

## FOCIS Lightning Multi-Fibre Optic Connector Inspection System



### Features

- Extremely fast multi-fibre auto-analysis for datacom and telecom inspection applications
- Auto-focus and auto-centering for fast, easy inspection
- WiFi, Bluetooth, and USB connectivity
- IEC, IPC, AT&T, and user-defined auto-analysis
- Self-contained, tether-free, compact, hand-held inspection solution
- Keyless UPC & APC adapter tips work with both MPO-12 & MPO-16 connectors
- Available with adapter tips supporting all commonly used multi-fibre connector types
- Snout and adapter tip keys and slots eliminate loosening during normal operation
- Single fibre adapter tips for LC connectors and bulkheads (UPC & APC) also available
- Field replaceable NiMH battery lasts over six hours
- MPO-XLR8™ mode provides compatibility with FOCIS Flex mobile App
- AFL's TRM PC software package enables MPO results reporting for desktop users

### Applications

- Inspect multi-fibre connectors on bulkhead adapters and patch cords
- Optimal tool for data centre optical network installation, turn-up, troubleshooting
- MPO/MTP multi-fibre multi-row connector inspection
- Critical fibre infrastructure performance assurance
- Maintenance of fibre connections at highest optical performance levels
- Verification that proper connector cleaning practices are being used

FOCIS Lightning is a self-contained multi-fibre connector inspection probe with integrated screen. It is intended specifically for the inspection of multi-fibre connectors and bulkheads such as MPO and MTP® including multi-row varieties. The FOCIS Lightning can perform industry standard and user-defined end-face cleanliness analysis at a rate of about 1 second per fibre. Lightning stores connector level and individual fibre images, analysis, overlays, and zones tables locally and provides both WiFi and Bluetooth wireless links. The AFL FOCIS app (iOS and Android) provides a comprehensive and user-friendly feature set as well as connectivity with AFL's cloud-based aeRos® workflow automation platform.

**Pass / fail results in seconds:** With the press of a single button, the FOCIS Lightning auto-focuses, captures, centres and analyzes the multi-fibre end-face image to industry standard and user-defined criteria.

**Untethered operation:** With rechargeable battery and integrated 2.4" TFT colour LCD screen, FOCIS Lightning can be used independently.

**Multi-fibre front-end adapter tips:** Multi-fibre front-end adapter tips support single row and multi-row MT 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.

## FOCIS Duel Fibre Optic Connector Inspection System

### Specifications<sup>a</sup>

OPTICAL PORT PARAMETERS	SPECIFICATION
Field of View (FOV; viewed on FOCIS Lightning)	Multi Fibres Live: 1960 x 4670 µm and 980 x 2335 µm Multi Fibres Captured, Overview: 1960 x 4338 µm Multi Fibres Captured, Details: 130 x 130 µm Single Fibre Live: 890 x 1075 µm and 445 x 537 µm Single Fibre Captured Zoomed Out: 684 x 742 µm Single Fibre Captured, Partially Zoomed In: 456 x 492 µm Single Fibre Captured, Fully Zoomed In: 228 x 246 µm
Field of View (FOV; viewed on a PC)	Multi Fibres Captured, Overview: 1960 x 4670 µm Multi Fibres Captured, Details: 130 x 130 µm Single Fibre Captured, Zoomed Out: 525 x 700 µm Single Fibre Captured, Partially Zoomed In: 355 x 475 µm Single Fibre Captured, Zoomed In: 175 x 235 µm
Manual Detection Capability (minimum)	0.25 µm
Auto Analysis Resolution	<1.0 µm
Internally Stored Image Size (pixels)	Multi-fibres: 640 x 480 VGA; images stored internally in N+1.JPG files, one in Overview screen and N each in Fibre Details screen Single Fibre: 640 x 480 VGA; images stored internally in three .JPG files, one at each FOV
Bluetooth Image and Overlay	2 x QVGA (320 x 240; image + overlay) to AFL test instruments (SPP) 1 x VGA (640 x 480) file to Apple iOS devices (IAP / MFi)
Maximum No Damage Live Fibre Power Level	+20 dBm; Image cannot be viewed if fibre is live
Focus Methods and Speeds	Auto-focus (≤3 sec) and manual focus
Centering	Auto-centering (<1 sec)
Zoom in Live Mode	1x and 2x modes
Image Capture with Pass/Fail Analysis	IEC 61300-3-35 (2015), AT&T TP-76461, IPC-8497-1, user-set criteria Capture SF <1 sec, MF <2 sec; Analysis <0.15 sec per fibre
Results Storage (Image and Pass/Fail Results)	Yes
File Format	JPG, GIF
File Storage Capacity	10,000 files
<b>OPERATING FEATURES</b>	
WiFi Characteristics	IEEE 802.11bng
Bluetooth Characteristics	IAP (iPod accessory protocol), SPP 0 x 1101
USB Characteristics	USB 2.0 mass storage device
Supported Languages	English, Chinese Simplified, Chinese Traditional, Finnish, French, German, Italian, Japanese, Korean, Polish, Russian, Spanish, Turkish
<b>ENVIRONMENT PARAMETERS</b>	
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)

