, SC, and ST. Not recommended for measuring optical power (except OptiTap).

## **Accessories**



**Encircled Flux Modulator** 

## **Encircled Flux (EF) Modal Conditioners**

Industry specifications TIA-526-14-B and IEC 61280-4-1 Ed. 2.0 define multimode test launch conditions required for testing multimode networks. Modal conditioners provide a convenient and reliable means of bringing multimode sources into compliance with encircled flux specification requirements. Modal Conditioners are available in both 50 micron and 62.5 micron configurations. Each conditioner is supplied with one meter pigtails.

AFL NO.	Description: Fiber Size, Connectors	
8700-06-0001MR	50/125 μm, FC input to FC output	
8700-06-0002MR	52.5/125 μm, FC input to FC output	
8700-06-0003MR	50/125 μm, SC input to SC output	
8700-06-0004MR	62.5/125 μm, SC input to SC output	
8700-06-0005MR	50/125 μm, SC input to LC output	
8700-06-0006MR	62.5/125 μm, SC input to LC output	





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# **Accessories**

# Multimode Test Jumpers (62.5/125 µm - 2 meters)

AFL NO.	Description	
8700-00-0053MR	SC/SC	
8700-00-0045	SC/ST	
8700-00-0003	ST/ST	

## Single-mode Test Jumpers (9/125 µm - 2 meters)

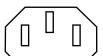
AFL NO.	Description	
8700-00-0005	FC/FC	
8700-00-0016	FC/ST	
8700-00-0017	ST/ST	
8700-00-0018	SC/SC	
8700-00-0021	FC/SC	
8700-00-0022	SC/ST	
8700-00-0032	FC-APC/FC-UPC	
8700-00-0033	SC-APC/FC-UPC	
8700-00-0034	SC-APC/SC-UPC	
8700-00-0046	LC/SC	

# **Bare Fiber Test Accessories**

AFL NO.	Description	
8500-10-0007	Bare fiber test connector	
8400-00-0066MZ	SC terminator	
8400-00-0048MZ	FC terminator	

# **Power Supply Cords**

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



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

### Table 1

AFL NO.	Country	Description	
6000-00-0001MR	USA	3-conductor, IEC320, 115V, Type K	
6000-00-0012MR	Euro	3-conductor, IEC320, 250V, Type B	
6000-00-0015MR	UK	3-conductor, IEC320, 250V, Type D	
6000-00-0016MR	Australia, China	3-conductor, IEC320, 250V, Type C	
6000-00-0017MR	Denmark	3-conductor, IEC320, 250V, Type E	
6000-00-0018MR	Japan	2-conductor, IEC320, 125V, Type M	
6000-00-0019MR	Swiss	3-conductor, IEC320, 250V, Type L	
6000-00-0020MR	Italy	3-conductor, IEC320, 250V, Type I	
6000-00-0021MR	Israel	3-conductor, IEC320, 250V, Type H	
6000-00-0022MR	India	3-conductor, IEC320, 250V, Type G	

# Mating Adapters (Bulkheads)

All adapters listed here meet single-mode mechanical tolerance requirements and therefore are recommended for both multimode and single-mode testing.

AFL NO.	Description	
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	

# **Mandrels for Multimode Link Testing**

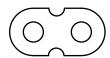
Mandrels are used to meet the transmit jumper mandrel-wrap requirements of TIA/EIA-568 B.3 (Section 7.1) when testing multimode links using an LED source.

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	Kit with two mandrels, 62.5 and 50 $\mu m$ fiber, 3 mm jacket	

# **Return Loss Test Sets Accessories**

AFL NO.	Description	
2475-20-0001MZ	Index Matching Block – simplifies return loss	
	measurements (set of 5)	

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



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

### Table 2

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







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# **Discontinued Products Accessories**

AFL NO.	Description	
C850 OTDR Access		
4050-00-0122PR	Vehicle charger/supply, 18 V, 6.7 A, 120 W	
1400-01-0090PZ	C850 hard carry case	
4050-00-0918PR	AC adapter 100-240 VAC to 18 VDC, (specify	
	power cord, see <u>page 49</u> , Table 1)	
3900-05-0004ME	Li-lon battery	
4050-30-0005MR	Li-Ion battery charger 90-260 VAC	
6000 00 0027MD	(specify power cord, see page 49, Table 2)	
6000-00-0027MR	Cable, USB-MINI B (connect to PC)	
TRM-00-0920PR	TRM® 2.0 software upgrade, Basic to Advanced	
2900-50-0002MR	FC adapter for OTDR port	
2900-50-0003MR	SC adapter for OTDR port	
2900-50-0004MR	ST adapter for OTDR port	
2900-50-0006MR	LC adapter for OTDR 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	
8800-00-0214	2.5 mm adapter for OPM port	
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	
8800-00-0072PR	Flip-top dust cap for UCI outputs	
M100 OTDR Access		
M100-00-0108	CompactFlash card holder	
M100-00-0107	M100 battery pack (three packs required)	
4050-00-0917PR	M100 AC adapter <sup>a</sup>	
2900-50-0002MR	FC adapter for OTDR port	
2900-50-0003MR	SC adapter for OTDR port	
2900-50-0004MR	ST adapter for OTDR port	
2900-50-0006MR	LC adapter for OTDR port	
2900-50-0007MR	2.5 mm Universal for VFL port	
M200 OTDR Access		
M200-001-01	M200 Software upgrade from v1.X to v2.X	
1400-01-0075PZ	Hard carry case for M200 with 6 compartment	
2000 05 000455	connector case	
3900-05-0001PE	Li-lon battery	
4050-00-0918PR	AC adapter <sup>a</sup> , 100-240 VAC to 18 VDC	
6000-00-0024MR	Cable, USB-MINI B (connect to PC)	
1420-35-0009PR	CF slot cover	
M600 OTDR Access		
4050-00-0918PR	AC adapter <sup>a</sup> , 100-240 VAC to 18 VDC	
3900-02-0100	Spare battery	

AFL NO.	Description					
M700 OTDR Access	ories					
2900-50-0002MR	FC adapter for OTDR port					
2900-50-0003MR	SC adapter for OTDR port					
2900-50-0004MR	ST adapter for OTDR port					
2900-50-0006MR	LC adapter for OTDR 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					
8800-00-0214	2.5 mm Universal adapter for OPM port					
8800-00-0224	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					
4050-00-0122PR	Vehicle charger/supply, 18 V, 6.7 A, 120 W					
1400-01-0082PZ	Soft carry case					
1400-01-0090PZ	Hard carry case					
4050-00-0918PR	AC adapter <sup>a</sup> , 100-240 VAC to 18 VDC					
3900-05-0004ME	i-lon battery					
4050-30-0005MR	i-lon battery charger 90-260 VAC <sup>a</sup>					
6000-00-0027MR	Cable, USB-MINI B (connect to PC)					
TRM-00-0920PR	TRM® 2.0 upgrade to Advanced software					
OFL200 OTDR Acce	ssories					
4050-00-0919PR	AC adapter <sup>b</sup> , 100-240 VAC to 9 VD					
6000-00-0003MR	Serial cable, DB9/DB9, M/F					
6000-00-0026MR	USB to RS232 DB9 cable					
3900-04-0007ME	NiMH battery pack					
2900-50-0002MR	FC adapter for OTDR port					
2900-50-0003MR	SC adapter for OTDR port					
2900-50-0004MR	ST adapter for OTDR port					
2900-50-0006MR	LC adapter for OTDR port					
2900-50-0007MR	2.5 mm Universal adapter for VFL port					
2900-50-0010MR	1.25 mm Universal adapter for VFL port					
OFL250 OTDR Acce	ssories					
6000-00-0024MR	Cable, USB-MINI B (connect to PC)					
4050-00-0123PR	Vehicle charger/supply, 15 V, 5.0 A, 75 W					
4050-00-0927PR	AC adapter <sup>a</sup> 100-240 VAC to 15 VDC					
4050-30-0005MR	Li-lon battery charger <sup>b</sup> 90-260 VAC					
3900-05-0003ME	Li-lon battery pack					
1400-01-0045	Soft carry case					
1400-01-0098PZ	Hard carry case					
8800-00-0072PR	Universal flip-top dust cap for UCI outputs					



