



AFL

**Product Name:** 

AFL VFI4 Visual Fault Identifier (2.5mm & 1.25mm)

**Manufacturer Part Number:** 

VFI4-01-0900PR

Click here for more details on the AFL VFI4 Visual Fault Identifier (2.5mm & 1.25mm)

Click the thumbnail below to navigate to the datasheet.



**VFI4 Visual Fault Identifiers** 



<u>FASTConnect</u> <u>Field-Installable Connectors</u>





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### **Test & Inspection**

### **VFI4 Visual Fault Identifiers**





VFI4-L Low Power Model

#### **Features**

- Eye-safe Class 3R visible red laser source, 650 nm (High power version)
- Output power of 5.0 mW with 10 km range (High power version)
- Universal connector interface for quick connection
- 2.5 mm universal adapter (included) accepts FC, SC, ST, etc. connectors
- 1.25 mm universal adapter (included in High power version only) accepts LC and MU connectors
- Low power model VFI4-L is available with output power of 1.0 mW with 4 km range

### Applications

- Identify and trace fibers during activation and installation
- Identify poorly mated connectors
- Verify AFL's FASTConnect® field-installable connector installation
- Find faults inside OTDR dead zones

A Visible Fault Identifier (VFI), also referred to as a Visual Fault Locator (VFL), is an essential tool for fiber installation and maintenance technicians.

AFL's compact VFI4 injects high-powered red-laser light to provide exceptional brightness and range for locating defects in single-mode and multimode fibers. The light generated by these units will escape from sharp bends and breaks in jacketed or bare fibers, as well as poorly mated connectors enabling technicians to quickly spot faults. The universal connector interface mates with many connector styles without needing an adapter.

**Rugged and Compact:** The rugged VFI4 is designed for the rigors of real-life field testing. It has a range of up to 10 km, fits on a keychain, and features extensions that protect the red-laser port. It has both CW and pulsating modes and is powered by a single AA battery for up to 30 hours of operation.

**Installation and Activation:** VFI4 is used for quick continuity checks, fiber tracing, splice verification, and Pass/Fail validation for mechanical connectors. VFI4 is also an excellent complement to any OTDR because it can locate faults inside the OTDR's dead zone.

**Essential Troubleshooting Tool:** The VFI4 highlights sharp bends, breaks, faulty connectors, and other defects that "leak" light. Other applications include end-to-end continuity checks, as well as identifying connectors in patch panels and fibers during splicing operations.

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# **Test & Inspection**

### **VFI4 Visual Fault Identifiers**

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

OPTICAL	VFI4	VFI4-L	
Emitter Type	Laser, Class IIIa FDA 21 CFR 1040.10 and 1040.11, Class 3R IEC 60825-1:2014	Laser, Class II FDA 21 CFR 1040.10 and 1040.11, Class 2 IEC 60825-1:2014	
Wavelength	650 nm ±15 nm		
Output Power	5 mW maximum	1 mW maximum	
Modulation	2 Hz or CW selected		

GENERAL	VFI4	VFI4-L	
Adapter	2.5 mm Universal, 1.25 mm Universal		
Power	1 AA battery, <30 hours (flash mode)	1 AA battery, <50 hours (flash mode)	
Operating Temperature	-10°C to 50°C, 85 % humidity non condensing		
Storage Temperature	-30°C to 60°C, 95 % humidity non condensing		
Size (H x W x D)	7.9 x 5.1 x 2.2 cm (3.1 x 2.0 x 0.9 in)		
Weight	43 g (1.5 oz)		

#### Notes:

a. All specifications valid at 25°C unless otherwise specified.

### **Ordering Information**

DESCRIPTION	AFL NO.
VFI4 visual fault identifier with 2.5 mm and 1.25 mm adapters	VFI4-01-0900PR

### **Recommended Products**



#### One-Click® Cleaner Mini

- Small compact design with single action cleaning
- Automatically advance ensures each clean is performed with fresh cleaning tape
- 100 clean and 500 clean versions available
- Low cost per clean



### FASTConnect® Field-Installable Connectors

- Field-installable, takes less than a minute to complete
- Fast and easy to terminate
- Low insertion/return loss
- Reusable

