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1. Introduction

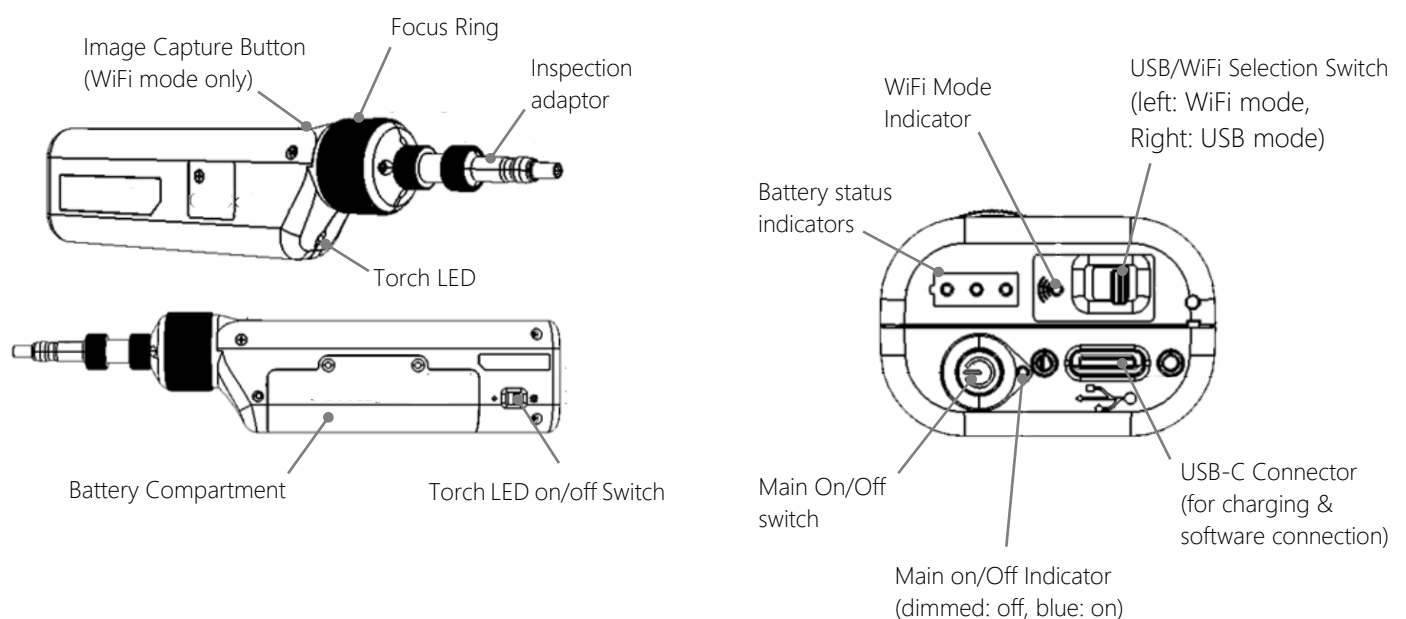
The KI6680 Mini Fiber Inspection Probe is a handy tool to check fiber optic connector end face quality. The end face image can be viewed and stored on Windows, Android or iOS devices via USB or WiFi connection. A combination of versatile and rugged design, easy operation, quality optics and durable construction ensures that this equipment will enhance the performance of installation and maintenance staff. It is suitable for single mode multimode fiber, with many connector options including MPO.