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# **Discontinued Products Accessories**

TRM-00-0920PR TF OLTS5 Accessories 4050-00-0912PR A 6000-00-0026MR U	C adaptera, 90-264 VAC to 12 VDC SB to RS232 DB9M iMH-AA battery pack	
OLTS5 Accessories 4050-00-0912PR A 6000-00-0026MR U	C adapter <sup>a</sup> , 90-264 VAC to 12 VDC SB to RS232 DB9M	
4050-00-0912PR A 6000-00-0026MR U	SB to RS232 DB9M	
<b>6000-00-0026MR</b> U	SB to RS232 DB9M	
<b>3900-04-0106PE</b> N	iMH-AA battery pack	
ORL38 Accessories		
<b>4050-00-0918PR</b> A	C adapter <sup>a</sup> , 100-240 VAC to 18 VDC	
6000-00-0026MR U	SB to RS232 DB9M	
<b>3900-04-0106PE</b> N	iMH-AA battery pack	
<b>3900-05-0001PE</b> Li	thium Ion battery	
SVA1 Accessories		
<b>2900-50-0002MR</b> FG	C adapter	
<b>2900-50-0003MR</b> SO	C adapter	
<b>2900-50-0004MR</b> ST	T adapter	
<b>2900-50-0006MR</b> LO	C adapter	
<b>8800-00-0072PR</b> U	niversal flip-top dust cap for UCI outputs	
T400 Accessories		
4050-00-0912PR A	C adapter <sup>a</sup> , 90-264 VAC to 12 VDC	
6000-00-0003MR Se	erial cable, DB9/DB9, M/F	
6000-00-0026MR U	SB to RS232 DB9M cable	
T500 Accessories		
4050-00-0918PR A	C adapter <sup>a</sup> , 100-240 VAC to 18 VDC	
6000-00-0026MR U	SB to RS232 DB9M	
<b>3900-04-0106PE</b> N	iMH-AA battery pack	
<b>3900-05-0001PE</b> Li	thium Ion battery	
VOA6-SM Accessories	and Connector Adapters	
2900-FT-LS-FCMR FG	C connector	
2900-FT-LS-SCMR SG	C connector	
2900-FT-LS-STMR ST	T connector	
2900-FT-FCLC	C-LC hybrid adapter	
1400-10-0220PZ Pr	rotective rubber boot	
<b>1400-01-0087PZ</b> C	arry case	

VFS2 Microscope A	ccessories	
VFS2-02-0100	FC adapter tip	
VFS2-02-0101	SC adapter tip	
VFS2-02-0102	ST® adapter tip	
VFS2-02-0103 <sup>c</sup>	2.5 mm Universal; accepts FC, SC, ST ferrules	
VFS2-02-0104 <sup>c</sup>	1.25 mm Universal; accepts LC and MU ferrules	
VFS2-02-0105 <sup>c</sup>	2.0 mm Universal for male Mil C 28876	
VFS2-02-0106 <sup>c</sup>	2.0 mm Socket for female Mil C 28876	
VFS2-02-0108 <sup>c</sup>	1.6 mm Universal for male Mil C 38999	
VFS2-02-0109 <sup>c</sup>	1.6 mm Socket for female Mil C 38999	
VFS2-02-0110	AFC adapter tip	
VFS2-02-0111	ASC adapter tip	
VFS2-02-0112	LC adapter tip	
VFS2-02-0113	SC2 adapter tip	
VFS2-02-0114	D4 adapter tip	
VFS2-02-0115	E 2000 adapter tip	
VFS2-02-0117	MU adapter tip	
VFS2-02-0118	Biconic adapter tip	
VFS2-02-0127	ELIO adapter tip	
4050-00-0918PR	AC adapter <sup>a</sup> ,100-240 VAC to 18 VDC	
3900-05-0002PE	VFS2 Li-lon battery pack	
VFS2-00-0108	Converter: VFS2 to VS300 adapter caps	
VOS3-00-0108	External cable, VFS2 display to RCA jack	

Description

AFL NO.

#### Notes:

- a. Specify power cord, see <a href="page 49">page 49</a>, Table 1.
- b. Specify power cord, see page 49, Table 2.
- c. Used for viewing patch cords.





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# **Cleaning Supplies**

A wide variety of pre-stocked 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 VS300 Scope includes 2.5 mm Universal Cap. Each stick is double ended, designed for two (2) cleans.

FCP1 Kit

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

AFL NO.	Old NO.	CCTS-25-0900MZ for FC, SC, ST QTY=40, BLUE	CCTS-12-0900MZ for LC, MU QTY=40, GREEN	CCTS-16-0900MZ for D4, Mil socket QTY=40, ORANGE	CCTP-25-0900MZ for all connectors Qty=20, YELLOW	CCTX-MT-0900MZ for MTP, MPO, MPX Qty=20, PINK	Cletop Type	VS300 Scope	
FCP1-00-0900		1	1		2		Α		
FCP1-00-0901		1			2		SB		
FCP1-00-0905		1	1	1	2		SB		
FCP1-00-0906		1	1	1	2				
FCP1-00-0907	FCP1-37A	3	1		1	1			
FCP1-00-0909	FCP1-25D	3			1				
FCP1-00-0914	FCP1-37C	2	1		1		SB		
FCP1-00-0915	FCP1-37D	3	1	1	4	1			
FCP1-00-0926PZ <sup>a</sup>		2	2				SB		
FCP1-00-0927PZ <sup>d</sup>		2	1		1		SB		
FCP1-01-0902		1	1	1	2		SB	1 a	
FCP1-01-0903		1	1	1	2			1 a	
FCP1-01-0904		2	2		2		А	1	
FCP1-01-0905		1	1		2	1	SB	1 a	

# **Hard Carry Case Cleaning Kits**

AFL NO.	for FC, SC, ST	for LC, MU	CCTP-25-0900MZ for all connector QTY=20, YELLOW	Cletop Type	VS300 Scope		
FCP1-02-0901PF <sup>d</sup>	3	3	2	SB	1 b		
FCP1-02-0902PF c, d	3	3	2	SB	1 b		
C182120	AFL Connector/Adapter Cleaning Kit. Ships in a hard carry case with: Cletop –SB (Qty = 1), replacement reel for Cletop –SB (Qty = 1), ACT-01 cleaning tips for 2.5 mm adapters (Qty = 20), FiberWipes (Qty = 2 tubs), can of FCC2 Enhanced Fiber Connector Cleaner and Preparation Fluid (Qty = 1).						

#### Notes:

- a. Includes 2.0 mm and 1.25 mm Universal cap.
- b. Includes 1.25 mm Universal cap.
- c. Includes One-Click SC/ST/FC and One-Click LC/MU.
- d. Includes a tub of FiberWipes.





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FCP2-00-0900



FCP2-01-090



# Field Portable Duffle Bag Cleaning Kits

FCP2 kits offer a complete selection of optical cleaning products for field cleaning of connector end-faces in a convenient duffle bag style carry case. These popular kits are now available with inspection and loss testing options. All kits combine **Base Package** plus various cleaning accessories as well as inspection and test equipment. **Base Package includes: FCC2 cleaning fluid, FiberWipes, Cletop SB.** 

- Basic Cleaning Kit: Includes Base Package, One-Clicks for SC, ST, FC, LC and MU connectors.
- Basic Cleaning and Inspection Kit: Adds inspection capabilities to the Basic Cleaning Kit with an OFS300-200 inspection scope.
- Basic Cleaning, Inspection and Test Kit: Adds inspection (OFS300-200 inspection scope) along with multimode and single-mode loss test capabilities (CSM1-2 power meter, CSS1-MM multimode light source, CSS1-SM single-mode light source).

