

# FOCIS Lightning<sup>®</sup>2 Multi-Fiber Optic Connector Inspection System

## Features

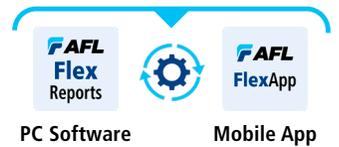
- Large, simple-to-use touch screen
- Self-contained, tether-free, compact, hand-held inspection solution
- Auto-focus and auto-centering for fast, easy inspection
- Up to 8x zoom for enhanced fiber end-face viewing
- Stores 10k images or easily shares data via USB or Bluetooth connectivity
- IEC, IPC, AT&T, and user-defined auto-analysis
- Wide variety of adapter tips for MPO and single-fiber connector types

## Applications

- Inspect multi-fiber and single-fiber connectors and adapters
- Data center fiber network installation, turn-up, and troubleshooting
- Inspect hardened connectors in FTTx network
- Verify proper connector cleaning practices
- Pair with OTDR for comprehensive reporting



## FlexReporter™ Software Suite



FOCIS Lightning2 is a compact self-contained inspection probe that captures and displays the entire MPO end-face image in less than two seconds. One button provides auto-focusing, centering, and Pass/Fail analysis at the connector and individual fiber level. It can be used to inspect MPO-8, -12, -16, -24 and -32 connectors. Results can be easily shared via USB and Bluetooth<sup>®</sup>.

**Pass/Fail results in seconds:** FOCIS Lightning2 was designed to quickly inspect multi-fiber connectors and bulkheads, such as MPO and MTP<sup>®</sup>, including multi-row varieties. It can perform industry standard and user-defined end-face cleanliness analysis at a rate of about 1 second per fiber – significantly speeding up inspection time when compared with other technologies.

**Internal storage and multiple export options:** FOCIS Lightning2 can store 10,000 individual fiber images, analysis, overlays, and zones tables locally and can provide optional Bluetooth wireless links for archiving and reporting. AFL's FlexApp (iOS and Android) provides a comprehensive and user-friendly feature set as well as connectivity with AFL's FlexReporter-Cloud.

**Untethered operation:** With rechargeable battery and integrated 3.5" TFT color LCD touchscreen, FOCIS Lightning2 can be used independently.

**Multi-fiber front-end adapter tips:** Multi-fiber front-end adapter tips support single row and multi-row MPO connector inspection for a wide range of patch cords and bulkhead-mounted connectors having either PC/UPC or APC polished end-faces. The probe snout includes a key which in combination with a slot on the adapter tips ensures that adapter tips never loosen during use, under any circumstances.

**Easy reporting and archiving:** The FlexReporter software suite is a complete platform for report generation and results sharing. This platform includes FlexApp, a mobile App that wirelessly transfers test results from the field to the Cloud. These results can be accessed via FlexReports that provide a variety of easy-to-use options for report generation. FlexReports Basic is included with all AFL OTDRs and enables users to quickly view and analyze results, generate simple single-fiber OTDR and OLTS reports. FlexReports Basic also includes a 60-day Advanced trial that includes full reporting and OTDR Trace Batch Editing.