2. Instrument Overview

2.1. Features:

- Captive dust/protective cap
- Long operation from built-in rechargeable battery with charging via USB-C cable
- Quick-change adaptors for many connector styles
- Good image quality with easy focus
- Economical
- Image can be centred and expanded
- On-probe image capture button
- LED torch for work in low light conditions
- Handy storage case for inspection adaptors
- Simplex and duplex connectors

2.2. Layout:



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2.3. Specification and Standard Accessories:

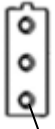
Parameters	Value	
Magnification	200x / 400x	
Field of View	512 x 384 um	
Focus method	Manual	
Communication interface	WiFi802.11 / USB2.0	
Software compatible (KI6680 Img Viewer)	WIFI	Android 4.2 and above, iOS 9.3 & above
	USB	PC Win7 and above
Power	Built-in Lithium battery rechargeable via USB, 2.5hrs charging time (from 0 charge)	
Operating/storage temp	-10 to +50 °C / -20 to + 50 °C	
Relative humidity	95%	
Weight	188 g including battery	
Size	195(L) x 40(W) x 25(H) mm	

Description	Quantity
Inspection adaptors: 1.25mm Male, 2.5mm Male, FC Female, SC Female, LC Female	1 each
Wrist strap with captive protective cap	1
USB charger with Interchangeable International Plug Style Adaptors	1 set
USB Cable (type A - type C)	1
Storage case for inspection adaptors	1
Operation manual	1
QA certificate	1

3. Instrument Basic Operation

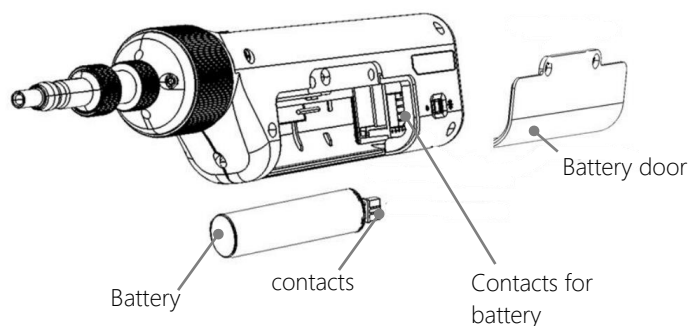
3.1. Charging instrument

Connect instrument to the supplied USB charger, or to USB port of PC using the supplied USB cable. The *Battery Status Indicator* (comprises of 3 white LEDs) show charging status as below,

Battery status indicator pattern		Meaning
 LED #1	Only LED #1 lights up & blinking	Low battery. Instrument will turn off automatically if not recharged.
	All 3 LEDs light up in running mode	Instrument is being charged. Max charging time needed is 2.5 hrs.
	All 3 LEDs light up continually	Instrument is fully charged.
	All 3 LEDs light up & blinking	Battery connection error

3.2. Replacing instrument battery

The instrument is powered by a specific built-in Lithium battery which could be replaced as shown below. Contact Kingfisher for replacement battery.