#### Notes:

- All specifications valid at 23°C ±2°C (73.4°F ±3.6°F).
- Operating conditions: 60 tests in 20 minutes, then auto-off; repeat each hour.
- Trademarks are the property of their respective owners.

## FOCIS Lightning Multi-Fibre Optic Connector Inspection System

### Specifications<sup>a</sup>

PHYSICAL AND POWER CHARACTERISTICS	
Display Size, Type, Resolution	2.4", colour TFT, backlit, 240 x 320 with brightness control
Battery Type	NiMH, user replaceable
Operating Time (typical)	6 hours <sup>b</sup> ; 3 hours continuous
Power Save Features	Auto-off (disabled, 2, 5, 10 min)
Recharge Time	≤4 hours
Low-Battery Warning	Alerts when ≤15 minutes battery operation remains
AC Charger Voltage, Frequency, Current	100-240VAC, 50/60Hz, 5VDC, 2A
Charger Jack	3.2 mm, centre positive
Size	47 x 37 x 190 mm (1.8 x 1.5 x 7.7 in)
Weight	280 g (0.62 lb)
Safety & Compliance Certifications	UL, CE, FCC

### Ordering Information

PART NUMBER	DESCRIPTION
FOCIS-LTNG-N	FOCIS Lightning Kit, soft carry case, AC charger, with no tips or One-Click® cleaner
FOCIS-LTNG-U	FOCIS Lightning Kit, soft carry case, AC charger, (1) UPC ferrule & bulkhead adapter tip, and (2) One-Click MPO cleaners
FOCIS-LTNG-A	FOCIS Lightning Kit, soft carry case, AC charger, (1) APC ferrule & bulkhead adapter tip, and (2) One-Click MPO cleaners
FOCIS-LTNG-UA	FOCIS Lightning Kit, soft carry case, AC charger, (1) UPC and (1) APC ferrule & bulkhead adapter tips, and (2) One-Click MPO cleaners

### FOCIS Duel Adapter Tips

PART NUMBER	DESCRIPTION	TIP ID
FLTNG-01-M12A	MPO APC adapter tip for MPO-12/24 fibre APC (with key)	M12A
FLTNG-01-MPOU	MPO UPC adapter tip for MPO-12/24/16/32 fibre UPC (no key)	MPOU
FLTNG-01-M12U	MPO UPC adapter tip for MPO-12/24 fibre UPC (with key)	M12U
FLTNG-01-M16U	MPO UPC adapter tip for MPO-16/32 fibre UPC (with key)	M16U
FLTNG-01-SFA	Coupler for single fibre adapter tips	SFA

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### International Sales and Service Contact Information

Available at [www.AFLglobal.com/Test/Contacts](http://www.AFLglobal.com/Test/Contacts)