

QUICK CARD

Fiber Inspection with the FiberChekPRO Software

This Quick Card outlines how to use the P5000i Fiber Inspection Microscope to inspect common single mode and multimode fiber end faces.

EQUIPMENT REQUIREMENTS

- ▶ Personal Computer (PC) or Laptop with Windows 10
- ▶ FiberChekPRO software with 2.4 version or greater (download at <http://fcpro.updatemyunit.net/>)
- ▶ P5000i Fiber Microscope
- ▶ Bulkhead and Patch Cord Inspection Tips matching the fiber under test
- ▶ Fiber optic cleaning tools



Figure 1: Equipment Requirements

ATTACH INSPECTION TIP

Attached appropriate Inspection Tip to the front of the P5000i by threading the collar of the tip onto the probe:


- ▶ Standard Patch cord tips and Bulkhead tips connect to the **Barrel Assembly** (FBPT-BAP1) by loosening and tightening the Retaining Nut on the Barrel Assembly.
- ▶ Ribbon tips and the Corning OptiTap Bulkhead tip (FBPT-COD-L) **connect directly** to the probe.
- ▶ Consult the VIAMI [Fiber Inspection Tips and Adapters Selection Guide](#) for more information.



Figure 2: P5000i, Barrel Assembly and Tips

QUICK CARD

SET UP THE P5000i

1. Insert the P5000i **USB Connector** into a **USB Port** on the PC or Laptop Computer.
2. Press the FiberChek PRO icon  from the Windows Start menu on your PC or laptop to launch FiberChekPRO.
3. Using the drop-down menus at the top of the screen, select the **OPTICAL SETTING** and **PROFILE** per the table below or per VIAVI's online configuration tool: [Fiber Inspection Tips for Handheld Probe Microscopes](#).

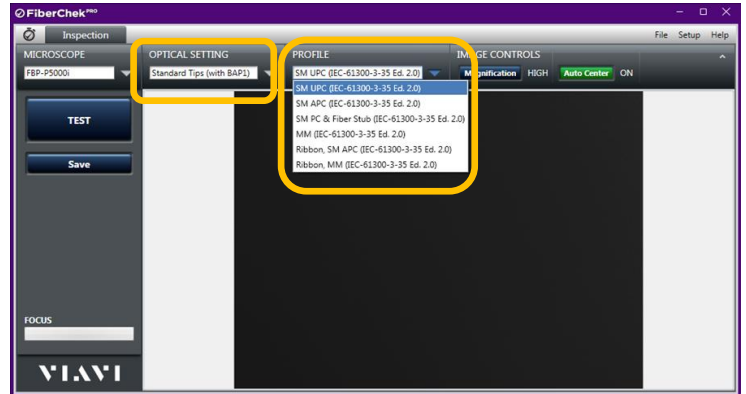












Figure 3: Optical Settings and Profiles

Connection Type		Tip	Profile Selection	Optical Setting
LC-UPC	Bulkhead		SM UPC (IEC-61300-3-35 Ed. 2.0) MM (IEC-61300-3-35 Ed. 2.0)	Standard Tips (with BAP1)
	Patch Cord		SM UPC (IEC-61300-3-35 Ed. 2.0) MM (IEC-61300-3-35 Ed. 2.0)	Standard Tips (with BAP1)
SC-UPC	Bulkhead		SM UPC (IEC-61300-3-35 Ed. 2.0) MM (IEC-61300-3-35 Ed. 2.0)	Standard Tips (with BAP1)
	Patch Cord		SM UPC (IEC-61300-3-35 Ed. 2.0) MM (IEC-61300-3-35 Ed. 2.0)	Standard Tips (with BAP1)
SC-APC	Bulkhead		SM APC (IEC-61300-3-35 Ed. 2.0)	Standard Tips (with BAP1)
	Patch Cord		SM APC (IEC-61300-3-35 Ed. 2.0)	Standard Tips (with BAP1)
Corning OptiTap	Bulkhead		SM APC (IEC-61300-3-35 Ed. 2.0)	FBPT-COD-L
	Patch Cord		SM APC (IEC-61300-3-35 Ed. 2.0)	Standard Tips (with BAP1)
Corning OptiTip			Ribbon, SM APC (IEC-61300-3-35 Ed. 2.0)	Ribbon Tips
	Patch Cord		Ribbon, SM APC (IEC-61300-3-35 Ed. 2.0)	Ribbon Tips

- If the Optical Setting is not shown in the drop-down menu:
1. Click **Setup** in the menu bar at the top of the screen.
 2. Select **FBP-P5000i...**
 3. Select **Optical Settings**.
 4. Select the Optical setting in the **Available** list.
 5. Click on the **Copy →** button.
 6. Click on the **OK** button.