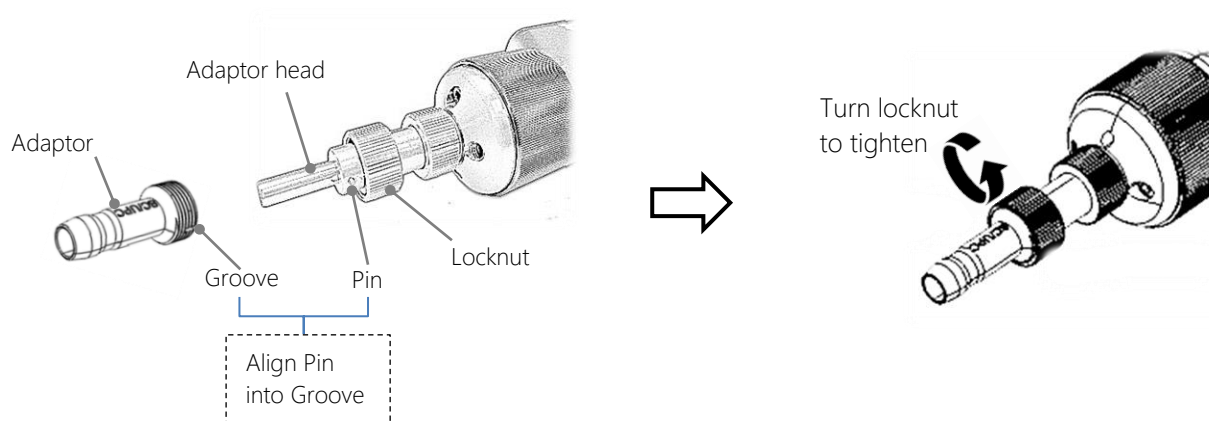


- ❶ Remove 2 screws, using a special screw driver, to open battery door
- ❷ Pull battery out of battery compartment
- ❸ Insert new battery in an angle, and make sure that the contacts on battery are aligned with that in battery compartment
- ❹ Replace battery door and screws. Do not over-tighten screws.
- ❺ Charge instrument as described in the last section

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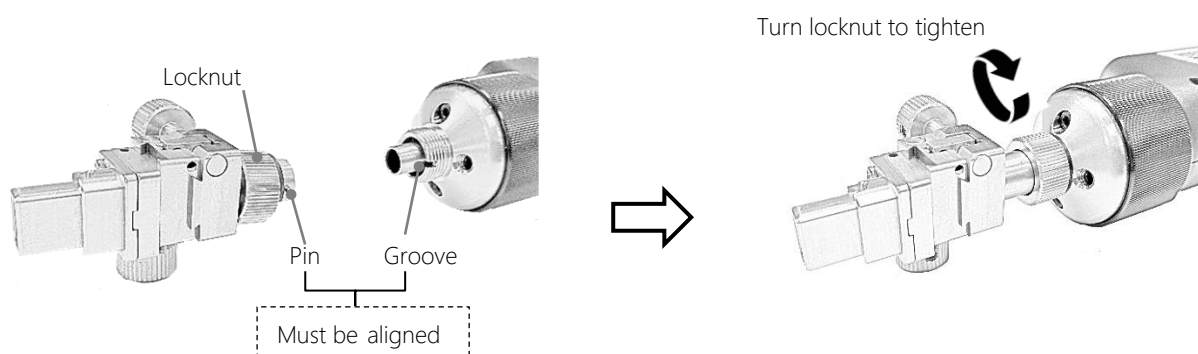
3.3. Installing Inspection Adaptor

Place an inspection adaptor onto instrument's adaptor head, make sure that the pin is aligned into the groove, tighten locknut on adaptor head by turning it in the direction shown in diagram below.

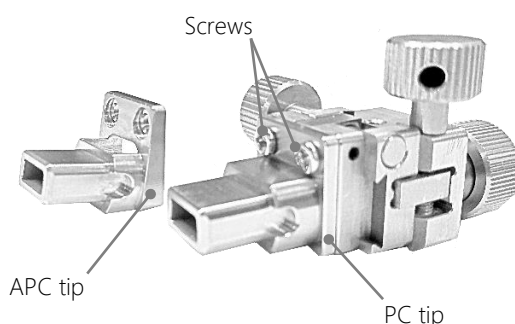


In case of MPO Inspection adaptor,

Remove adaptor head on instrument. Place MPO inspection adaptor on instrument, make sure that pin on adaptor is aligned into the groove on instrument, tighten locknut by turning it in the direction shown in diagram below.



MPO inspection adaptor comes with both a PC and an APC tips which are interchangeable by loosening / tightening 2 screws as shown below,



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3.4. Torch LED

The built-in Torch LED on instrument can be turned on to assist works in dark or low light conditions. To turn light on, flip *Torch LED on/off Switch* to "☀". To turn off, flip the switch to "○".

4. Viewing Image on Smart Devices (via WiFi connection only)

4.1. Download Software

See section 2.3 for Software Compatibility on Smart Devices.

For iOS devices:



Scan QR code, or go to App Store <https://itunes.apple.com/cn/app/ki6680-img-viewer/id1374050279>, to download imaging software, "KI6680 Img Viewer" for free.

