

G0293A USB 400x Video Inspection Probe

G0293A

USB 400x Video Inspection Probe

Product Introduction

February 2013

Anritsu Corporation

G0293A Product Introduction

VIP Series (OPTION-545VIP, G0293A) Support Items

Mainframe	Features	
	Live Monitor on the mainframe	Pass/Fail Feature on the mainframe
MT9090A Network Master™ With μOTDR Module™ (MU909014/MU909015)	✓	✓ New ! (ver.2.10 or later *)
MT9090A Network Master™ without μOTDR Module™ (MU909011x/MU909020A/MU909060Ax)	✓	
MT9083x2 Series ACCESS Master	✓	✓ New ! (ver.1.03 or later *)
MT9083x/83x1 Series ACCESS Master	✓	
CMA5000/CMA5000a	✓	✓
Windows PC	✓	✓

*: Mainframe's software version

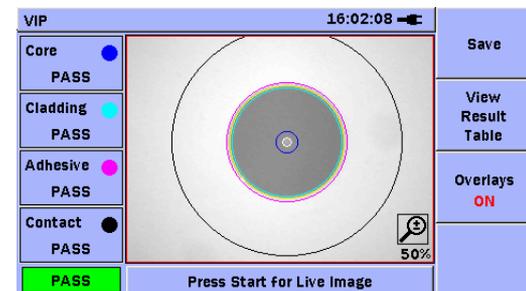
G0293A Product Introduction

G0293A Video Inspection Probe

Scratches and stains to optic fiber ferrule endfaces are often said to have a negative impact on transmission quality.

The G0293A can be connected to an MT908x Series ACCESS Master, MT9090A Network Master Series product and PC, to show the state of a ferrule endface.

This function is effective for determining whether a ferrule endface is clean, and whether connector replacement is necessary due to connector scratches.

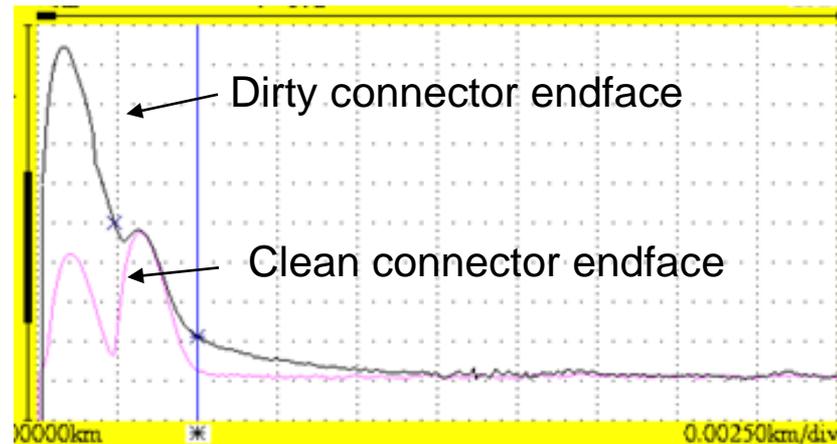
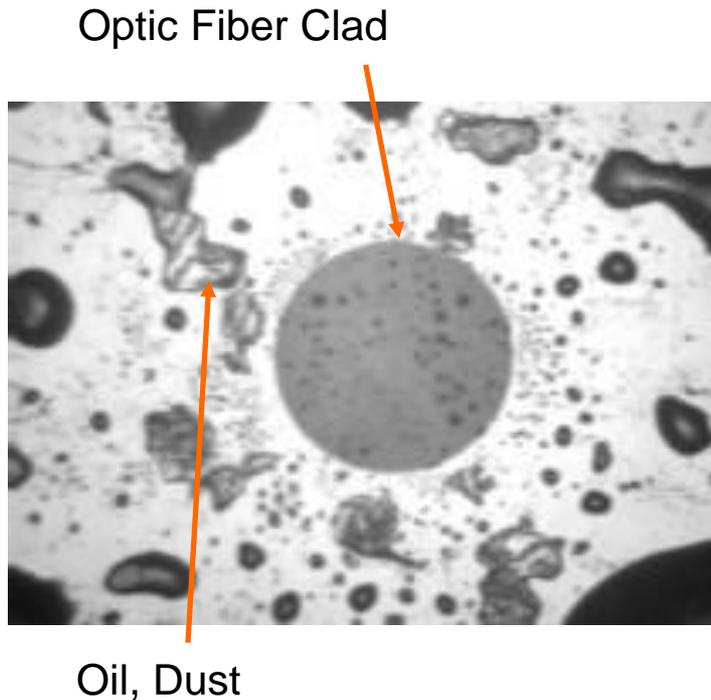


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When a Connector Endface is Dirty...

When a connector endface is dirty, it tends to produce a greater amount of reflection.

A good connection can be maintained by cleaning connector endfaces.