AFL NO.	Description	
FCP2-00-0900	Basic Cleaning Kit with carry case. Includes: Base Package, One-Clicks for SC, ST, FC, LC, MU connectors.	
FCPR-00-0900	Refill for Basic Cleaning Kit (no carry case). Includes: Base Package, One-Clicks for SC, ST, FC, LC, MU connectors.	
FCP2-00-0901	Basic Cleaning Kit with MPO cleaner and carry case. Includes: Base Package, One-Clicks for SC, ST, FC, LC, MU, MPO connectors.	
FCP2-01-0900	<b>Basic Cleaning and Inspection Kit</b> with carry case. Includes: Base Package, One-Clicks for SC, ST, FC, LC, MU connectors, OFS300-200 inspection scope.	
FCP2-02-0900	Basic Cleaning, Inspection and Test Kit with carry case. Includes: Base Package, One-Clicks for SC, ST, FC, LC, MU connectors, OFS300-200 inspection scope, CSM1-2 power meter, CSS1-MM 850/1300 nm light source, and CSS1-SM 1310/1550 nm light source.	
1400-01-0095PZ	Field portable duffle bag cleaning supplies carry case.	

# **Cleaning Fluids and CCT Double Ended Cleaning Sticks**

For best results, use CCT cleaning sticks with FCC2 fluid!



FCC2 Fiber Connector Cleaner and Preparation Fluid



AFL NO.	Description	
FCC2-00-0902 FCC2-00-0903	FCC2 Enhanced Formula Fiber Connector Cleaner and Preparation Fluid- optical quality cleaning fluid for cleaning connector end-faces and cleaning optical fiber (after striping) before field termination or fusion splicing. Nonflammable, not hazardous, not regulated (including air-cargo).	
CCTP-25-0900MZ	Connector Cleaning Tips for exposed 2.5 mm, 2.0 mm, 1.6 mm ferrules and termini (FC, SC, ST, LC, MU, etc., jumpers and male Mil C 38999 and 28876). Color Code = Yellow.	
CCTS-25-0900MZ	Connector Cleaning Tips for 2.5 mm ferrule in adapters or sockets (SC, FC, ST, etc. in adapters). Color Code = Blue.	
CCTS-12-0900MZ	Connector Cleaning Tips for 1.25 mm ferrule in adapters or sockets (LC, MU, etc., in adapters).  Color Code = Green.	
CCTS-16-0900MZ	Connector Cleaning Tips for MT-RJ connectors and 2.0 mm and 1.6 mm termini in sockets (female Mil C 38999 and 28876 and MT-RJ both jumpers and adapters). Color Code = Orange.	
CCTX-MT-0900MZ	Connector Cleaning Tips for Biconic and MT ferrule connectors both jumpers and in adapters (Biconic, MTP, MPO, MPX, etc.). Color Code = Pink.	
CCT cleaning sticks blister packs (300 s	are available in bulk packs of single-ended sticks. Blister packs of 50 single-ended sticks packag ticks).	ed in boxes of 6
CCTP-25-0910MZ	Connector Cleaning Tips for exposed 2.5 mm, 2.0 mm, 1.6 mm ferrules and termini (FC, SC, ST, LC, MU, etc., jumpers and male Mil C 38999 and 28876). Color Code = Yellow	
CCTS-25-0910MZ	Connector Cleaning Tips for 2.5 mm ferrule in adapters or sockets (SC, FC, ST, etc. in adapters).  Color Code = Blue	
CCTS-12-0910MZ	Connector Cleaning Tips for 1.25 mm ferrule in adapters or sockets (LC, MU, etc., in adapters).  Color Code = Green	
CCTS-16-0910MZ	Connector Cleaning Tips for MT-RJ connectors and 2.0 mm and 1.6 mm termini in sockets (female Mil C 38999 and 28876 and MT-RJ both jumpers and adapters). Color Code = Orange	
CCTX-MT-0910MZ	Connector Cleaning Tips for Biconic and MT ferrule connectors both jumpers and in adapters (Biconic, MTP, MPO, MPX, etc.). Color code = Pink	





# **Buyer's Guide**

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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.

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 tapes, 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 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	
8500-10-0032MZ	Cletop for MT-RJ with pins (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). For FC, SC, ST, and D4.	
8500-10-0022MZ	ACT-02 1.25 mm single-ended sticks (box of 200). For LC and MU.	
8500-10-0023MZ	ACT-03 2.0 mm single-ended sticks (box of 200). For Military and High Definition Video (LEMO).	
8500-10-0030MZ	2.0/2.5 mm double-ended sticks (box of 100). For Military and High Definition Video (LEMO).	





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# **One-Click Cleaners** U.S. Patent Numbers 7,212,719 and 8,087,118



# SC/ST/FC, LC/MU, ODC

Mini-500 SC, ST, FC and LC/MU



One-Click Cleaners

# **Cleaning Accessories for Test Kits**

Accurate test results require clean optical connectors – cleaning kits below are designed to support OTDR and Loss testing. A great accessory for maintaining new test equipment measurement integrity!

AFL NO.	Description	Includes	
8500-20-0900	Wet Cleaning Kit for SC/FC/ST/LC connectors	8500-10-0016MZ, Cletop-SB     CCTS-25-0900MZ, connector Cleaning Tips for 2.5 mm ferrule in adapters or sockets (SC, FC, ST in adapters), Blue (40 sticks)     CCTS-12-0900MZ, connector Cleaning Tips for 1.25 mm ferrule in adapters or sockets (LC, MU in adapters), Green (40 sticks)     FCC2-00-0902, Enhanced Fiber Connector Cleaner and Preparation Fluid, QTY = 1 can	
8500-20-0901	Dry Cleaning Kit	<ul> <li>8500-10-0016MZ, Cletop -SB.</li> <li>8500-10-0024MZ, ACT-01 2.5 mm adapter cleaning tips, QTY = 200</li> </ul>	
8500-20-0902MZ	Fiber Cleaning Refill Kit	<ul> <li>9000-03-0025MZ, FiberWipes™, QTY = 2 tubs</li> <li>FCC2-00-0902, Enhanced Fiber Connector Cleaner and Preparation Fluid, QTY = 1 can</li> </ul>	



8500-20-0900 kit



# **Buyer's Guide**

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AFL NO.	Description	
8500-15-0900MZ	NEOCLEAN-E1 for MU, LC, and LC APC connectors, 750 cleans	
8500-15-0901MZ	NEOCLEAN-E2 for SC and FC connectors with UPC/APC polishes and OptiTap connectors, 750 cleans	
8500-15-0902MZ	NEOCLEAN-E3 for SC, ST, FC, E2000 with UPC/APC polishes and OptiTap connectors, 750 cleans	
8500-15-0903MZ	NEOCLEAN-ES1 - pack of 3 replacement cartridges for NEOCLEAN-E1, 750 cleans each	
8500-15-0904MZ	NEOCLEAN-ES2 - pack of 3 replacement cartridges for NEOCLEAN-E2, 750 cleans each	
8500-15-0905MZ	NEOCLEAN-ES3 - pack of 3 replacement cartridges for NEOCLEAN-E3, 750 cleans each	
8500-15-0909MZ	NEOCLEAN-M for MPO/MTP connectors, 600+ cleans	

# NEOCLEAN-M

# **OPTIPOP-C Fiber Connector Cleaning Card**

**NEOCLEAN Fiber Connector Cleaning Tools** 

AFL NO.	Description	
8500-25-0900MZ	OPTIPOP-C: Includes card cleaner case, 10 cleaning cards, 120 cleans - 12 cleans per card	
8500-25-0901MZ	OPTIPOP-C refills: Includes 100 cleaning cards, 1200 cleans - 12 cleans per card	



# CleanConnect 500

AFL NO.	Description	
8500-30-0900MZ	CleanConnect 500 optical fiber connector cleaner, 500 cleans	
8500-30-0901MZ	CleanConnect 500 replacement reel, 500 cleans	

# **Optical Grade Cleaning Wipes**

AFL NO.	Description	
9000-03-0029MZ	CleanWipes - box with 400 optical quality wipes	
9000-03-0030MZ	CleanWipes - box with 3200 optical quality wipes	
9000-03-0025MZ	FiberWipes™ - optical quality wipes in rugged mini tub, 90 wipes per tub	
9000-03-0026MZ	FiberWipes - optical quality wipes in rugged mini tub, 90 wipes per tub, case of 24 tubs	
9000-03-0027MZ	FiberAide 1 - lint free wipe for single use and harsh environment connector cleaning, case of 600 wipes (12-50 pack bags)	
9000-03-0028MZ	FiberAide 1 - lint free wipe for single use and harsh environment connector cleaning, 1 bag of 50 wipes	



OPTITOP-C

# **Other Cleaning Supplies**

AFL NO.	Description	Qty
8500-10-0103	Alco pads	320 Pads
9000-03-0002	Kimwipes® – 280 wipes, 4.4" x 8.4" each	1 Box

CleanConnect 500



CleanWipes-400



FiberWipes Tub





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# **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. Many test standards require annual calibration. Authorized AFL calibration facilities are ISO 9001 certified, traceable to the National Institute of Standards and Technology, and in compliance with ANSI/NCSL Z540-1, ISO 10012-1.

