FIBERCHEK2™

Automated fiber end face inspection & analysis system

QUICK START GUIDE

ZP-PKG-0318
REV 2

JDSU

NOTICE

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PATENTS

RibbonDrive Tips: US Patent No. 6,751,017 / 6,879,439

CleanBlast: US Patent No. 7,232.262

TESTED EQUIPMENT

All pre-qualification tests were performed internally at JDSU, while all final tests were performed externally at an independent, accredited laboratory. This external testing guarantees the unerring objectivity and authoritative compliance of all test results. JDSU's Commerce and Government Entities (CAGE) code under the North Atlantic Treaty Organization (NATO) is 0L8C3.

FCC INFORMATION

Electronic test equipment is exempt from Part 15 compliance (FCC) in the United States.

EUROPEAN UNION

Electronic test equipment is subject to the EMC Directive in the European Union. The EN61326 standard prescribes both emission and immunity requirements for laboratory, measurement, and control equipment. This unit has been tested and found to comply with the limits for a Class A digital device.

INDEPENDENT LABORATORY TESTING

This unit has undergone extensive testing according to the European Union Directive and Standards.

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QUICK START

1

SOFTWARE INSTALLATION

IMPORTANT! *Install the software before attaching the microscope to PC.*

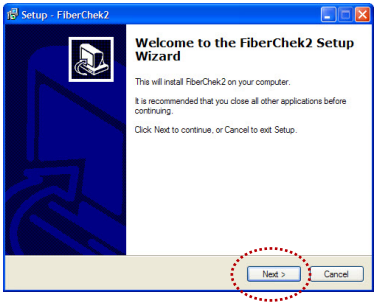
Minimum System Requirements

- PC/laptop with Pentium® III 1.0 Ghz CPU or higher
- Windows® 2000 (SP4), XP or Vista® Operating System
- 30 MB of hard drive space for application software
- One open USB 2.0 port
- 128 MB RAM

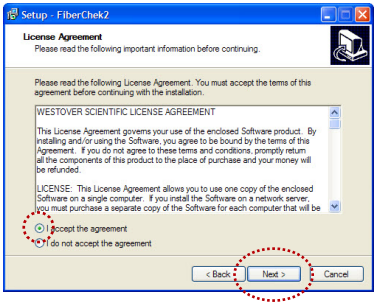
1. INSERT FIBERCHEK2™ CD

- Insert FiberChek2™ CD and wait for the automatic ***Welcome to the FiberChek2™ Setup Wizard*** menu to launch OR locate the ***setup*** file on the software CD and open.

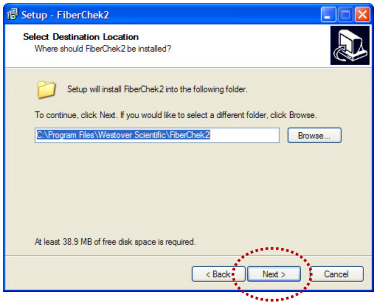
2. INSTALL FIBERCHEK2™ SOFTWARE



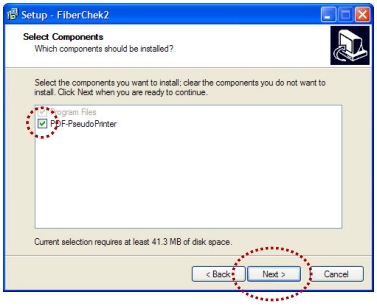
- At the ***Welcome to the FiberChek2 Setup Wizard*** menu click **Next >** to continue.



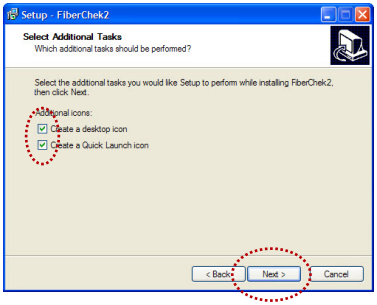
- At the ***License Agreement*** menu select **I accept the agreement** button, then click **Next >** to continue.