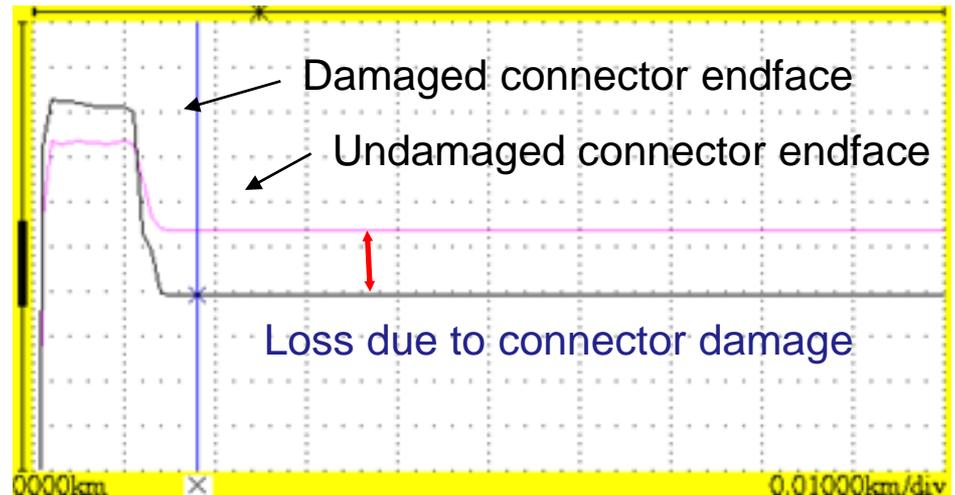
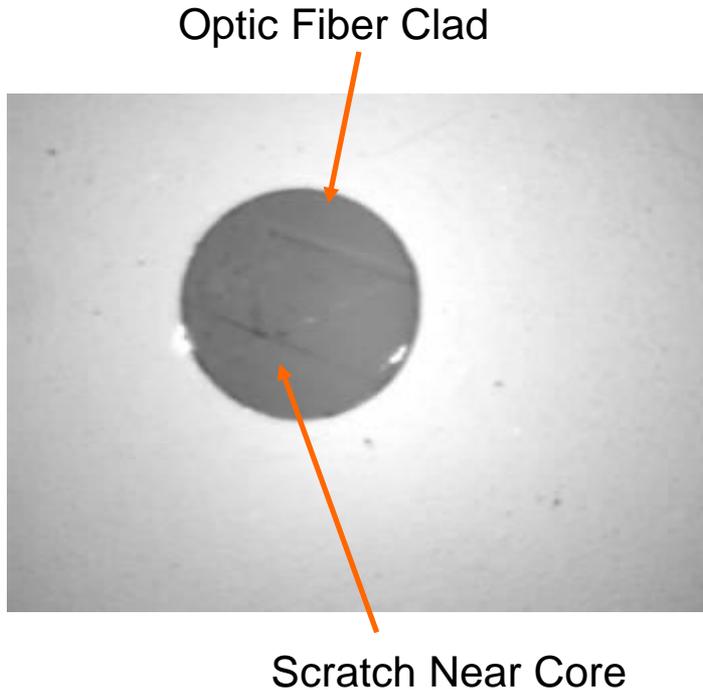


Verification through OTDR Output Port Connection

G0293A Product Introduction

When a Connector Endface is Damaged...

When a connector endface is damaged, in addition to having a greater amount of reflection, it also tends to exhibit greater splice loss. When the amount of reflection or loss caused by the damage is high, the connector port needs to be replaced.



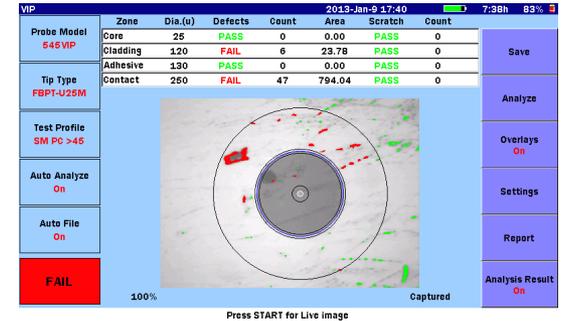
Verification through OTDR Output Port Connection

G0293A Product Introduction

●MT9083x2 Series ACCESS Master



+



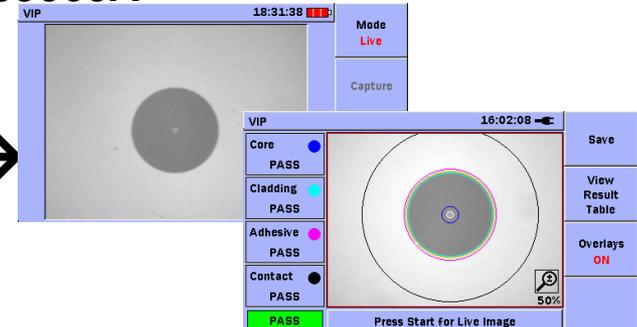
●MT9090A Series Network Master

μOTDR: MU909014/15

DCFL: MU909011, OCA: MU909020A, GigE: MU909060A



+



Include Pass/Fail analysis function (Software version 1.03 or later)

●CMA5000a Mainframe, Windows XP PC

**uOTDR include Pass/Fail analysis function (Software version 2.10 or later)*

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G0293A Video Inspection Probe

- (1) Standard Soft case
- (2) Video Inspection Probe
- (3) USB converter
- (4) Tips for measurement
- (5) Operation Manual
- (6) Software CD

FS-PT-USB-CASE Hard case(Optional)

- (7) Hard Case for VIP

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G0293A Accessories



Tips are connected to the end of the VIP based on the shape of connector (adapter) to be connected. This unit comes standard with 8 types of tips.