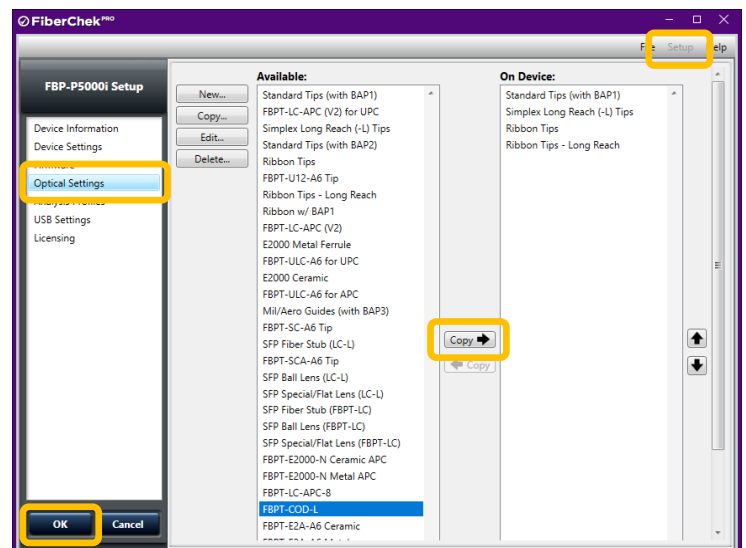


Figure 4: Copy Optical Settings

QUICK CARD

INSPECT THE BULKHEAD

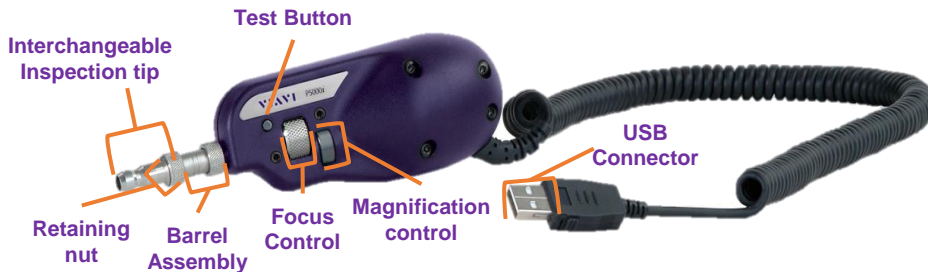


Figure 5: P5000i



Figure 6: LC Bulkhead



Figure 7: SC APC Bulkhead



Figure 8: OptiTap Bulkhead



Figure 9: OptiTip Bulkhead

1. Set up the P5000i as described on page 2.
2. Insert the **Bulkhead inspection** tip into the Bulkhead.
 - ▶ For SC-APC Bulkheads, align the keys on the inspection tip and the bulkhead connector.
 - ▶ For OptiTap Bulkheads, align the arc and flat pin in the inspection tip to the matching insertions inside the OptiTap receptacle adapter.
 - ▶ For OptiTip Patch Cord Inspection, slide the patch cord adapter onto the main tip assembly. Rotate wheel to view and test each fiber.
3. Adjust the **Focus Control** wheel of the P5000i microscope to focus the optical fiber. The top vertical bar on the screen indicates the level of focus adjustment. The higher the level, the better the focus. The screen will display a line in the focus bar where the optimal focus lies for that image. Focus the image until the bar is as close to the line as possible.
4. There are 2 ways to run the inspection test:
 - ▶ Press the **Test** button on the P5000i.
 - ▶ Tap the **Test** button in FiberChekPRO.
5. A green checkmark indicates a **PASS** result. A red **X** indicates a **FAIL** result.
6. Tap the **Live** soft key on the FiberChekPRO Software to return to the Live fiber view.
7. If the test failed, clean the fiber end-face and re-run the inspection test. Repeat until it passes.