Category	Model	
OTDRs, FlexTesters	C850*	
	FlexScan FS200-50 or -100 without OLS/OPM	
	FlexScan FS200-50 or -100 with OLS/OPM	
	M210, M210e, M310, M650, M700, M710, OFL280, OFL250, FLX380, CS260-10	
	OFL100*, OFL200*, M100*, M200, M600*, CS260-20	
OTDR & Certification Kits	C860	
Certification & Loss/Return Loss Kits (Pairs)	C840, T400*, T500*, ORL3B*	
Loss Test Kits/Talk Sets (Pairs)	OLTS5, FTS	
Power Meters	CSM, OPM	
Light Sources	CSS, OLS	
Light Sources - Encircled Flux (EF) Compliant	OLS1-DL-EF, OLS4-EF	
Attenuators	VOA5-MM	
Network Simulators	NS1, NS2, NSR	
Optical Fiber Identifiers	OFI	
Network Activation Kits	TACT1	

#### Notes:

- \*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: FTS3, OLTS2, OLTS3, OPM3, ORL3, WSP, VOA4, VOA5-SM.

# **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	Europe	Asia
AFL Test & Inspection Division	Fujikura Europe Ltd	Fujikura Asia Ltd
16 Eastgate Park Road	C51 Barwell Business Park	438A Alexandra Road, #08-03 Blk A,
Belmont, NH 03220	Leatherhead Road	Alexandra TechnoPark
603-528-7780	Chessington, Surrey, KT9 2NY	Singapore 119967
800-321-5298	+44 (0) 208 240 2020	calibration.fal@sg.fujikura.com
		+65 62711312

# **Payment and Other Fees**

Upon approval and 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.







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# **Prepaid Calibration Plans**

#### **Recommended Calibration Interval for AFL Test & Inspection products**

In keeping with ISO certification guidelines, AFL recommends the following calibration intervals for AFL Test & Inspection products:

- 3-year Calibration Interval for OPM, CSM1, OLS, CSS1, OFI, and VFI products
- 1-year Calibration Interval for all other AFL Test & Inspection products

AFL provides calibration recommendations as guidance for our customers. It is the responsibility of customers to determine actual calibration intervals used comply with internal corporate ISO requirements. Additionally, contractors providing services may be held to more frequent calibration intervals per contractual agreements with their customers. AFL recognizes many customers prefer annual calibration for all their Test and Inspection instruments. To support our customers AFL offers pre-paid calibration plans for AFL Test & Inspection products. Pre-paid plans allow customers to factor two annual calibrations into initial purchase order ensuring they will have a calibrated tool for three years without the hassle (and potential delay) of seeking internal purchase approval for necessary future calibrations. Annual calibrations performed at AFL calibration facilities ensure that you are getting the most out of your test equipment and that your equipment is operating at AFL specifications.

### **Cal Plans**

- Two annual calibrations at a discounted price.
- Express calibration return service

Note: Cal Plans cover cost of service work. Customer is responsible for in-coming and return freight.

#### Cal Plus Plans

- Cal Plan benefits plus addition of a 2 year extended warranty.
- Return freight paid by AFL

**Note:** Cal & Cal Plus Plan part numbers and pricing can be found in sections "Cal Plans Ordering (for products covered with (1) one year warranty)" on page 58 and "Cal Plans Ordering (for products covered with (5) five years warranty)" on page 60.

# Cal Plans Ordering (for products covered with (1) one year warranty)

		2-year Cal plan	2-year Cal Plus plan
Product	Model	AFL NO.	AFL NO.
C-Series Certification Products	C840	CAL2-00-C840	CAL2-01-C840
	C880	CAL2-00-C880	CAL2-01-C880
CS260-10 Contractor Series OTDRs	CS260-10	CAL2-00-CS260-10	CAL2-01-CS260-10
Encircled Flux Light Sources	OLS1-DUAL-EF	CAL2-00-OLS1-DUAL-EF	CAL2-01-OLS1-DUAL-EF
	OLS4-EF	CAL2-00-OLS4-EF	CAL2-01-OLS4-EF
Encircled Flux MLP Loss Test Kits	MLP4-2-EF	CAL2-00-MLP4-2-EF	CAL2-01-MLP4-2-EF
	MLP5-2-EF	CAL2-00-MLP5-2-EF	CAL2-01-MLP5-2-EF
Encircled Flux SMLP Loss Test Kits	SMLP4-4-EF	CAL2-00-SMLP4-4-EF	CAL2-01-SMLP4-4-EF
	SMLP5-5-EF	CAL2-00-SMLP5-5-EF	CAL2-01-SMLP5-5-EF
FlexScan FS200 Series	FS200-50-BAS-P0-W0	CAL2-00-FS-50-BA-P0	CAL2-01-FS-50-BA-P0
	FS200-50-BAS-P1-W1	CAL2-00-FS-50-BA-P1	CAL2-01-FS-50-BA-P1
	FS200-100-BAS-P0-W0	CAL2-00-FS-100-BA-P0	CAL2-01-FS-100-BA-P0
	FS200-100-BAS-P1-W1	CAL2-00-FS-100-BA-P1	CAL2-01-FS-100-BA-P1
	FS200-50-PLUS-P0-W0	CAL2-00-FS-50-PL-P0	CAL2-01-FS-50-PL-P0
	FS200-50-PLUS-P1-W1	CAL2-00-FS-50-PL-P1	CAL2-01-FS-50-PL-P1
	FS200-100-PLUS-P0-W0	CAL2-00-FS-100-PL-P0	CAL2-01-FS-100-PL-P0
	FS200-100-PLUS-P1-W1	CAL2-00-FS-100-PL-P1	CAL2-01-FS-100-PL-P1
	FS200-50-PRO-P0-W0	CAL2-00-FS-50-PR-P0	CAL2-01-FS-50-PR-P0
	FS200-50-PRO-P1-W1	CAL2-00-FS-50-PR-P1	CAL2-01-FS-50-PR-P1
	FS200-100-PRO-P0-W0	CAL2-00-FS-100-PR-P0	CAL2-01-FS-100-PR-P0
	FS200-100-PRO-P1-W1	CAL2-00-FS-100-PR-P1	CAL2-01-FS-100-PR-P1







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# **Prepaid Calibration Plans (continued)**

Cal Plans Ordering (for products covered with (1) one year warranty)