FBET-FC
For FC-PC Connector



FBET-SC
For SC-PC Connector



FBET-ST
For ST-PC Connector



FBET-SCA
For SC-APC Connector



FBET-U12
For MU/LC Connector



FBET-U25M
For 2.5mm (PC Universal)



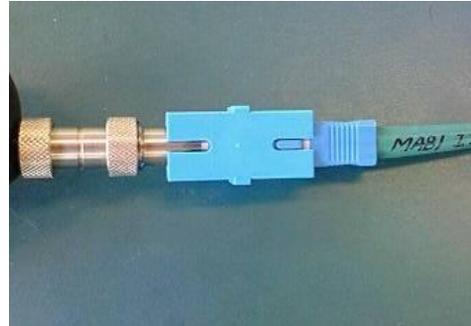
FBET-U25MA
For 2.5mm (APC Universal)



FBET-U12M
For 1.25mm (Universal)

G0293A Product Introduction

Examples of Tip Connection



●Tips for bulk type

As this figure shows, the ferrule endface of the connected fiber can be checked via this bulk type adapter.



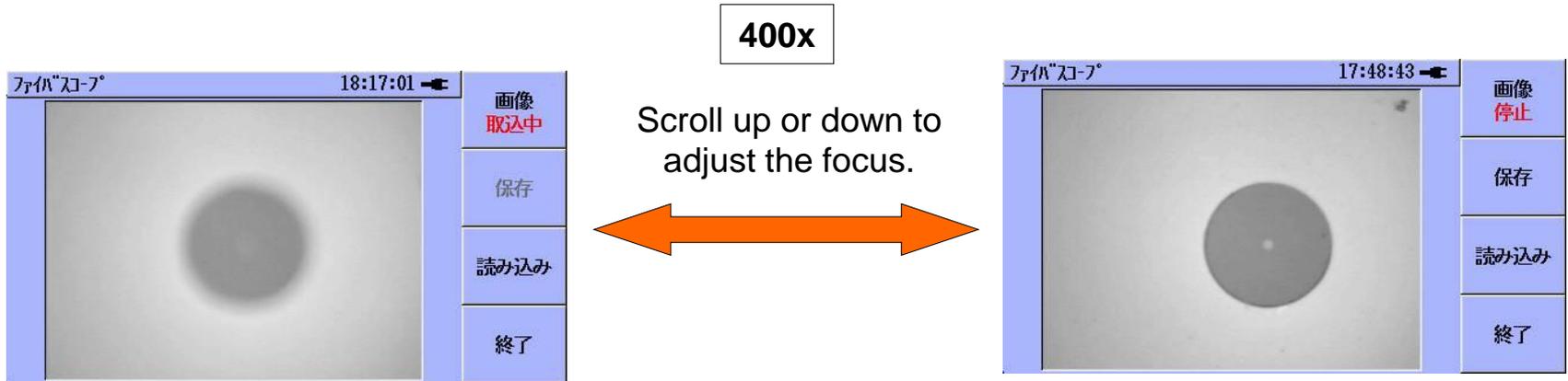
●Tips for universal type

As this figure shows, the universal type tip can be used to directly plug into the ferrule for test.

Connected to OTDR output port ferrule endface

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Basic Video Inspection Probe Operation



Fixed 400x focus

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MT9083x2 Series ACCESS Master Measurement Example



1. The VIP USB terminal is connected to the MT908x series instrument's USB port.

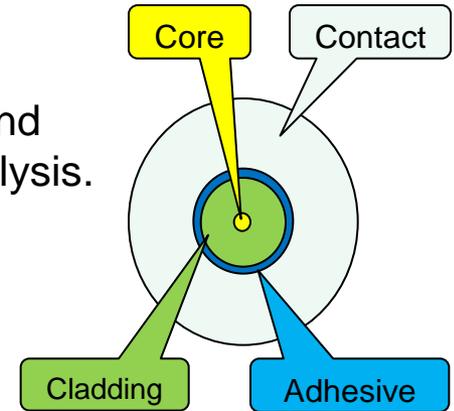
2. The power is turned on. "Video Inspection Probe" is selected from the top menu.

*Before starting, select the appropriate tip for the connector adapter and ferrule type to be connected to.

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Measurement Sequence

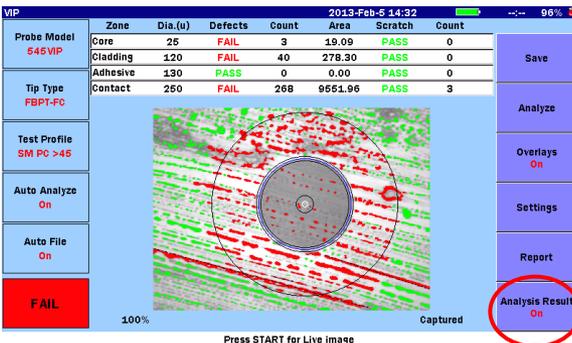
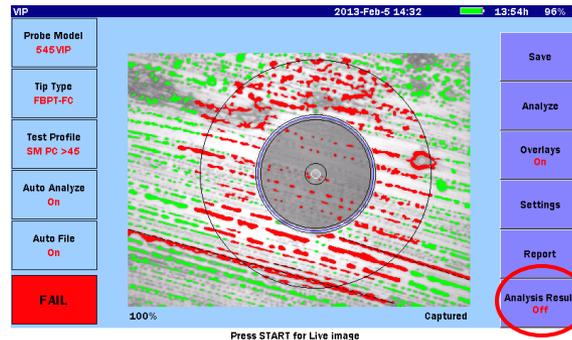
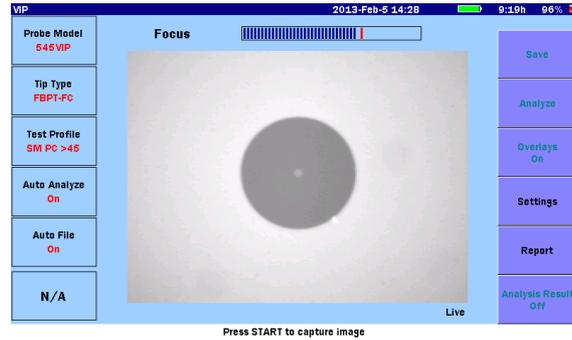
Adjust the focus in the Live screen, and press the Start  button to begin analysis.