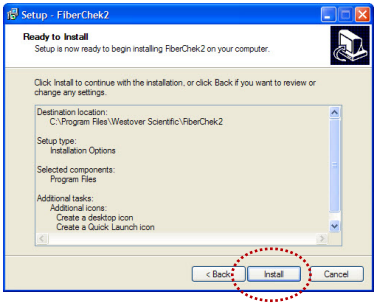
- At the ***Select Destination Location*** menu, accept the default location **(strongly recommended)** for the application files OR click **Browse** to select a user-defined location then click **Next >** to continue.



- At the ***Select Components*** menu, make sure the box next to **PDF-PseudoPrinter** is checked and click **Next >** to continue.

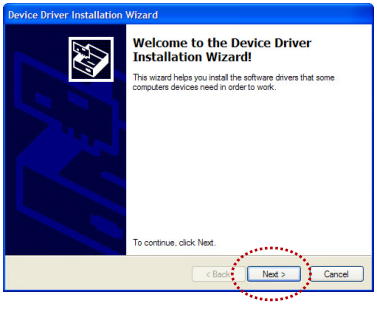


- At the ***Select Additional Tasks*** menu, select/check options for FiberChek2™ icon placement then click **Next >** to continue.

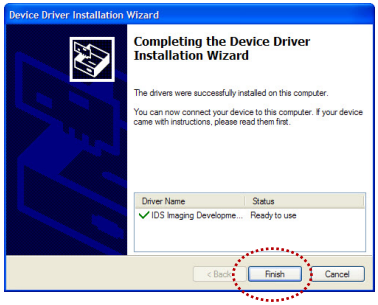


- At the ***Ready to Install*** menu, confirm settings then click **Install** to continue.

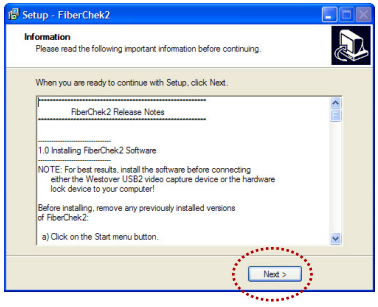
DRIVER INSTALLATION



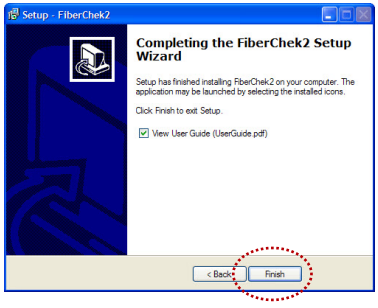
- At the ***Welcome to the Device Driver Installation Wizard*** menu, click **Next >** to continue.



- At the ***Completing the Device Driver Installation Wizard*** menu, click **Finish** and continue to hardware installation.



- At the ***Information*** menu, click **Next >** to continue.



- At the ***Completing the FiberChek2 Setup Wizard*** menu, click **Finish** to complete software/driver installation.

HARDWARE INSTALLATION

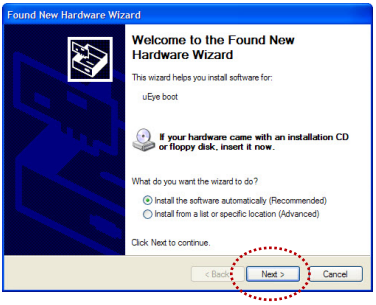
3. PLUG THE MICROSCOPE INTO THE COMPUTER

NOTE: *If you are installing this software (FiberChek2 REV 1.07) for a previous version of the FVD or P5000 model (REV B), go to page 19 for driver installation procedures.*

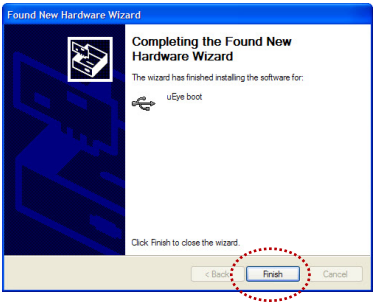
- Wait for the automatic ***Found New Hardware Wizard*** menu to launch.

uEye boot DRIVER INSTALLATION

4. INSTALL "uEye boot" DRIVER



- At the ***Welcome to the Found New Hardware Wizard*** menu, make sure the circle next to **Install the software automatically (Recommended)** is checked, then click **Next >** to continue.