		2-year Cal plan	2-year Cal Plus plan
Product	Model	AFL NO.	AFL NO.
-LX380 FlexTester Series	FLX380-304	CAL2-00-FLX3-304	CAL2-01-FLX3-304
	FLX380-303	CAL2-00-FLX3-303	CAL2-01-FLX3-303
	FLX380-302	CAL2-00-FLX3-302	CAL2-01-FLX3-302
	FLX380-300	CAL2-00-FLX3-300	CAL2-01-FLX3-300
FLX380 FlexTester Complete2 Kits	FLX380-304 Complete2 Kit	CAL2-00-FLX3-304-CMP2	CAL2-01-FLX3-304-CMP2
	FLX380-303 Complete2 Kit	CAL2-00-FLX3-303-CMP2	CAL2-01-FLX3-303-CMP2
	FLX380-302 Complete2 Kit	CAL2-00-FLX3-302-CMP2	CAL2-01-FLX3-302-CMP2
	FLX380-300 Complete2 Kit	CAL2-00-FLX3-300-CMP2	CAL2-01-FLX3-300-CMP2
FLX380 FlexTester PRO2 Kits	FLX380-304 PRO2 Kit	CAL2-00-FLX3-304-PRO2	CAL2-01-FLX3-304-PRO2
	FLX380-303 PRO2 Kit	CAL2-00-FLX3-303-PRO2	CAL2-01-FLX3-303-PRO2
	FLX380-302 PRO2 Kit	CAL2-00-FLX3-302-PRO2	CAL2-01-FLX3-302-PRO2
	FLX380-300 PRO2 Kit	CAL2-00-FLX3-300-PRO2	CAL2-01-FLX3-300-PRO2
FTK Pro Installer Kits	FTK1-01-0900PR	CAL2-00-FTK1-0900	CAL2-01-FTK1-0900
	FTK1-01-0902PR	CAL2-00-FTK1-0902	CAL2-01-FTK1-0902
FTS Talk Sets	FTS2 (pair)	CAL2-00-FTS2	CAL2-01-FTS2
M210e OTDR Series	M210e-20	CAL2-00-M210e-20	CAL2-01-M210e-20
	M210e-22	CAL2-00-M210e-22	CAL2-01-M210e-22
	M210e-25K-01-HC1	CAL200-M210e-25K-HC1	CAL2-01-M210e-25KHC1
	M210e-25K-01-HC2	CAL2-00-M210e-25KHC2	CAL2-01-M210e-25KHC2
	M210e-25	CAL2-00-M210e-25	CAL2-01-M210e-25
M310 Enterprise OTDR Series	M310-25, -HC, -HC1	CAL2-00-M310-25	CAL2-01-M310-25
	M310-25K-HC2	CAL2-00-M310-25K-HC2	CAL2-01-M310-25K-HC2
	M310-20, -HC, -HC1	CAL2-00-M310-20	CAL2-01-M310-20
	M310-20K-HC2	CAL2-00-M310-20K-HC2	CAL2-01-M310-20K-HC2
M710 OTDR Series	M710-20	CAL2-00-M710-20	CAL2-01-M710-20
	M710-24	CAL2-00-M710-24	CAL2-01-M710-24
	M710-24	CAL2-00-710-24	CAL2-01-710-24
	M710-40	CAL2-00-710-40	CAL2-01-710-40
OFL280 FlexTester Series	OFL280-103	CAL2-00-OFL2-103	CAL2-01-OFL2-103
	OFL280-102	CAL2-00-OFL2-102	CAL2-01-OFL2-102
	OFL280-101	CAL2-00-OFL2-101	CAL2-01-OFL2-101
	OFL280-100	CAL2-00-OFL2-100	CAL2-01-OFL2-100
OFL280 FlexTester Complete2 Kits	OFL280-103 Complete2 Kit	CAL2-00-OFL2-103-CMP2	CAL2-01-OFL2-103-CMP2
	OFL280-102 Complete2 Kit	CAL2-00-OFL2-102-CMP2	CAL2-01-OFL2-102-CMP2
	OFL280-100 Complete2 Kit	CAL2-00-OFL2-100-CMP2	CAL2-01-OFL2-100-CMP2
OFL280 FlexTester PRO2 Kits	OFL280-103 PRO2 Kit	CAL2-00-OFL2-103-PRO2	CAL2-01-OFL2-103-PRO2
	OFL280-102 PRO2 Kit	CAL2-00-OFL2-102-PRO2	CAL2-01-OFL2-102-PRO2
	OFL280-100 PRO2 Kit	CAL2-00-OFL2-100-PRO2	CAL2-01-OFL2-100-PRO2
SVA1 Optical Attenuator	SVA1	CAL2-00-SVA1	CAL2-01-SVA1







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# **Prepaid Calibration Plans (continued)**

# Cal Plans Ordering (for products covered with (5) five years warranty)

Product	Model	AFL NO.	
Contractor Series Loss	CKM-2	CAL2-00-CKM2	
Test Kits	CKSM-2	CAL2-00-CKSM2	
	CKS-3	CAL2-00-CKS-3	
	CKS-2	CAL2-00-CKS-2	
<b>CSM Power Meters</b>	CSM1-1	CAL2-00-CSM1-1	
	CSM1-2	CAL2-00-CSM1-2	
	CSM1-3	CAL2-00-CSM1-3	
	CSM1-4	CAL2-00-CSM1-4	
CSS Light Sources	CSS1-MM	CAL2-00-CSS1-MM	
	CSS1-SM	CAL2-00-CSS1-SM	
MLP Loss Test Kits	MLP1-1	CAL2-00-MLP1-1	
	MLP1-2	CAL2-00-MLP1-2	
	MLP4-1	CAL2-00-MLP4-1	
	MLP4-2	CAL2-00-MLP4-2	
	MLP5-2	CAL2-00-MLP5-2	
OFI-200, OFI-400 Optical	OFI-200D	CAL2-00-OFI-200D	
Fiber Identifiers	OFI-400	CAL2-00-OFI-400	
	OFI-400C	CAL2-00-OFI-400C	
	OFI-400HP	CAL2-00-OFI-400HP	
OLS Light Sources	OLS1-1	CAL2-00-OLS1-1	
	OLS1-2	CAL2-00-OLS1-2	
	OLS1-DUAL	CAL2-00-OLS1-DUAL	
	OLS2-DUAL	CAL2-00-OLS2-DUAL	
	OLS4	CAL2-00-OLS4	
OLS Light Sources	OLS7-3	CAL2-00-OLS7-3	
	OLS7-FTTH	CAL2-00-OLS7-FTTH	
	OLS7-FTTx	CAL2-00-OLS7-FTTx	

Product	Model	AFL NO.	
OPM Power Meters	OPM1-2	CAL2-00-OPM1-2	
	OPM1-3	CAL2-00-OPM1-3	
	OPM4-1	CAL2-00-OPM4-1	
	OPM4-2	CAL2-00-OPM4-2	
	OPM4-3	CAL2-00-OPM4-3	
	OPM4-4	CAL2-00-OPM4-4	
	OPM4-FTTX	CAL2-00-OPM4-FTTX	
	OPM5-2	CAL2-00-OPM5-2	
	OPM5-3	CAL2-00-OPM5-3	
	OPM5-4	CAL2-00-OPM5-4	
SLP Loss Test Kits	SLP4-6	CAL2-00-SLP4-6	
	SLP4-6D	CAL2-00-SLP4-6D	
	SLP4-7	CAL2-00-SLP4-7	
	SLP4-FTTH	CAL2-00-SLP4-FTTH	
	SLP4-FTTX	CAL2-00-SLP4-FTTX	
	SLP5-6	CAL2-00-SLP5-6	
	SLP5-6D	CAL2-00-SLP5-6D	
	SLP5-7	CAL2-00-SLP5-7	
	SLP5-FTTH	CAL2-00-SLP5-FTTH	
	SLP5-FTTX	CAL2-00-SLP5-FTTX	
SMLP Loss Test Kits	SMLP4-4	CAL2-00-SMLP4-4	
	SMLP5-5	CAL2-00-SMLP5-5	



# **Buyer's Guide**

January 15, 2016

# **Terms and Conditions**

- 1. **PRICES:** All prices set forth are suggested selling prices, FOB Belmont, NH USA for domestic shipments and FCA Belmont, NH 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, and VFI 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.





January 15, 2016





# Fiber Optics 1-2-3

This four-day class has been developed with 16 hours of classroom lecture and 16 hours of hands-on skills labs to provide practical understanding and skills required to properly design, install, and maintain fiber optic communications systems in Telco, Broadband, and Premises (LAN) applications. Students will use the latest fiber optic technology and equipment to learn how to splice, connectorize, test, and troubleshoot optical fiber networks in order to increase efficiency, reliability and on-the-job safety as well as reduce cost and downtime.

#### **Course Level**

Introductory to intermediate. Beginners to experienced fiber technicians find the class and extensive hands on skills training beneficial.



## **Certification: ETA Fiber Optic Installer**

Complete the four-day Fiber Optics 1-2-3 course and successfully pass the ETA Fiber Optic Installer (FOI) certification exam. The FOI is designed for those working with both multimode and single-mode fibers.

# **Course Options**

AFL NO.	Description	
TRN-FO123-C	Four-day Course. Includes classroom lecture and hands-on exercises.	
EXAM-FOI	Optional Certification. Optional ETA Fiber Optic Installer (FOI) Exam.	