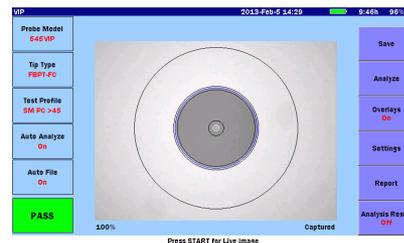
When analysis completes, the following information appears:

- Core
- Cladding
- Adhesive
- Contact

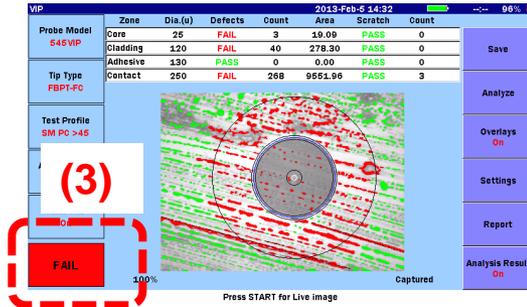
As well as a pass/fail determination for the total area for each.



Press f6 to toggle between Details (Table) and Image View.



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FAIL

From the Table View, you can identify “defects” or “scratches” on the end of the fiber.

Zone	Dia.(u)	Defects	Count	Area	Scratch	Count
Core	25	FAIL	3	19.09	PASS	0
Cladding	120	FAIL	40	278.30	PASS	0
Adhesive	130	PASS	0	0.00	PASS	0
Contact	250	FAIL	268	9551.96	PASS	3

(1)

(2)

PASS

- (1) Defects in each area.
- (2) Scratches in each area.
- (3) Overall determination for each area merging (1) and (2)

Zone	Dia.(u)	Defects	Count	Area	Scratch	Count
Core	25	PASS	0	0.00	PASS	0
Cladding	120	PASS	0	0.00	PASS	0
Adhesive	130	PASS	0	0.00	PASS	0
Contact	250	PASS	0	0.00	PASS	0

The automatic pass/fail determination is made in accordance with the IEC61300-3-35 standard.

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Saving the Measurement Results

You can manage the measurement results in either of the following ways.

Save to File

- Screen capture (PNG format)
- VIP data file (file with .vipi extension)

Load from File

- PNG file
- VIP data file (file with .vipi extension)

You can also create a PDF report on the system.

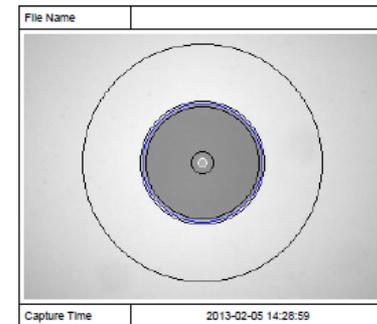
2013-02-05 14:31:30

VIP Test Result

Probe Model	545VIP	Tip Type	FBPT-FC
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VIP Test Information	
Test Profile	SM PC >45
Analysis Result	PASS

Analysis Details						
Zone Name	Diameter	Defects	Count	Area	Scratches	Count
Core	25	PASS	0	0.00	PASS	0
Cladding	120	PASS	0	0.00	PASS	0
Adhesive	130	PASS	0	0.00	PASS	0
Contact	250	PASS	0	0.00	PASS	0



Sample PDF Report

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Examples of Measurement Using the MT9090A Series μ OTDR (MU909014/15)



(1) The VIP USB terminal is connected to the MT9090A's USB port.

(2) The power is turned on. When unit has started up, the VIP screen will be displayed automatically.

*The screen will also be displayed automatically if the VIP USB terminal is connected after the MT9090A has been started.

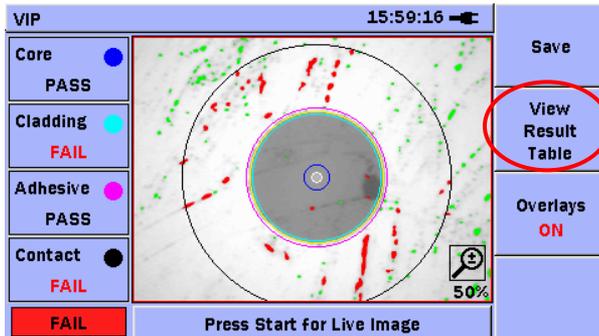
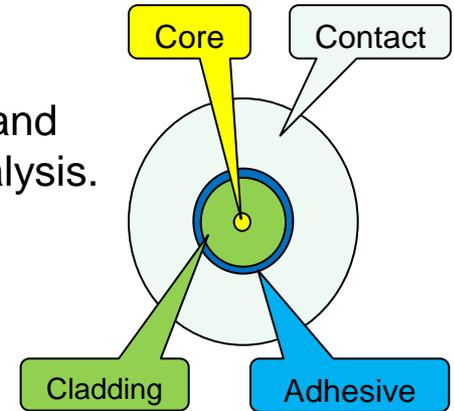
*Before starting, select the appropriate tip for the connector adapter and ferrule type to be connected to.