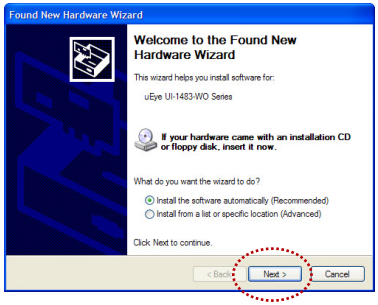


- At the ***Completing the Found New Hardware Wizard*** menu, click **Finish** to complete **"uEye boot"** driver install.

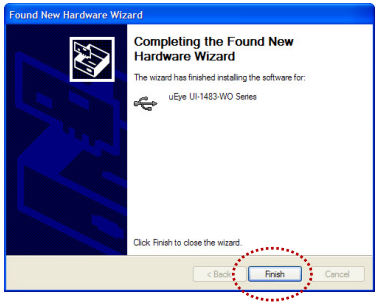
FOR NON-WINDOWS® VISTA® COMPUTERS ONLY

uEye UI-1483 WO Series INSTALLATION

4a. INSTALL "uEye UI-1483-WO Series" DRIVER



- At the ***Welcome to the Found New Hardware Wizard*** menu, make sure the circle next to **Install the software automatically (Recommended)** is checked, then click **Next >** to continue.



- At the ***Completing the Found New Hardware Wizard*** menu, click **Finish** to complete "**uEye UI-1483-WO Series"** driver install.

INSPECT FIBER

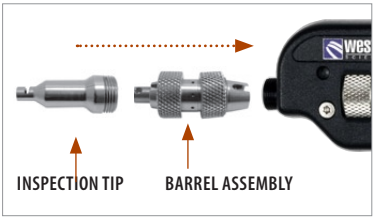
5. OPEN/LAUNCH FIBERCHEK2™

- Locate FiberChek2™ application and open.

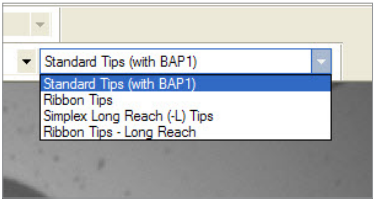
FOR P5000 PROBE ONLY

5a. FOR P5000 PROBE MICROSCOPE ONLY

INSTALL INSPECTION TIP & SELECT CALIBRATION



- Select the appropriate inspection tip that corresponds to the connector type and side being inspected and attach to probe.



- From the pre-configured **Calibration** settings drop-down list, select the appropriate inspection tip type being used *(see page 17 for **Calibration** descriptions).*

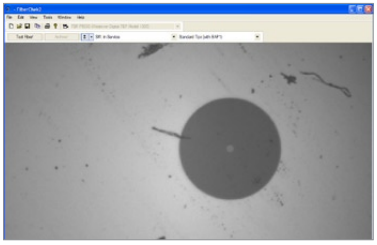
6. ATTACH FIBER TO THE MICROSCOPE

P5000 PROBE MICROSCOPE

- Insert the probe into the bulkhead (for probe) or attach the patch cord to the microscope.

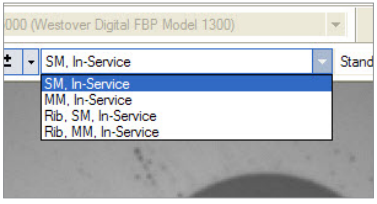
FVD BENCH-TOP MICROSCOPE

7. FOCUS THE FIBER END FACE IMAGE ON SCREEN



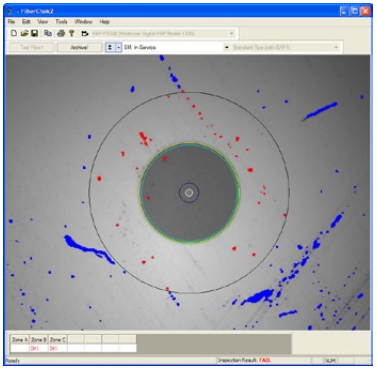
- Adjust the focus of the fiber end face image on the computer screen by turning the **Focus Control** on the microscope.

8. SELECT PROFILE SETTING



- From the pre-configured **Profile** settings drop-down list, select the appropriate connector being inspected *(see page 18 for available **Profiles**)*.