# **Advanced Hands-on Training**

This four-day course has been developed with 8 hours of classroom lecture and 24 hours of hands-on skills exercises focused on specific fiber optic disciplines. This next level of training is intended for those who have already had formal introductory classes and require more advanced knowledge and skills. The course material is predominantly based on technician fiber installation skills and technology, and includes content applicable for FTTx and DWDM systems.

### **Course Level**

Intermediate to expert. This series of classes requires basic knowledge of fiber optic theory and terminology, as well as field experience, equivalent formal training such as the Fiber Optics 1-2-3 course, or viewing the Light Brigade Staff Development DVD set.



# Certification: ETA Fiber Optic Technician — Outside Plant

Complete all four days of the Advanced Hands-on Training course and pass the ETA Fiber Optic Technician — Outside Plant (FOT-OSP) certification exam. The FOT-OSP is designed for those installing outside plant single-mode fiber optic networks.

#### **Course Options**

AFL NO.	Description	
TRN-ADVANCED-C	Four-day Course. Includes classroom lecture and hands-on exercises.	
EXAM-OSP	Optional Certification. Optional ETA FOT-OSP Exam.	



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**Buyer's Guide** 

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# **Emergency Restoration**

This three-day course features classroom lecture with a heavy emphasis on fault location, troubleshooting, and test equipment, followed by hands-on tasks that simulate actual field restorations for both retrievable and non-retrievable slack scenarios. It is intended for those who perform or specify fiber optic maintenance and restoration programs.

#### Course Level

Intermediate to expert. This series of classes requires basic knowledge of fiber optic theory and terminology as well as field experience, equivalent formal training such as the Fiber Optics 1-2-3 course, or viewing the Light Brigade Staff Development DVD set.

## **Course Options**

AFL NO.	Description	
TRN-ER-C	Three-day Course. Includes classroom lecture and hands-on exercises.	

# **Fiber Characterization**

This three-day class has been developed with 16 hours of classroom lecture and 8 hours of hands-on skills labs to provide practical understanding of the principles behind building and maintaining high-speed optical networks. Key critical parameters such as polarization mode dispersion (PMD), chromatic dispersion (CD), and optical return loss (ORL) need to be calculated in order to evaluate system capabilities and network upgrades to higher bit rate systems.

### **Course Level**

The course is intended for those involved with transmission equipment or the outside plant where fiber characterization is required to assure operation at 10 Gigabits or higher data rates. This class requires basic knowledge of fiber optic theory, as well as field experience, equivalent formal training such as the Fiber Optics 1-2-3 course, or viewing the Light Brigade DVD set.



### Certification: Light Brigade Certificate of Completion

Complete this course and receive a Light Brigade Certificate of Completion.

# **Course Options**

AFL NO.	Description	
TRN-FR-C	Three-day Course. Includes classroom lecture and hands-on exercises.	

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# FTTx for Installers and Technicians

This four-day class has been developed with 16 hours of classroom lecture and 16 hours of hands-on skills labs to provide practical understanding and hands-on skills required to properly install and maintain fiber-to-the-home (FTTx) networks. This course is focused to supervisors and technicians that are to be involved in building, maintaining and troubleshooting FTTx networks. Attendees will gain the valuable skills that are required to install, test, and troubleshoot PON and active Ethernet FTTx systems according to ITU, IEEE, and SCTE standards. Students will perform bidirectional testing, WDM testing, and splitter testing with the latest FTTx test equipment such as PON power meters and optical time-domain reflectometers.





Introductory to intermediate. Beginners to experienced fiber-to-the-home technicians find the class and extensive hands-on skills training beneficial.

# Certification: ETA Fiber Optic Technician — Outside Plant

Complete the FTTx for Installers and Technicians course and pass the ETA Fiber Optic Technician — Outside Plant (FOT-OSP) certification exam. The FOT-OSP is designed for those installing outside plant single-mode fiber optic networks.

# **Course Options**

AFL NO.	Description	
TRN-FTTX-C	Four-day Course. Includes classroom lecture and hands-on exercises.	
EXAM-OSP	Optional Certification. Optional ETA FOT-OSP Exam.	



# FTTx OSP Design

This three-day class has been developed with 16 hours of classroom lecture and 8 hours of hands-on design exercises to teach attendees to apply critical issues such as customer take rate and density to outside plant design. This course covers FTTH network field configurations, design benchmarks, and installation parameters for active Ethernet and PON systems. Attendees will create their own FTTx network designs in classroom break-out sessions, applying the learned objectives to distributed split, centralized split, home run, and point-to-point systems.

#### Course Level

The course is intended for outside plant and network engineers who need in-depth skills for designing an effective FTTx network.



# **Certification: Light Brigade Certificate of Completion**

Complete the three-day FTTx OSP Design course and receive a Certificate of Completion from Light Brigade.

# **Course Options**

AFL NO.	Description	
TRN-OSPD-C	Three-day Course. Includes classroom lecture and hands-on exercises.	

**SAVE 10%** 

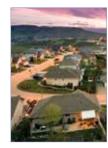
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# **Certified Fiber to the Home Professional**

This course features 16 hours of classroom lecture with an experienced FTTH instructor. The content is focused to network designers, network planners, supervisors, and project managers that will be involved in deploying and maintaining FTTH and FTTB networks. Students will gain a broad base of knowledge and familiarity with FTTH architecture, network design, deployment technology, and operational skills.

#### **Course Level**

Intermediate to expert. This series of classes requires basic knowledge of fiber optic theory and terminology, as well as field experience, equivalent formal training such as the Fiber Optics 1-2-3 course, or viewing the Light Brigade Staff Development DVD set.



# Certification: Certified Fiber to the Home Professional (CFHP)

Complete the CFHP course and pass the FTTH Council's online CFHP examination. The certification is valid for three years.

# **Course Options**

AFL NO.	Description	
TRN-CFHP-C	Two-day Course. Includes classroom lecture and CFHP Certification Exam.	



# **CFHP Online Training Program**

This course is focused to network designers, network planners, supervisors, and project managers that will be involved in deploying and maintaining FTTH and FTTB networks. Students will gain a broad base of knowledge and familiarity with FTTH architecture, network design, deployment technology, and operational skills. This online training program is comprised of 15 modules that allow the student to grasp key concepts at their own pace and gauge their mastery through knowledge questions, culminating in a 75-question practice exam. The comprehensive online training course covers the same material as the CFHP classroom course.

#### Course Level

Intermediate to expert. This series of classes requires basic knowledge of fiber optic theory and terminology as well as field experience, equivalent formal training such as the Fiber Optics 1-2-3 course, or viewing the Light Brigade Staff Development DVD set.



# Certification: Certified Fiber to the Home Professional (CFHP)

Complete the CFHP course and pass the FTTH Council's online CFHP examination. The certification is valid for three years.

#### **Course Options**

AFL NO.	Description	
TRN-eCFHP-C	Certified Fiber to the Home Professional Online Training Program.	
TRN-eCFHP-CM	Certified Fiber to the Home Professional Course manual.	
EXAM-CFHP	Optional Certification. Optional CFHP Certification Exam.	



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# **Fiber Optics for Utilities**

The Fiber Optic Professional certification program is an instructor-led training program developed in partnership with the Utilities Telecom Council (UTC). It is for those who construct, install, maintain, or design utility-based fiber optic networks. It consists of three courses: Level 1 Technician, Level 2 Designer and Level 3 Advanced Designer. The Level 1 and Level 2 courses are scheduled back to back in a four day block. The Level 3 course is available as a custom course only.

#### **Course Level**

Introductory to intermediate. Novices to experienced fiber technicians find the class and extensive hands-on skills training beneficial.



# **Certification: UTC Fiber Optic Professional**

To be eligible for UTC certification, complete the Level 1 Technician or Level 2 Designer course(s) and pass the corresponding certification examination.

# **Course Options**

AFL NO.	Description	
TRN-UTCL1-C	Three-day Course. Fiber Optics for Utilities Level 1 Technician.	
TRN-UTCL2-C	One-day course. Fiber Optics for Utilities Level 2 Designer.	
TRN-UTCL3-C	Fiber Optics for Utilities Level 3 Advanced Designer. Available as a custom course.	
EXAM-UTCL1	Optional Certification. Optional UTC Exam.	