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Measurement Sequence

Adjust the focus in the Live screen, and press the Start  button to begin analysis.



When analysis completes, the following information appears:

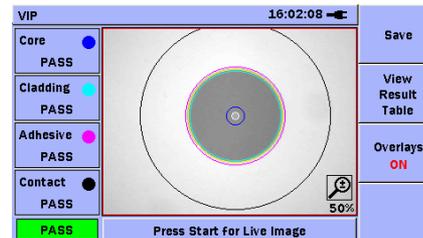
- Core
- Cladding
- Adhesive
- Contact

As well as a pass/fail determination for the total area for each.

Zone Name	Diameter (μ)	Result
1 Core	25	PASS
2 Cladding	120	FAIL
3 Adhesive	130	PASS
4 Contact	250	FAIL

Defects	Count	Area (μ²)	Scratches	Count
1 PASS	0	0.00	PASS	0
2 FAIL	5	29.81	PASS	0
3 PASS	0	0.00	PASS	0
4 FAIL	85	1,180.85	PASS	0

Press F2 to toggle between Details (Table) and Image View.



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VIP 15:59:27

	Zone Name	Diameter (μ)	Result
1	Core	25	PASS
2	Cladding	120	FAIL
3	Adhesive	130	PASS
4	Contact	250	FAIL

Save

(3) View Result Image

	Defects	Count	Area (μ^2)	Scratches	Count
1	PASS	0	0.00	PASS	0
2	FAIL	5	29.81	PASS	0
3	PASS	0	0.00	PASS	0
4	FAIL	85	1180.85	PASS	0

Overlays ON

FAIL (1) Press Start for Live Image (2)

From the Table View, you can identify “defects” or “scratches” on the end of the fiber.

- (1) Defects in each area.
- (2) Scratches in each area.
- (3) Overall determination for each area merging (1) and (2)

VIP 16:02:20

	Zone Name	Diameter (μ)	Result
1	Core	25	PASS
2	Cladding	120	PASS
3	Adhesive	130	PASS
4	Contact	250	PASS

Save

View Result Image

	Defects	Count	Area (μ^2)	Scratches	Count
1	PASS	0	0.00	PASS	0
2	PASS	0	0.00	PASS	0
3	PASS	0	0.00	PASS	0
4	PASS	0	0.00	PASS	0

Overlays ON

PASS Press Start for Live Image

The automatic pass/fail determination is made in accordance with the IEC61300-3-35 standard.

G0293A Product Introduction

Saving the Measurement Results

You can manage the measurement results in either of the following ways.

Save to File

- Screen capture (PNG format)
- VIP data file (file with .vipi extension)

Load from File

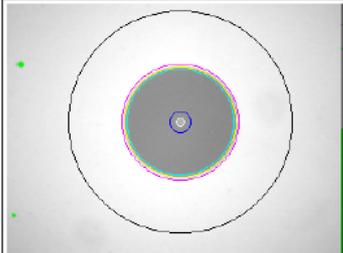
- PNG file
- VIP data file (file with .vipi extension)

You can also create a PDF report on the system.