#### Qualifications

CATEGORY	REGULATION/STANDARD	QUALIFICATION
CE Marking	EU	Compliant to relevant EU Directives on health, safety, and environmental protection, and certified with CE marking
	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
Safety/EMC/EMI	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
	FDA	Compliant to code of federal regulations FDA 21 CFR 1040.10 and 1040.11 on laser products
	IEC	Compliant to IEC 60825-1 for safety of laser products
RoHS	EU	Compliant to EU regulations Directive 2011/65/EU (RoHS 2) and Directive 2015/863 (RoHS 3)

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# FASTConnect® Field-Installable Connectors

FASTConnect are factory pre-polished, field-installable connectors that completely eliminate the need for hand polishing in the field. Proven mechanical splice technology ensuring precision fiber alignment, a factory pre-cleaved fiber stub and a proprietary index-matching gel combine to offer an immediate low loss termination to either single-mode or multimode optical fibers. FASTConnect are compatible with 250 µm and 900 µm optical fibers, as well as 4.8 mm (SC only) cordage.

All primary fiber types are supported, and each connector is color coded per industry standard requirements to aide in identification during and after installation. A factory-installed wedge clip (included with each connector) is removed and discarded upon completion of the termination. Incorporated into this device is an innovative, translucent wedge enabling the use of a common VFI to provide a "pass/fail" signal once physical contact is achieved.



### **Features**

- No epoxy, no Polish
- Low insertion loss
- Fiber can be reinserted up to three times
- 4.8 mm (SC only) cordage compatibility
- VFI accessory to confirm proper installation

### **Applications**

- Premise/Enterprise Networks
- LAN/WAN Connections
- Patch Panels
- Equipment Termination
- FTTx Applications
- Field Repair/Replacement
- Equipment Test Leads

### **Specifications**

Parameter	Туре	Value
Insertion Loss:	Single-mode - UPC Single-mode - APC Multimode - PC	Average: 0.2 dB, Maximum: 0.5 dB Average: 0.3 dB, Maximum: 0.6 dB Average: 0.1 dB, Maximum: 0.5 dB
Return Loss at Room Temperature	Single-mode - UPC Single-mode - APC Multimode	Average: -50 dB, Maximum: -45 dB Average: -55 dB, Maximum: -50 dB Average: -25 dB, Maximum: -20 dB

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# **FASTConnect® Field-Installable Connectors**

### **Ordering Information**

Fiber Type	Housing	Cable	AFL No.	
ribei lype	Color	Size	Package of 6	Package of 100
FASTConnect SC				
Multimode 62.5/125 μm, OM1	Beige	900 µm	FAST-SC-MM62.5-6	FAST-SC-MM62.5-100
Multimode 50 μm LOMMF*	Aqua	900 µm	FAST-SC-MM50L-6	FAST-SC-MM50L-100
Single-mode, UPC	Blue	900 μm	FAST-SC-SM-6	FAST-SC-SM-100
Single-mode, APC	Green	900 μm	FAST-SC-SMAU-6	FAST-SC-SMAU-100
FASTConnect ST				
Multimode 62.5/125 μm, OM1	Beige	900 µm	FAST-ST-MM62.5-6	FAST-ST-MM62.5-100
Multimode 50 μm LOMMF*	Aqua	900 µm	FAST-ST-MM50L-6	FAST-ST-MM50L-100
Single-mode, UPC	Blue	900 μm	FAST-ST-SM-6	FAST-ST-SM-100
FASTConnect LC				
Multimode 62.5/125 μm, OM1	Beige	900 μm	FAST-LC-MM62.5-6	FAST-LC-MM62.5-100
Multimode 50 μm LOMMF*	Aqua	900 μm	FAST-LC-MM50L-6	FAST-LC-MM50L-100
Single-mode, UPC	Blue	900 μm	FAST-LC-SM-6	FAST-LC-SM-100
Single-mode, APC	Green	900 μm	FAST-LC-SMAU-6	

Laser Optimised MM Fiber (LOMMF) Compatible with OM2, OM3 and OM4 fibers.

### **Accessories**

Tool Kits	AFL NO.
FASTConnect High Precision Tool Kit with CT50 Cleaver	CS001201
Visual Fault Identifiers	AFL NO.
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### Qualifications

Governing Body	Standard Code
EIA/TIA	568-C.3 604 (FOCIS)

#### **Patents**

Country	Patent Number(s)
	5,963,699
U.S.	5,984,532
	6,179,482
	7,003,208
	7,258,496

### **Temperature Specifications**

Temperature R	lange
Operating Temperature	-40°C to +75°C

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