# Fiber Optics for ITS, Traffic, Fire Alarm, and Communication Systems

This multi-level training program is for those who plan, design, install, or maintain fiber optic networks in public safety, security, traffic, and/or transportation environments.

# **Course Level**

Introductory to intermediate. Beginners to experienced fiber technicians find the class and extensive hands-on skills training beneficial.



# Certification: IMSA Fiber Optics for ITS, Traffic, Fire Alarm, and Communication Systems

To be eligible for IMSA certification, complete the Technician Level I, Field Technician Level II \*, and/or Design Technician Level II \* course(s) and pass the corresponding certification examination(s). (\* Level I certification is a prerequisite for both of the Level II certifications.)

# **Course Options**

AFL NO.	Description	
TRN-IMSAL1-C	<b>Technician Level I.</b> Two days of classroom training on the physical layer: fiber optic theory, fiber types, cables, splicing, terminations, fiber management products, installation, testing, troubleshooting, maintenance, and safety.	
TRN-IMSAL2F-C	<b>Field Technician Level II.</b> Two days of hands-on skills training labs performing fiber optic cable preparation, splicing, OTDR operation, optical loss testing, restoration, and maintenance. Recommended for those who install and maintain fiber-optic intelligent transportation systems (ITS).	
TRN-IMSAL2D-C	<b>Design Technician Level II.</b> One day of classroom training on system design, loss budgets, optical multiplexing, bidirectional transmission, bandwidth considerations, integration for voice, video, and data systems, and analog to digital ITS applications. Recommended for Maintenance & Operations Supervisors, Design Engineers, ITS Managers.	
EXAM-IMSAL1	Certification per Level.	



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# **Custom Training Classes**

Light Brigade can develop and deliver a custom course specific to your needs and application. Let us create a course to meet your desired skill level or to focus on specific subject matter. We have produced thousands of customized courses, DVDs, and other training materials. Any Light Brigade training course can be tailored to suit your needs or brought to your location, anywhere in the world.

## **Benefits of Customized Onsite Training**

- Convenience We can bring our training to your site(s) and schedule it to meet your business needs.
- Cost and Time Savings Minimize travel time and expense to and from a public class. Also, your staff's time will be spent focused on issues
  specific to your company's business.
- Develop Expertise Use your own equipment in our training or have us bring our extensive inventory of equipment and supplies.
   You decide!
- Critical Emphasis You pick the objectives, products, and techniques of particular importance to your operations, and our skilled instructors and technicians will tailor a custom course to meet your requirements.
- Scheduling Flexibility A custom course can be any length: one day, one week, or longer. It can take place at a time and place most convenient to your organization. Sessions can be scheduled throughout the year and delivered at different company locations.

#### Other custom course offerings include:

# **Fiber Optics for Mining Applications**

This course provides the knowledge and skills required to properly design, install, and maintain fiber optics systems in underground and surface mines. Students will learn to splice, connectorize, test, and troubleshoot mining-based optical fiber networks in order to increase efficiency, reliability, and to meet on-the-job MSHA safety requirements.

# Fiber Optics for Oil & Gas

This course is intended for those who design, install, test, and maintain optical fiber networks in petrochemical applications such as offshore drilling, pipelines, refineries, and processing plants. Students will learn about optical sensing as well as get hands-on experience splicing, connectorizing, testing, and troubleshooting optical fiber networks.

# Premises/LAN Installation and Maintenance

This course is intended for installation contractors and end users involved in building and maintaining premises-based local area networks, municipal networks, private networks, and data centers. Learn about passive optical LANs, fiber options for high speed network needs, small form factor cabling, ribbon fibers and array connectors in this newly updated course.

**SAVE 10%** 

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# **Light Bites Online Training Series**

Our new online training series, Light Bites, is a quick, easy and cost effective way to learn fiber optics. Technicians, engineers, project managers and sales/marketing professionals can learn the technology and how it is applied in the real world. The modules can be completed in 60–90 minutes at your own pace with easy to use stop, pause and rewind controls. High quality images, animations, charts and reference material enhance your learning experience and help reinforce important concepts. Each module concludes with a knowledge quiz to ensure mastery of the content.



# Single-mode Technology: Theory and Fibers

All types of communications today depend on single-mode fiber. It is used in the backbone infrastructure of voice, data and video wireline networks as well as most wireless networks. A good understanding of optical theory as it applies to single-mode fibers and systems is critical to anyone working in fiber optics. This course covers topics that go beyond the fundamentals, to provide a deeper understanding of optical theory and of single-mode applications.



## **Certification: Light Brigade Certificate**

Those who pass the 35-question quiz at the conclusion of the course will earn a Light Brigade Certificate of Completion.

# **Course Options**

AFL NO.	Description	
TRN-SMFTO-C	Single-mode Technology: Theory and Fibers Online Course.	



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Use promotion code **TRN-NOYES** to qualify for 10% off retail price.





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# Changes in the current revision, January 2016

# **New Products and Services**

AFL NO.	Description	Page
aeRos and ROGUE Test Suite		
RGA-STND-01	One Kickstand	8
RG-1100-M01	ROGUE Turbo OLTS Module, Single Engine, MM 850/1300 nm	8
RG-1100-M01-D	ROGUE Turbo OLTS Module,Dual Engine, MM 850/1300 nm	8
RGL-1100-01	ROGUE Tier 1 Certification License	8
aeRos	aeRos Basic account, 1 seat	8
aeRos-PRO-MTH	aeRos PRO account, 1 seat, monthly subscription	8
aeRos-PRO-YRL	aeRos PRO account, 1 seat, annual subscription	8
aeRos-PRO-LFT	aeRos PRO account' 1 seat, lifetime subscription	8
RGK-CERT02	ROGUE Certification Kit, Dual Engine SM and Dual Engine MM	9
RGK-CERT04	ROGUE Certification Kit, Dual Engine MM	9
MFS-12-SM-ASC	Multi-fiber Switch, 12 fibers SM, APC–SC, soft case	9
MFS-12-SM-USC	Multi-fiber Switch, 12 fibers SM, UPC–SC, soft case	9
MFS-12-MM-USC	Multi-fiber Switch, 12 fibers MM, UPC–SC, soft case	9
OTDRs		
FS200-50-BI-P1-W1	FlexScan BI Complete kit	12
FS200-100-BI-P1-W1	FlexScan BI Complete kit	12
FS200-50-BIPM-P1-W1	FlexScan BIPM Complete kit	12
FS200-100-BIPM-P1-W1	FlexScan BIPM Complete kit	12
FLX380-300-CMP2-BI	FLX380 BI Complete kit	15
FLX380-302-CMP2-BI	FLX380 BI Complete kit	15
FLX380-303-CMP2-BI	FLX380 BI Complete kit	15
FLX380-304-CMP2-BI	FLX380 BI Complete kit	15
FLX380-300-CMP2-BIPM	FLX380 BIPM Complete kit	15
FLX380-302-CMP2-BIPM	FLX380 BIPM Complete kit	15
FLX380-303-CMP2-BIPM	FLX380 BIPM Complete kit	15
FLX380-304 -CMP2-BIPM	FLX380 BIPM Complete kit	15
OFL280-100-CMP2-BI	OFL280 BI Complete kit	18
OFL280-102-CMP2-BI	OFL280 BI Complete kit	18
OFL280-103-CMP2-BI	OFL280 BI Complete kit	18
OFL280-100-CMP2-BIPM	OFL280 BIPM Complete kit	18
OFL280-102-CMP2-BIPM	OFL280 BIPM Complete kit	18
OFL280-103-CMP2-BIPM	OFL280 BIPM Complete kit	18





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# Changes in the current revision, January 2016