# FOCIS Lightning<sup>®</sup>2 Multi-Fiber Optic Connector Inspection System

## Specifications<sup>a</sup>

Optical Port Parameters	Specification
Field of View (FOV; viewed on FOCIS Lightning2)	LFOV <sup>b</sup> : Live - 4333 x 6500 µm and 4333 x 5418 µm; Captured - 4333 x 5418 µm Multi Fibers: Live - 3200 x 4800 µm and 3200 x 4000 µm; Captured - 3200 x 4000 µm; Captured, Details - 200 x 225 µm Single Fiber: Live - 1314 x 2144 µm and 1314 x 1788 µm; Captured - 1314 x 1626 µm
Field of View (FOV; viewed on a PC)	LFOV <sup>b</sup> : 4333 x 6500 µm Multi Fibers: 3200 x 4800 µm Single Fiber: 1314 x 2144 µm
Manual Detection Capability (minimum)	0.25 µm
Auto Analysis Resolution	<1.0 µm
Internally Stored Image Size (pixels)	LFOV <sup>b</sup> : 3840 x 2560 JPG file Multi Fibers: 3840 x 2560 JPG file, N x 160 x 160 pixels .GIF files Single Fiber: 3840 x 2560 JPG file, 468 x 468 pixels .GIF file
Bluetooth Image and Overlay	2 x QVGA (320 x 240; image + overlay) to AFL test instruments 2 x VGA (640 x 480; image + overlay) files to Apple iOS and Android devices (IAP / MFI)
Maximum No Damage Live Fiber Power Level	+20 dBm; image cannot be viewed if fiber is live
Focus Methods	Auto-focus and manual focus
Centering	Auto-centering captured single fiber images
Zoom in Live Mode	1x / 2x / 4x / 8x zoom
Image Capture with Pass/Fail Analysis	IEC 61300-3-35 (2015), AT&T TP-76461, IPC-8497-1, user-set criteria
Results Storage (Image and Pass/Fail Results)	Yes
File Format	JPG, GIF
File Storage Capacity	10,000 files
Result Storage Capacity	Multi Fibers: 1000; Single Fiber:1500
Operating Features	
Bluetooth Characteristics (Wireless only)	IAP (iPod Accessory Protocol), SPP 0 x 1101, Apple MFi
USB Characteristics	Connector USB-C, Charging, USB 2.0 Mass Storage Device
Environment Parameters	
Storage Temperature	-40 °C to +70 °C
Operating Temperature	0 °C to +50 °C
Relative Humidity	0 to 95% RH
Vibration Limits	2G (transportation)
Transit Drop (without soft case)	300 mm (12 inches, all sides, dust cover installed)
Transit Drop (with soft case)	460 mm (18 inches, all sides, dust cover installed)
Physical and Power Characteristics	
Display Size, Type, Resolution	3,5" color TFT touch screen with backlit, 320 x 480 with brightness control
Battery Type	Li-Pol, user-replaceable
Operating Time (typical)	8 hours <sup>c</sup> ; 5 hours continuous <sup>c</sup>
Power Save Features	Auto-off (disabled, 2, 5, 10 min)
Low-Battery Warning	Alerts when ≤15 minutes battery operation remains
Size	67 x 32 x 190 mm (2.7 x 1.3 x 7.5 in)
Weight	280 g (0.62 lb)

### Notes:

- All specifications valid at 23°C ±2°C (73.4°F ±3.6°F).
- Large Field of View (LFOV) parameters are provided using LFOV MPO PC and APC adapters.
- Operating conditions: 60 tests in 20 minutes, then auto-off; repeat each hour.
- Trademarks are the property of their respective owners.

# FOCIS Lightning<sup>®</sup>2 Multi-Fiber Optic Connector Inspection System

## Ordering Information

AFL NO.	Description
FOCIS-LT2-N	FOCIS Lightning2 Kit, soft carry case, USB cable, with no tips or One-Click <sup>®</sup> cleaner
FOCIS-LT2-U	FOCIS Lightning2 Kit, soft carry case, USB cable, (1) UPC ferrule and bulkhead adapter tip, (2) One-Click MPO cleaners
FOCIS-LT2-A	FOCIS Lightning2 Kit, soft carry case, USB cable, (1) APC ferrule and bulkhead adapter tip, (2) One-Click MPO cleaners
FOCIS-LT2-UA	FOCIS Lightning2 Kit, soft carry case, USB cable, (1) UPC and (1) APC ferrule and bulkhead adapter tips, (2) One-Click MPO cleaners
FOCIS-LT2-UASF	FOCIS Lightning2 Kit, soft carry case, USB cable, (1) UPC and (1) APC ferrule and bulkhead adapter tips, (2) One-Click MPO cleaners, single fiber adapter
FOCIS-LT2-NW-N	FOCIS Lightning2 No Wireless Kit, soft carry case, USB cable, with no tips or One-Click cleaner
FOCIS-LT2-NW-U	FOCIS Lightning2 No Wireless Kit, soft carry case, USB cable, (1) UPC ferrule and bulkhead adapter tip, (2) One-Click MPO cleaners
FOCIS-LT2-NW-A	FOCIS Lightning2 No Wireless Kit, soft carry case, USB cable, (1) APC ferrule and bulkhead adapter tip, (2) One-Click MPO cleaners
FOCIS-LT2-NW-UA	FOCIS Lightning2 No Wireless Kit, soft carry case, USB cable, (1) UPC and (1) APC ferrule and bulkhead adapter tips, (2) One-Click MPO cleaners
FOCIS-LT2-NW-UASF	FOCIS Lightning2 No Wireless Kit, soft carry case, USB cable, (1) UPC and (1) APC ferrule and bulkhead adapter tips, (2) One-Click MPO cleaners, single-fiber adapter