Anritsu 2013-02-05 13:25:14

VIP Test Result

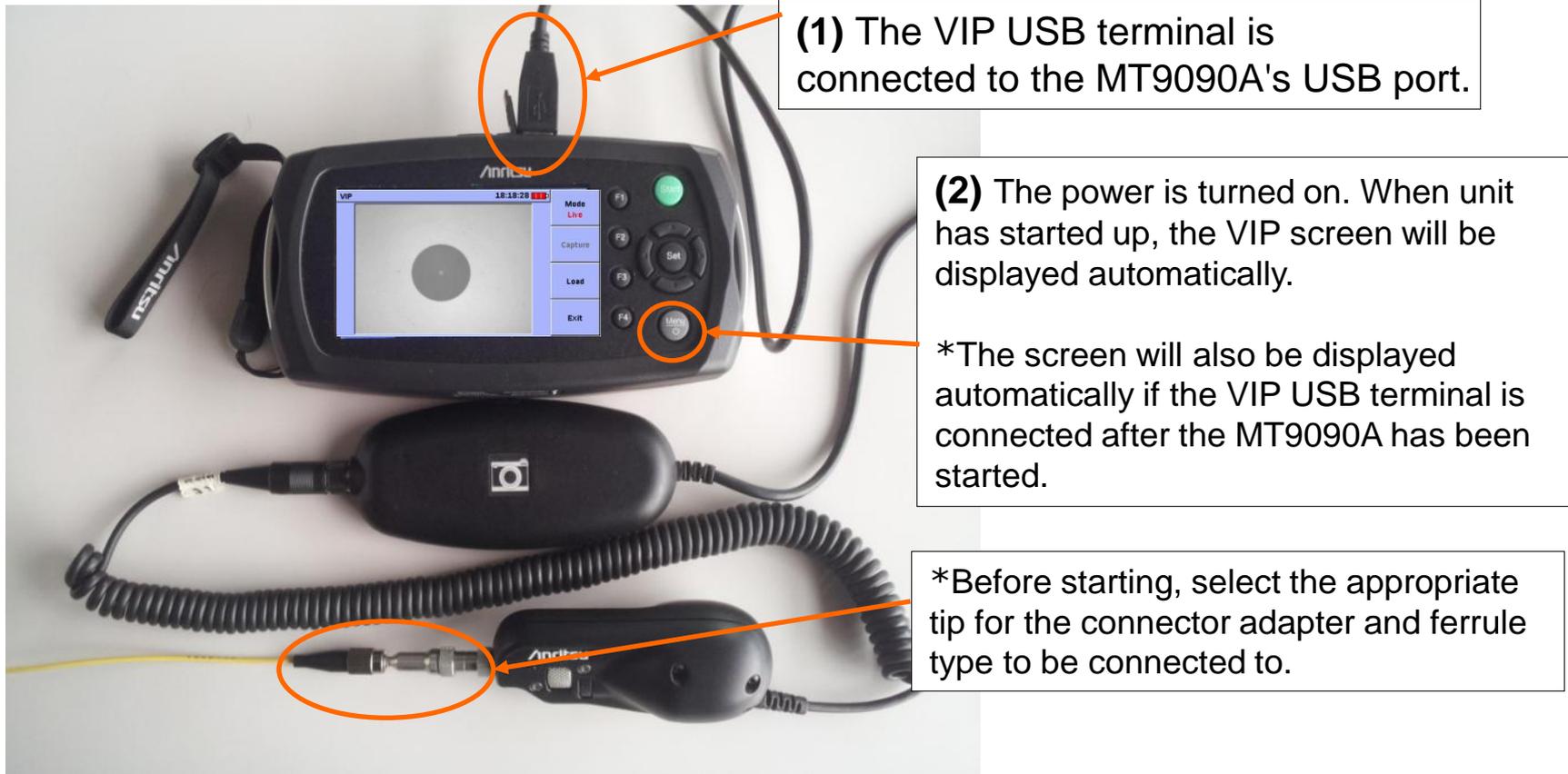
Probe	S45VIP	Tip	FBPT-FC			
Test Information						
Test Profile	SM PC -45					
Analysis Result	PASS					
Analysis Details						
Zone Name	Diameter (μ)	Defects	Count	Area (μ ²)	Scratches	Count
Core	25	PASS	0	0.00	PASS	0
Cladding	120	PASS	0	0.00	PASS	0
Adhesive	130	PASS	0	0.00	PASS	0
Contact	250	PASS	0	0.00	PASS	0

File Name	
	
Capture Time	2013-02-05 13:24:24

Sample PDF Report

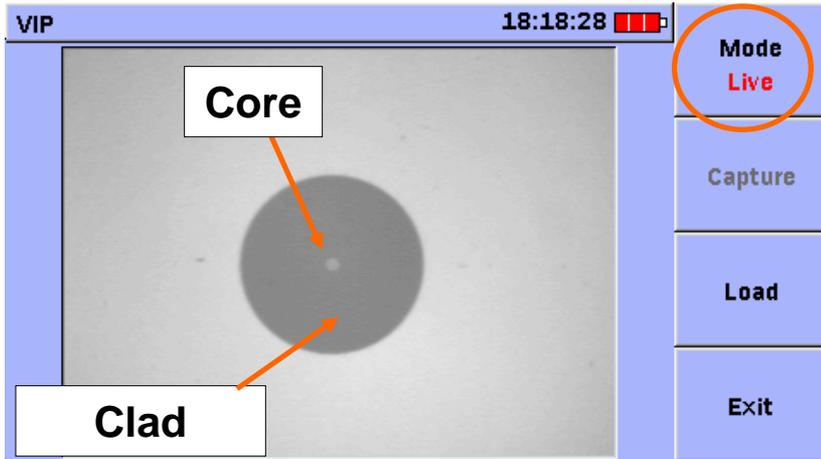
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Examples of Measurement Using the MT9090A Series (MU909011, MU909020, MU909060)

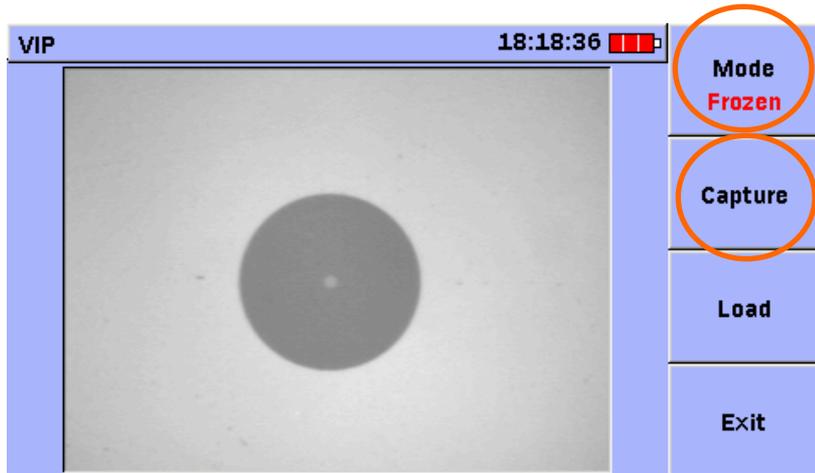


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Measurement Screen (MU909011, MU909020, MU909060)