9. INSPECT & ANALYZE



- Press the **QuickCapture™** button on the probe or bench-top microscope ***OR*** click the **Test Fiber!** button from the FiberChek2™ toolbar to run analysis.

P5000 DIGITAL PROBE MICROSCOPE

2

INTRODUCTION

The **WESTOVER P5000 Digital Probe Microscope** is a portable handheld microscope used to view and inspect both the bulkhead (female) and patch cord (male) sides of fiber connectors as well as other optical devices, such as transceivers. The probe is specially designed to fit and operate comfortably and easily in-hand, allowing the user to inspect hard-to-reach connectors that are installed on the backside of patch panels or inside hardware devices. The P5000 requires an FBPT inspection tip and is connected to the PC/laptop with a USB 2.0 connector.

CONTROLS

FEATURES

- Inspects and analyzes both the bulkhead (female) and patch cord (male) sides of fiber interconnects
- Eliminates human subjectivity
- Instant automated PASS or FAIL result
- Comprehensive selection of precision FBPT inspection tips and adapters that enable inspection of every connector and application
- 5 MP high-resolution camera and coaxial illumination for crisp, clear view of fiber end face

Laptop not included.

P5000 PROBE SPECIFICATIONS

Dimensions	140 x 46 x 44 mm (5.5 x 1.8 x 1.7 in)
Weight	110 g (3.88 oz)
LOW Mag Field-of-View (FOV)	Horizontal: 714 µm Vertical: 535 µm Diagonal: 892 µm
HIGH Mag Field-of-View (FOV)	Horizontal: 446 µm Vertical: 335 µm Diagonal: 558 µm
Connector	USB 2.0 (with latch lock)
Cord Length	180 cm (6 ft)
Camera Sensor	1280 x 1024 black & white, 1.27 cm CMOS
Live Image	800 x 600; 15 fps
Particle Size Detection	< 1 µm
Light Source	Blue LED, 100,000+ hour life
Lighting Technique	Coaxial
Power Source	From PC/Laptop USB port
Certification	CE
Warranty	1 yr

FVD BENCH-TOP MICROSCOPE

3

INTRODUCTION

The **FVD Series Digital Fiber Microscope** has been specifically designed to inspect the polished surface or cleaved ends of fiber optic cable. This high-resolution bench-top inspection microscope is ideally suited for post-polish inspection of high-quality end faces and can repeatably detect scratches that human technicians would often miss, delivering the sensitivity the industry has long sought. The FVD requires a connector adapter and PC (see system requirements, page 2). The PC powers the unit through the USB 2.0 cable.

CONTROLS

FEATURES

- Inspects and analyzes patch cord (male) sides of fiber interconnects
- Eliminates human subjectivity
- Instant automated PASS or FAIL result
- Comprehensive selection of precision FMA adapters that enable inspection of every connector
- 5 MP high-resolution camera and coaxial illumination for crisp, clear view of fiber end face

PC / display not included.

FVD SPECIFICATIONS

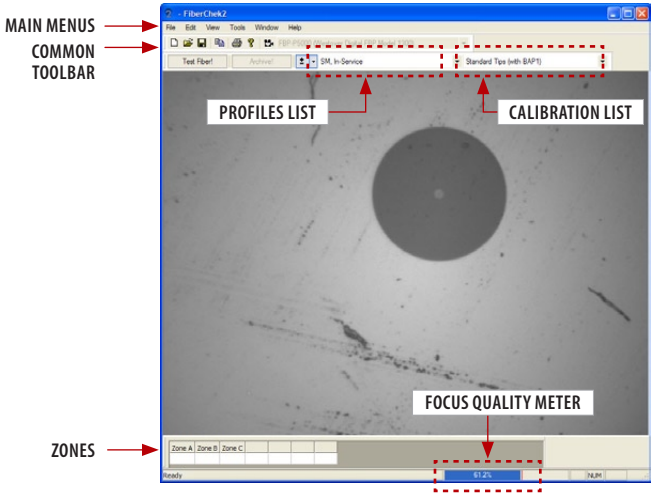
Dimensions	17.8 x 7.9 x 11.7 cm (7.0 x 3.1 x 4.6 in)
Weight	1.36 kg (3.0 lbs)
LOW Mag Field-of-View (FOV)	Horizontal: 298 µm Vertical: 223 µm Diagonal: 372 µm
HIGH Mag Field-of-View (FOV)	Horizontal: 186 µm Vertical: 140 µm Diagonal: 233 µm
Connector	USB 2.0
Cord Length	180 cm (6 ft)
Camera Sensor	1280 x 1024 black & white, 1.27 cm CMOS
Live Image	800 x 600; 15 fps
Particle Size Detection	< 0.5 µm
Light Source	Blue LED, 100,000+ hour life
Lighting Technique	Coaxial
Power Source	From PC/Laptop USB port
Certification	CE
Warranty	1 yr