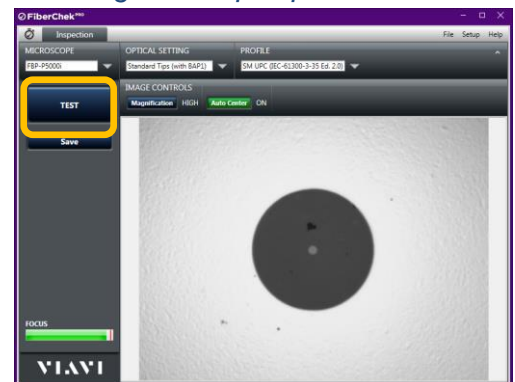


Figure 10: Live Inspection

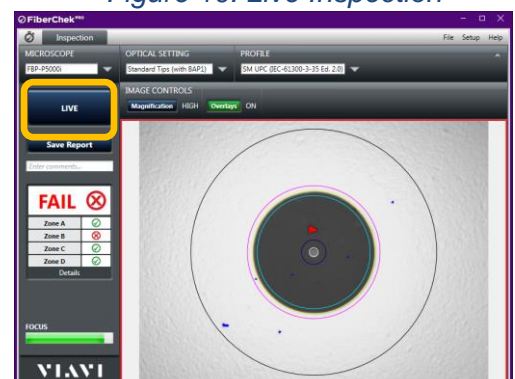


Figure 11: Pass/Fail Analysis 3

QUICK CARD

INSPECT THE PATCH CORD

1. Insert the Patch Cord into the Inspection tip:
 - For **SC-APC Patch Cord** inspection through an SC-SC Optical Coupler, insert the Patch Cord into the SC APC optical coupler. The Patch Cord, coupler, and tip are all keyed and the keys must be aligned.
 - For **OptiTap** and **SC-APC Patch Cord** Inspection without an Optical Coupler, insert the Patch Cord into the 2.5mm APC Patch Cord inspection tip. Rotate fiber and align the connector key to the notch on inspection tip for proper alignment.
 - For **OptiTip Patch Cord** Inspection, slide the bulkhead adapter onto the main tip assembly. Rotate wheel to view and test each fiber.



Figure 12: SC APC Patch Cord and Coupler




Figure 13: SC APC Patch Cord



Figure 14: OptiTap Patch Cord



Figure 15: OptiTip Patch Cord

2. Set up the P5000i as described on page 2.
3. Press the **Back** soft key  to return to the inspection screen.
4. Adjust the **Focus Control** wheel of the P5000i microscope to focus the optical fiber.
5. There are 2 ways to run the inspection test:
 - ▶ Press the **Test** button on the P5000i.
 - ▶ Tap the **Test** button in FiberChekPRO.
6. A green checkmark indicates a **PASS** result. A red **X** indicates a **FAIL** result.
7. Tap the **Live** soft key on the FiberChekPRO Software to return to the Live fiber view.
8. If the test failed, clean the fiber end-face and re-run the inspection test. Repeat until it passes.

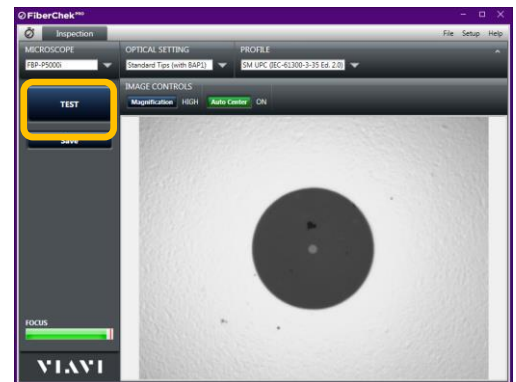


Figure 16: Live Inspection

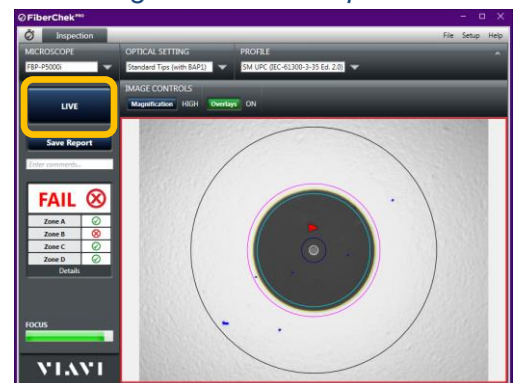


Figure 17: Pass/Fail Analysis