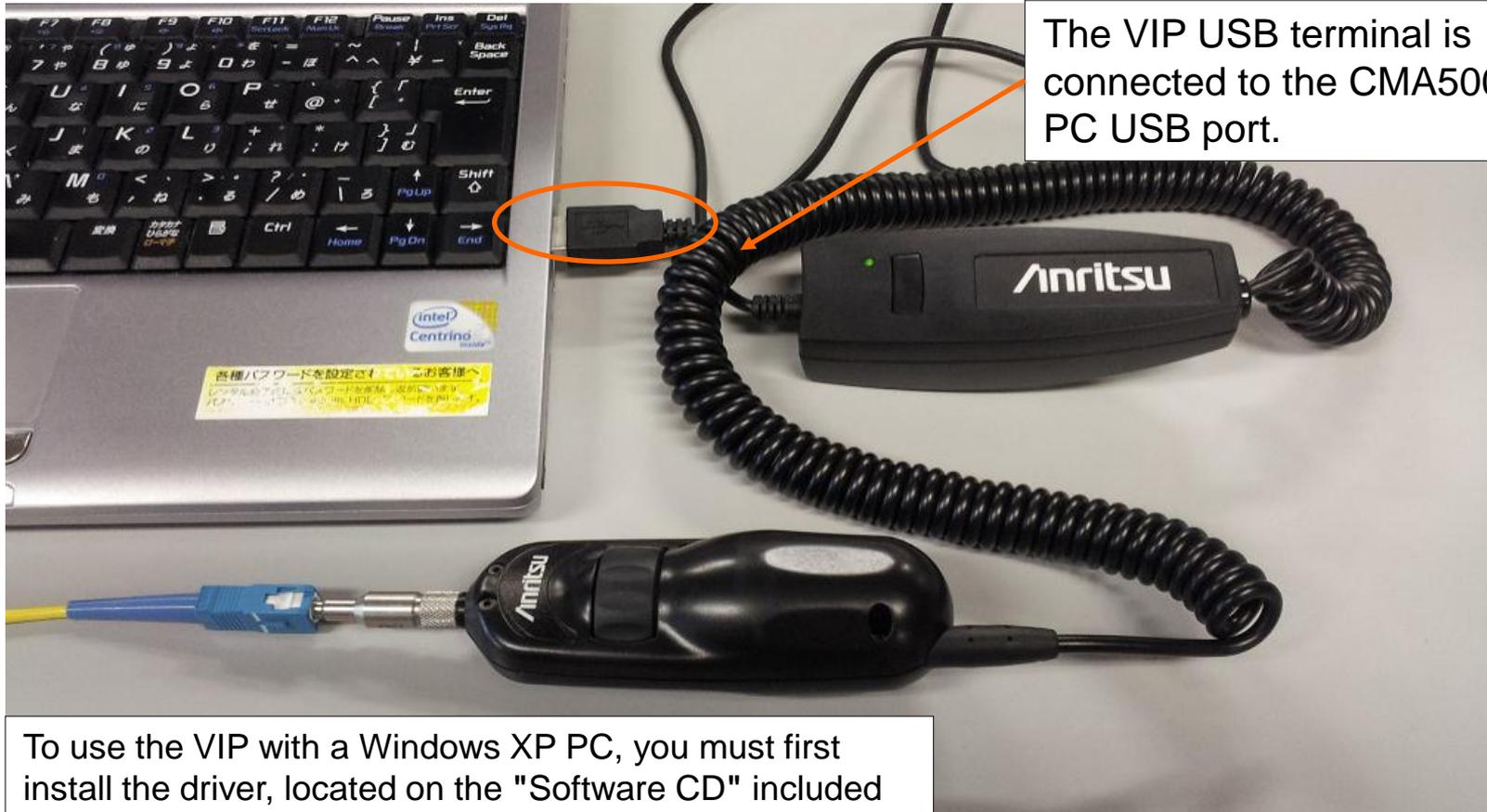
When "Live" is selected on-screen, the display screen will change in real time to reflect focus adjustments, etc. Use this display mode to check the status of the ferrule endface.



To save an image, press the F1 key on the MT9090A while the image you wish to save is displayed on-screen. The image display will change to "Frozen". Pressing the F2 key when the image is frozen will cause the MT9090A to save the image data to the internal memory (in png format).

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Examples of Measurement With the CMA5000a and a Windows XP PC