FIBERCHEK2

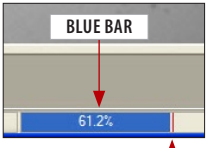
4

INTRODUCTION

FiberChek2™ is an advanced application that determines the acceptability of optical fiber end faces through automated inspection and analysis. It identifies and characterizes defects and contamination, and determines their location relative to the fiber core. It then provides a PASS or FAIL result according to the pre-configured failure criteria.



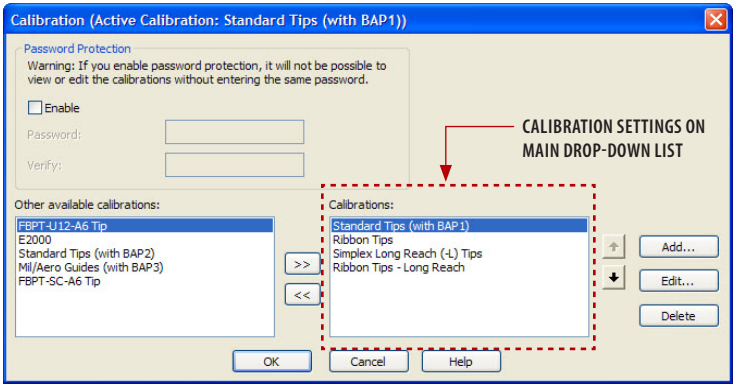
FOCUS QUALITY METER



The **Focus Quality Meter** is a visual gauge that aids the users in finding the optimal focus point. Optimal focus level is reached when the blue bar is closest to the red line. ***NOTE:*** *The percentage number/value is relative.*

FOR P5000 PROBE ONLY

PRE-CONFIGURED CALIBRATION SETTINGS



- **STANDARD TIPS (WITH BAP1)**

  Select when using **standard tips with FBPP-BAP1** barrel assembly. *Tips that use this setting include FBPT-SC, FBPT-LC, FBPT-ST, FBPT-FC, FBPT-SC-APC & FBPT-FC-APC.*

- **STANDARD TIPS (WITH BAP2)**

  Select when using **standard tips with the FBPP-BAP2** barrel assembly for longer reach inspection. ***Note:*** *The FBPP-BAP2 accepts the same tips as the FBPP-BAP1.*

- **MIL/AERO TIPS & GUIDES (WITH BAP3)**

  Select when using **guides designated for inspecting Military & Aerospace connectors** with the narrow barrel assembly *(FBPP-BAP3).*

- **LONG REACH (-L) TIPS**

  Select when using **long reach inspection tips.** ***Note:*** *Long Reach inspection tips are noted with the suffix "-L" on the part number (ex: FBPT-SC-L, FBPT-LC-L, etc.).*

- **RIBBON TIPS**

  Select when using **tips designated for inspecting ribbon connectors.** ***Note:*** *Ribbon connectors contain an array of multiple fibers in a single connector (ex: FBPT-MTP).*

- **E2000 TIPS**

  Select when using **long reach E2000 inspection tips** *(ex: FBPT-E2000).*

- **SC-A6 TIP (60 DEGREE ANGLE)**

  Select when using **SC inspection tips with a 60 degree angle.** ***Note:*** *Angled inspection tips are typically noted with the suffix "-A6" on the part number (ex: FBPT-SC-A6, FBPT-SCA-A6).*

