FOCIS Duel Fiber Optic Connector Inspection System

Features

- Auto-focus (both ports) and auto-centering (Port 1) for fast, easy inspection
- Self-contained, tether-free, compact, hand-held inspection solution
- IEC 61300-3-35 (2015), IPC 8497-1, AT&T TP-76461 and user-defined auto-inspection (Port 1)
- Available with more than three dozen tips supporting all commonly used connector types, including MPO/MTP multi-fiber connectors and bulkheads
- Rechargeable, field-replaceable NiMH battery lasts more than 8 hours
- Snout and adapter tip slots eliminate loosening during normal operation
- Fast 1X/2X zoom toggle

Applications

- Inspect connectors on bulkhead adapters (Port 1) and patch cords (Port 2) without swapping adapter tips
- Optimal tool for optical network installation, turn-up, troubleshooting and maintenance
- MPO/MTP multi-fiber multi-row connectors inspection
- Critical fiber infrastructure performance assurance
- Maintenance of fiber connections at highest optical performance levels
- Verification that proper connector cleaning practices are being used

FOCIS Duel is a self-contained twin-ported Bluetooth connected fiber optic connector inspection probe with integrated screen. The first port (right hand side Port 1) is fully featured, identical to AFL's FOCIS Flex. The second port (left hand side Port 2) has fast and convenient female "click-in" adapters, auto-focus and 2X zoom capabilities. The FOCIS Duel can perform IEC, IPC, AT&T and user-defined end-face cleanliness analysis and store Port 1 images and reports locally. 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, Port 1 of the FOCIS Duel auto-focuses, captures, centers and analyzes the end-face image to industry standard IEC 61300-3-35 (2015), IPC, AT&T and user-defined criteria.

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

Wide range of adapter tips: Port 1 – Interchangeable adapter tips support single and multi-fiber connector inspection for a wide range of patch cords and bulkhead-mounted connectors having either PC/UPC or APC polished end-faces. A key on the probe snout combined with a slot on the adapter tips assures that adapter tips never loosen during use, under any circumstances. Quad-slotted APC adapter tips ensure the screen is visible in any use case. Port 2 – A slot on the adapter tips combined with a keyed snout eliminates loosening during normal use. Port 2 adapter tips are available for all common connector types – Universal 1.25 mm and 2.5 mm, SC and LC in both UPC and APC polish types.

Inspection kits include AC charger, carry strap, two user-selected adapter tips (optionally), and soft carry case.

IEC 61300-3-35   **IPC 8497-1**   **ATT-TP-76450**

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Specifications [a]

FIRST PORT (Port 1) PARAMETERS	SPECIFICATION
Field of View (FOV; viewed on FOCIS Duel)	Live: 710 x 860 µm; Captured, Zoomed Out: 560 x 600 µm; Captured, Partially Zoomed In: 360 x 390 µm; Captured, Fully Zoomed In: 180 x 195 µm
Field of View (FOV; viewed on a PC)	Captured, Zoomed Out: 525 x 700 µm; Captured, Partially Zoomed In: 355 x 475 µm; 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)	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 Fiber Power Level	+20 dBm; Image cannot be viewed if fiber 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
Results Storage (Image and Pass/Fail Results)	Yes
File Format	JPG, GIF, Port 1 only
File Storage Capacity	10,000 files
SECOND PORT (Port 2) PARAMETERS	
Field of View (FOV; Viewed on FOCIS Duel)	Live: 365 x 440 µm and 183 x 220 µm
Manual Detection Capability (minimum)	0.25 µm
Maximum No Damage Live Fiber Power Level	+20 dBm; Image cannot be viewed if fiber is live
Zoom in Live Mode	1x and 2x modes
Focus Methods and Speeds	Auto-focus (≤3 sec) and manual focus
OPERATING FEATURES	
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
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)

Notes:

a. All specifications valid at 23°C ±2°C (73.4°F ±3.6°F).

b. Operating conditions: 60 tests in 20 minutes, then auto-off; repeat each hour.

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PHYSICAL AND POWER CHARACTERISTICS	
Display Size, Type, Resolution	2.4″, color TFT, backlit, 240 x 320 with brightness control
Battery Type	NiMH, user replaceable
Operating Time (typical)	8 hours[b]; 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, center positive
Size	47 x 37 x 175 mm (1.8 x 1.5 x 6.8 in)
Weight	280 g (0.62 lb)
Safety & Compliance Certifications	UL, CE, FCC

Notes:

a. All specifications valid at 23°C ±2°C (73.4°F ±3.6°F).

b. Operating conditions: 60 tests in 20 minutes, then auto-off; repeat each hour.

Ordering Information

DESCRIPTION	AFL NO.
FOCIS Duel Kit, soft carry case, AC charger, with no tips or One-Click® cleaner	FOCIS-DUEL-N
FOCIS Duel Kit, soft carry case, AC charger, user-selected: (2) UPC ferrule & bulkhead adapter tips, and (1) One-Click cleaner	FOCIS-DUEL-U
FOCIS Duel Kit, soft carry case, AC charger, user-selected: (2) APC ferrule & bulkhead adapter tips, and (1) One-Click cleaner	FOCIS-DUEL-A
FOCIS Duel Kit, soft carry case, AC charger, user-selected: (2) UPC and (2) APC ferrule & bulkhead adapter tips, and (1) One-Click cleaner	FOCIS-DUEL-UA

FOCIS Duel Adapter Tips

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

International Sales and Service Contact Information

Available at www.AFLglobal.com/Test/Contacts