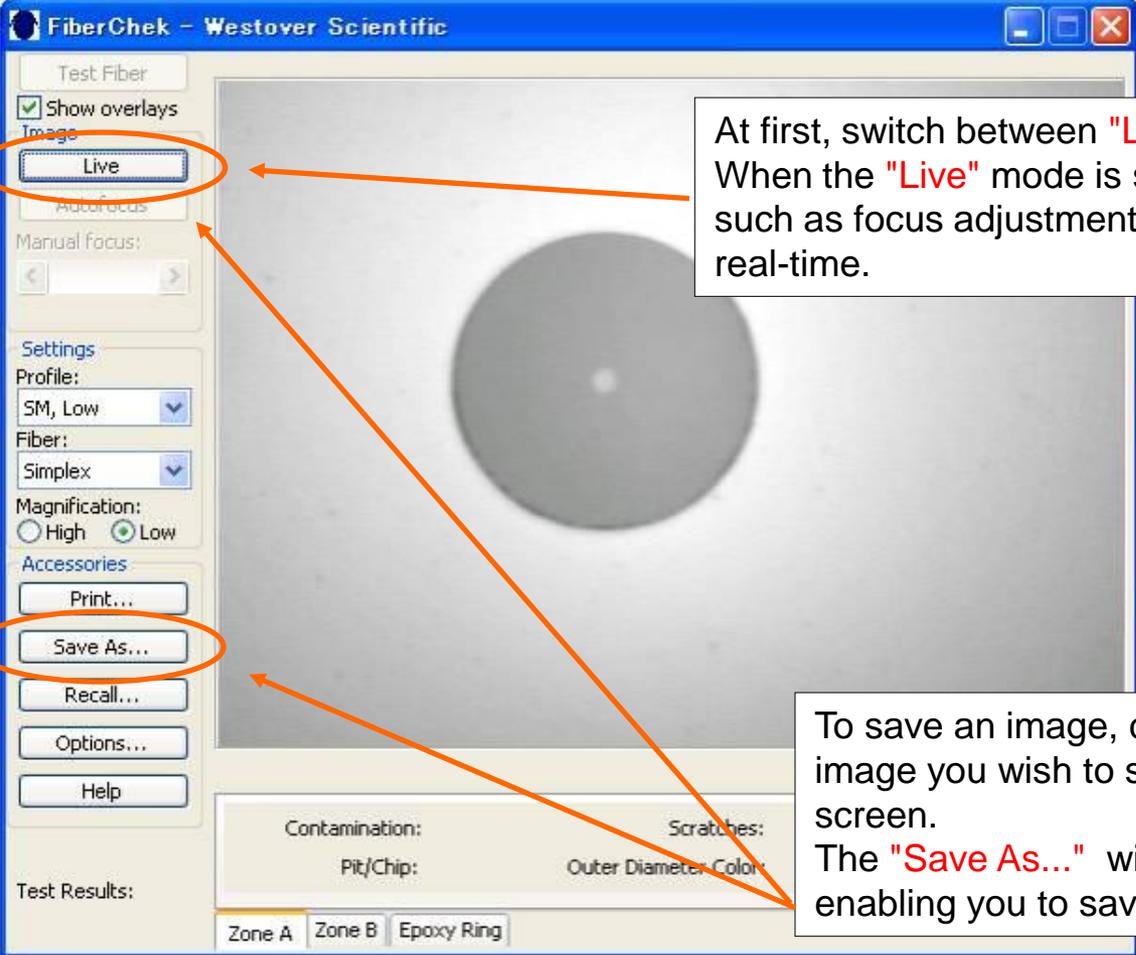


The VIP USB terminal is connected to the CMA5000a or PC USB port.

To use the VIP with a Windows XP PC, you must first install the driver, located on the "Software CD" included as a standard accessory with the fiber scope.

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Examples of Measurement With the CMA5000a and a Windows XP PC



The screenshot shows the FiberChek software interface. On the left, there is a control panel with several sections: 'Test Fiber' with a 'Show overlays' checkbox checked; 'Image' mode with 'Live' selected and circled in red; 'Manual focus' with a slider; 'Settings' with 'Profile' set to 'SM, Low', 'Fiber' set to 'Simplex', and 'Magnification' set to 'Low'; 'Accessories' with buttons for 'Print...', 'Save As...' (circled in red), 'Recall...', 'Options...', and 'Help'; and 'Test Results' at the bottom. The central area displays a grayscale image of a fiber. At the bottom, there are tabs for 'Zone A', 'Zone B', and 'Epoxy Ring', and fields for 'Contamination', 'Scratches', 'Pit/Chip', and 'Outer Diameter, Color'.

At first, switch between "Live" and "Freeze". When the "Live" mode is selected, changes such as focus adjustments will be reflected in real-time.

To save an image, click "Freeze" while the image you wish to save is displayed on-screen. The "Save As..." window will appear, enabling you to save the displayed image.

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Performing Pass/Fail Evaluation

The ferrule endface's cleanliness, etc. can be analyzed on-screen, and Pass/Fail judgment can be performed.

Clicking "Test Fiber" will cause analysis to be performed. Ferrule endface dirtiness (blue) and damage (yellow) levels which exceed their respective thresholds will be displayed.

Analysis can be performed for individual areas. Ex.)

- Core section (Epoxy Ring)
- Clad 10 μ m to 62.5 μ m area (Zone A)
- Clad 62.5 μ m to 125 μ m area (Zone B)

The overall evaluation will be displayed in terms of Pass or Fail.

Test Results: **FAIL** Zone A Zone B Epoxy Ring

Slide 23

G0293A Product Introduction

Ordering Information

Model No.	
G0293A	400x Video Inspection Probe
	- Standard accessories -
	Tips Bulk type (FC/PC, SC/PC, ST/PC, SC/APC, MU/LC) Universal 2.5mm PC, 1.25m APC, 1.25mm)
	Operation Manual
	Software CD
	Standard softcase
	- Accessories -
FS-PT-USB-CASE	Hard Case

G0293A Supported...

- MT908x ACCESS Master
- MT9090A Network Master
(MU909014/15: μ OTDR, MU909011:DCFL, MU909020:OCA, MU909060:GigE)
- Windows XP PC, CMA5000 / CMA5000a Multi Platform Tester

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