For Android devices:



Scan QR code, or go to Google Play <https://play.google.com/store/apps/details?id=com.KI6680.ImgViewer> to download imaging software, "KI6680 Img Viewer" for free.

4.2. Connect Instrument to Smart Devices

Turn on instrument by pressing down the *Main On/off Switch*. The blue LED near the switch will light up. Flip *WiFi/USB Selection Switch* to "📶". Wait until the green LED has lighted up continually. Turn on WiFi of your Smart Device, connect it to instrument with the network name below,

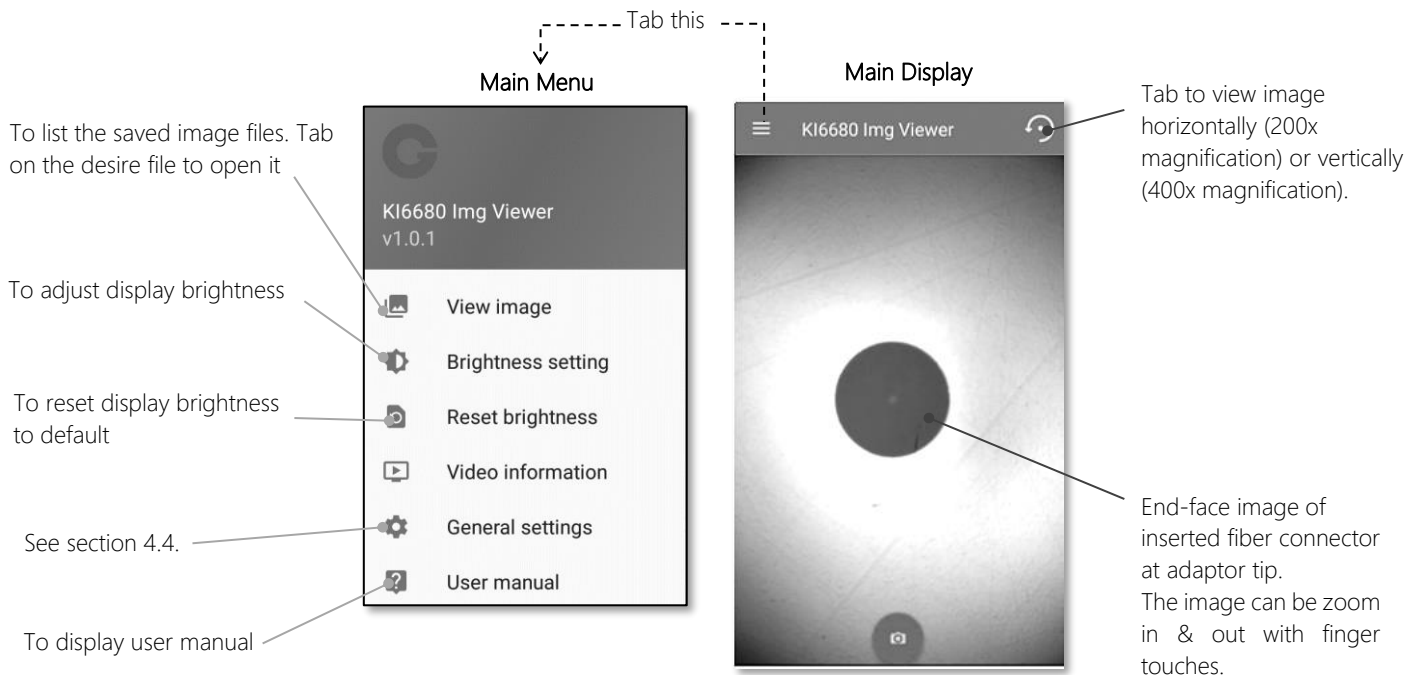
Name: EasyGet_x x represents the serial number of instrument.
Password: 12345678

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4.3. Imaging Software Operation

Tab icon,  on your Smart Device to start the imaging software. Turn *Focus Ring* (clockwise / anticlockwise) of instrument to obtain a sharp image on the Main Display, see figure below for associated menus and their respective functions.