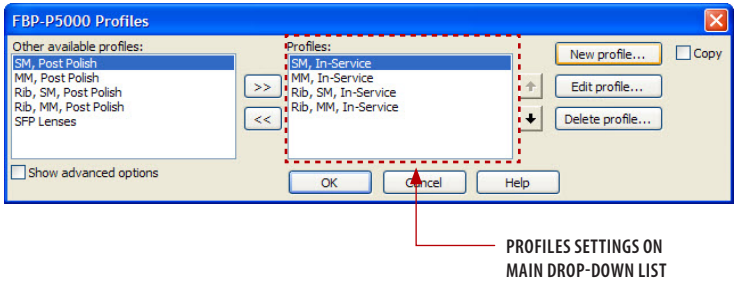
PROFILES

PROFILES contain the analysis parameters by which PASS/FAIL criteria are determined within FiberChek2™.

A set of pre-configured **PROFILES** are included with FiberChek2™. These settings have been carefully engineered and optimized to meet industry standards.

NOTE: *JDSU strongly recommends using the pre-configured Profiles.*

PROFILES MENU



PRE-CONFIGURED PROFILES SETTINGS

- **SM, Post Polish**
- **SM, In-Service**
- **MM, Post Polish**
- **MM, In-Service**
- **Rib, SM, Post Polish**
- **Rib, SM, In-Service**
- **Rib, MM, Post Polish**
- **Rib, MM, In-Service**
- **SFP Lenses**

ABBREVIATIONS

SM	Single-mode
MM	Multimode
Rib	Ribbon
SFP	Small Form-factor Pluggable (Transceivers)

NOTE: **Post Polish** *Profiles are configured and designated for* ***FVD microscopes.***

APPENDIX DRIVER INSTALLATION FOR REV B MODELS

VERIFYING REV B MODEL

USB Driver B

If the label reads **"USB Driver B,"** on the bottom of the FVD microscope or at the end of the P5000 probe USB cord, the then your microscope is a previous REV B model. Follow the driver installation procedures below.

"uEye UI-1543-WO Series" DRIVER INSTALLATION FOR PREVIOUS REV B MODELS

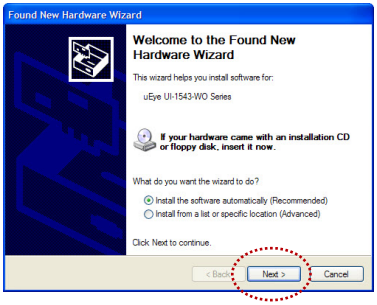
1. INSTALL SOFTWARE

- See software installation procedures, STEPS 1–2 on pages 4–7.

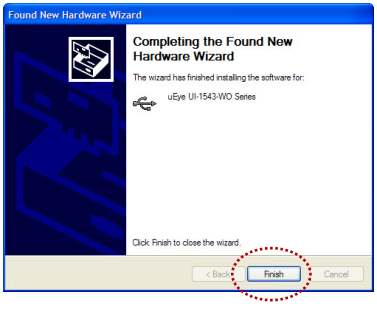
2. PLUG IN THE MICROSCOPE TO THE COMPUTER

- Wait for the automatic ***Found New Hardware Wizard*** menu to launch.

3. INSTALL "uEye UI-1543-WO Series" DRIVER



- At the ***Welcome to the Found New Hardware Wizard*** menu, check the circle next to **Install the software automatically (Recommended)** then click **Next >** to continue.



- At the ***Completing the Found New Hardware Wizard*** menu, click **Finish** to complete **"uEye UI-1543-WO Series"** driver install.

CUSTOMER SUPPORT

Please have the following information available:

FOR PRODUCT PROBLEMS

- Catalog Number and Serial Number *(if applicable)* of the product(s)
- Description of problem

FOR SOFTWARE PROBLEMS

- Type of computer you are using
- Operating System you are using
- FiberChek2™ software version *(click About FiberChek2™ from Help menu)*

TOLL FREE (US & Canada)

▶ Customer & Technical Service **800-304-3202**

Local & International

▶ Customer Service **425-398-1298**

▶ Fax **425-398-0717**

US Customer Service business hours are 7:00 a.m. – 5:00 p.m. Pacific Standard Time (PST).

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REV 2