## FOCIS Lightning Adapter Tips and Accessories

AFL NO.	Description	Tip ID
FLTNG-01-M12A	Adapter tip for MPO-12/24 APC bulkhead (with key)	M12A
FLTNG-01-M12U	Adapter tip for MPO-12/24 UPC bulkhead (with key)	M12U
FLTNG-01-M16U	Adapter tip for MPO-16/32 UPC bulkhead (with key)	M16U
FLTNG-01-MPOA	Adapter tip for MPO-12/16/24/32 APC bulkhead (no key)	MPOA
FLTNG-01-MMCA	Adapter Tip for MMC APC connector patchords	MMCA
FLTNG-01-MMCE	Adapter tip for MMC APC bulkhead	MMCE
FLTNG-01-MPOU	Adapter tip for MPO-12/16/24/32 UPC bulkhead (no key)	MPOU
FLTNG-01-MAC	Adapter Tip for MPO-12/16/24/32 APC connector (with key)	MAC
FLTNG-01-MUC	Adapter Tip for MPO-12/16/24/32 UPC connector (with key)	MUC
FLTNG-01-OPTM	Adapter Tip for OptiTip male (pinned) connector	OPTM
FLTNG-01-OPTF	Adapter Tip for OptiTip female (unpinned) connector	OPTF
FLTNG2-01-SFC	Coupler for most 'FFLX' single fiber connector adapter tips	SFC
FLTNG-01-ALCM	Extended adapter tip for LC-APC bulkhead	ALCM
FLTNG-01-ULCM	Extended adapter tip for LC-UPC bulkhead	ULCM
FLTNG-01-MPE	MPO extender barrel	MPE
FLTNG2-01-LVU	Adapter tip for Large Field of View (LFOV) - UPC	LVU

# FOCIS Lightning<sup>®</sup>2 Multi-Fiber Optic Connector Inspection System

## Test Management and Reporting Software

FlexReports Basic software is available as free download on AFL Software Resources website. FlexReports Basic includes a 60-day Advanced software trial. Once the evaluation period ends, users must upgrade to FlexReports Advanced software license to continue using FlexReports Advanced features.

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

## Recommended Products



**FlexScan<sup>®</sup> FS300 (Quad) and FS200 (SM) OTRs**

- SmartAuto<sup>®</sup> 1-button automated testing for fast results
- LinkMap<sup>®</sup> color-coded icons for easy troubleshooting
- FlexPress<sup>®</sup> mode (FS200) completes OTR test in <5 seconds!
- Integrated Source, Power Meter and VFL



**One-Click<sup>®</sup> Cleaner MPO / MPO-16**

- Ideal for Data Centers and high density optical networks
- Designed to work on MTP<sup>®</sup>/MPO multi-fiber connectors
- Cleans connectors on jumpers and in adapters

## Qualifications

Category	Regulation/Standard	Qualification
CE Marking	EU	Compliant to relevant EU Directives on health, safety, and environmental protection, and certified with CE marking
Safety /EMC /EMI	IEC	Compliant to IEC 61010-1 for safety requirements for electrical equipment
	EN	Compliant to EN 61010-1 for safety requirements for electrical equipment
	IEC	Compliant to IEC 61326-1 for EMC requirements for electrical equipment
	EN	Compliant to EN 61326-1 for EMC requirements for electrical equipment
	EN	Compliant to EN 55011 for EMC requirements for industrial, scientific and medical equipment
	FCC	Compliant to code of federal regulations FCC 47 CFR 15 on unlicensed transmissions
RoHS	EU	Compliant to EU regulations Directive 2011/65/EU (RoHS 2) and Directive 2015/863 (RoHS 3)
Test Method	IEC	Compliant to IEC 61300-3-35 for visual inspection of fiber optic connectors and fiber-stub transceivers
	IPC	Compliant to IPC-8497-1 for cleaning methods and contamination assessment for optical assembly

Contact [Sales@AFLglobal.com](mailto:Sales@AFLglobal.com) to schedule a demonstration or learn how to buy.

Visit [www.AFLglobal.com/Test](http://www.AFLglobal.com/Test) to learn more about FOCIS Lightning2.

International Sales and Service Contact Information available at [www.AFLglobal.com/Test/Contacts](http://www.AFLglobal.com/Test/Contacts).