# **Removed Products**

AFL NO.	Description		
FOCIS WiFi Kits with Adapter Tips and Cleaners			
FMVU-00-04XU	FOCIS WiFi VIEW UPC kit		
FMVU-00-04XA	FOCIS WiFi VIEW APC kit		
FMVU-00-04XM	FOCIS WiFi VIEW MPO kit.		
FMPL-00-04XU	FOCIS WiFi PLUS UPC kit		
FMPL-00-04XA	FOCIS WiFi PLUS APC kit		
FMPL-00-04XM	FOCIS WiFi PLUS MPO kit		
<b>FOCIS WiFi Kits in Soft Ca</b>	ase without Adapter Tips and Cleaners		
FMVU-00-04XN	FOCIS WiFi VIEW kit		
FMPL-00-04XN	FOCIS WiFi PLUS kit		
FMVU-01-04XN	FOCIS WiFi VIEW Upgrade kit for DFS1 owners		
FMPL-01-04XN	FOCIS WiFi PLUS Upgrade kit for DFS1 owners		
<b>FOCIS WiFi Kits in a Hard</b>	Carry Case without Adapter Tips and Cleaners		
FMVU-00-04XN-HC	FOCIS WiFi VIEW kit		
FMPL-00-04XN-HC	FOCIS WiFi PLUS kit		
FMVU-01-04XN-HC	FOCIS WiFi VIEW Upgrade kit for DFS1 owners		
FMPL-01-04XN-HC	FOCIS WiFi PLUS Upgrade kit for DFS1 owners		
<b>FOCIS and FOCIS PRO Kit</b>	s without Adapter Tips and Cleaners		
FOCIS-00-04XN	FOCIS kit		
FOCIS-00-P4XN	FOCIS PRO kit		
FOCIS-00-04NN	FOCIS Upgrade kit for DFS1 Owners		
FOCIS-00-P4NN	FOCIS PRO Upgrade kit for DFS1 Owners		
FOCIS-00-P0XX	FOCIS PRO Upgrade kit for FOCIS Owners		
FOCIS and FOCIS PRO Kits w	vith Adapter Tips and Cleaners		
FOCIS-00-04XU	FOCIS UPC kit		
FOCIS-00-04XA	FOCIS APC kit		
FOCIS-00-04XM	FOCIS MPO kit		
FOCIS-00-P4XU	FOCIS PRO UPC kit		
FOCIS-00-P4XA	FOCIS PRO APC kit		
FOCIS-00-P4XM	FOCIS PRO Data Center kit		
FOCIS-00-PTFK	FOCIS PRO TroubleFinder kit		





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# **Changes in the previous revision, October 2015**

# **New Products and Services**

AFL NO.	Description	Page
aeRos and ROGUE Test Suite		
RG-C01	ROGUE Carrier	8
RG-1100-Q01	Turbo Quad OLTS Module 850/1300/1350/1550 nm	8
RG-1100-S01	Turbo SM OLTS Module 1310/1550 nm	8
RG-1100-S01-D	Turbo SM OLTS Module 1310/1550 nm Dual Engine	8
RGK-CERT01	Quad Certification Kit	8
RGK-CERT03	Dual Engine SM Certification Kit	8
RGK-MPO-SM-CERT-ADD	SM MPO Certification Add-On Kit	8
RGK-MPO-MM-CERT-ADD	MM MPO Certification Add-On Kit	8
OTDRs		
FS200-50-BAS-P0-W0	FlexScan Pocket-sized OTDR with SmartAuto™ and LinkMap™ - Basic Kit	11
FS200-50-BAS-P1-W1	FlexScan Pocket-sized OTDR with SmartAuto™ and LinkMap™ - Basic Kit	11
FS200-100-BAS-P0-W0	FlexScan Pocket-sized OTDR with SmartAuto™ and LinkMap™ - Basic Kit	11
FS200-100-BAS-P1-W1	FlexScan Pocket-sized OTDR with SmartAuto™ and LinkMap™ - Basic Kit	11
FS200-50-PLUS-P0-W0	FlexScan Pocket-sized OTDR with SmartAuto™ and LinkMap™ - Plus Kit	11
FS200-50-PLUS-P1-W1	FlexScan Pocket-sized OTDR with SmartAuto™ and LinkMap™ - Plus Kit	11
FS200-100-PLUS-P0-W0	FlexScan Pocket-sized OTDR with SmartAuto™ and LinkMap™ - Plus Kit	11
FS200-100-PLUS-P1-W1	FlexScan Pocket-sized OTDR with SmartAuto™ and LinkMap™ - Plus Kit	11
FS200-50-PRO-P0-W0	FlexScan Pocket-sized OTDR with SmartAuto™ and LinkMap™ - PRO Kit	11
FS200-50-PRO-P1-W1	FlexScan Pocket-sized OTDR with SmartAuto™ and LinkMap™ - PRO Kit	11
FS200-100-PRO-P0-W0	FlexScan Pocket-sized OTDR with SmartAuto™ and LinkMap™ - PRO Kit	11
FS200-100-PRO-P1-W1	FlexScan Pocket-sized OTDR with SmartAuto™ and LinkMap™ - PRO Kit	11
M210e-20U-01	M210e OTDR	21
M210e-22U-01	M210e OTDR	21
M210e-25U-01	M210e OTDR	21
M210e-20U-01-HC	M210e OTDR	21
M210e-22U-01-HC	M210e OTDR	21
M210e-25U-01-HC	M210e OTDR	21
M210e-25K-01-HC1 <sup>b</sup>	M210e OTDR	21
M210e-25K-01-HC2 <sup>c</sup>	M210e OTDR	21





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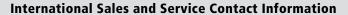
# Changes in the previous revision, October 2015

# **Removed Products**

AFL NO.	Description	
OTDRs		
CS260-20	Contractor Series Troubleshooting OTDR	
SOFT-00-OLS-EML	OTDR M310 OLS software (for v2.2.53 and lower version), by email	
M310-20U-01-AAd	M310 OTDR kit	
M310-25U-01-AAd	M310 OTDR kit	
M310-20U-01-HC-AAd	M310 OTDR kit	
M310-25U-01-HC-AAd	M310 OTDR kit	
M310-20K-01-HC1-AAb,d	M310 OTDR kit	
M310-25K-01-HC1-AAb,d	M310 OTDR kit	
M310-20K-01-HC2-AAb,d	M310 OTDR kit	
M310-25K-01-HC2-AAb,d	M310 OTDR kit	
SOFT-00-AAPK	OTDR & TRM® 2.0 Advanced Analysis software	
SOFT-01-AAPK	OTDR & TRM® 2.0 Advanced Analysis software, by email	
SOFT-00-AAS	OTDR Advanced Analysis software	
SOFT-00-OLS	OTDR M310 OLS software (for v2.2.53 and lower ver.)	
C850-100-LP1-S1	Soft case	
C850-100-LP1-H1	Soft and hard cases	
C850-100-LP1-H2	Soft and hard cases	
C850-100-LP1-H3	Soft and hard cases, OFS300	
C850-100-LP1-H4	Soft and hard cases, charger, spare battery	
C850-100-LP1-H5	Soft and hard cases	
C850-100-LP1-H6	Soft and hard cases, OFS300	
C850-100-LP1-H7	Soft and hard cases, charger, spare battery	
C860-100-LP1-H1	C860 QUAD OTDR and Certification Test Kit	
C860-100-LP1-H2	C860 QUAD OTDR and Certification Test Kit	
C860-100-LP1-H5	C860 QUAD OTDR and Certification Test Kit	
Optical Attenuator		
VOA6-SM	Optical Attenuator	
TACT1-4-6D-FC	Telecom Activation kit. FC kit contents: VOA6-SM, OPM4-4D, OLS2-DUAL, One-Click Mini SC/ST/FC, carry cases	
TACT1-4-6D-SC	Telecom Activation kit. SC kit contents: VOA6-SM, OPM4-4D, OLS2-DUAL, One-Click Mini SC/ST/FC, carry cases	
TACT1-4-FH-FC	Broadband Activation kit. FC kit contents: VOA6-SM, OPM4-4D, OLS7-FTTH, One-Click Cleaner SC/ST/FC, carry cases	
TACT1-4-FH-SC	Broadband Activation kit. SC kit contents: VOA6-SM, OPM4-4D, OLS7-FTTH, One-Click Cleaner SC/ST/FC, carry cases	

# **TEST & INSPECTION**





Available at www.AFLglobal.com/Test/Contacts