If prompted with the message, "Device connect failed", check that WiFi mode on instrument is enabled and stable (indicated by the green LED, *WiFi Mode Status Indicator* which should be lighted up continuously), and that WiFi connection on your smart device is enabled. You may need to re-establish the connection.



Note:

While at submenus or file/data displays, press *Return* button on your Smart Device to close submenu or to go back to previous display.

4.4. To Captured and Save Images on Smart Devices

The captured images can be saved in default file names or preferred file names.

- *To capture and save images in files with default file names:*

On the Main Display, tab on the Image Capturing symbol (see picture on next page), a small window displaying the captured image will appear on the bottom left corner. The image will be saved in default file name with the format, year-month-date-time. The file name auto increments after each image saving operation.

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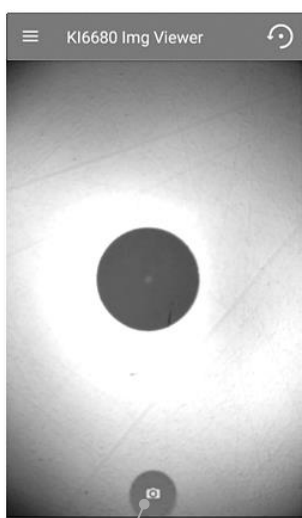


Image Capturing symbol

Alternatively,
Press the Image Capture Button on instrument to capture & save image.

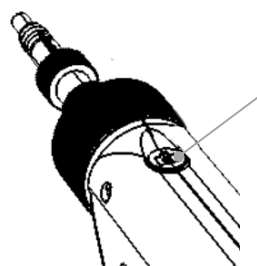
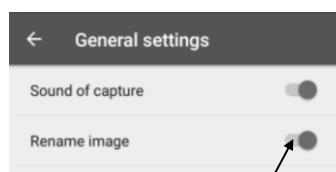


Image capture button on instrument
Note: this button does not work in USB mode

- **To capture and save images in files with preferred file names:**

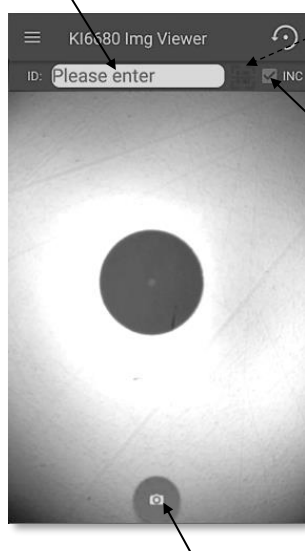
On Main Menu (see figure in section 4.3.), select "General Setting", and follow the steps below.



1 Enable "Rename image" & press *Return* button on your Smart Device.



2 Type in preferred file name or scan in barcoded ID (see *Barcode Scanning function* notes below) for image saving.



Barcode Scan function:
Tab to scan barcoded ID which will be used as file name for image saving.

3 Checked: A preferred text filename will be appended with a number which auto increment after each image saving operation.

Unchecked: Content of the preferred filename will be over written with that of the last image saving operation.

4 Tab to capture & save image

5. Viewing Image on PC (via WiFi or USB connection)

5.1. Download Software

See section 2.3 for Software Compatibility on PC. Download the software, "Imaging Software-PC" from <https://www.kingfisherfiber.com/products/fiber-inspection-scope/ki-6680-fiber-inspection-probe> on your PC. Install the software as per the prompted instructions.

5.2. Connect Instrument to PC

Turn on instrument by pressing down the *Main On/off Switch*. The blue LED near the switch will light up. Instrument can now be connected to PC via WiFi or USB mode.

For WiFi mode connection:

Note:

To connect the instrument via WiFi to a Windows 10 PC with active firewall, you must first "Allow Firewall Exception" on that PC to allow the imaging software to communicate through the firewall.

Flip *WiFi/USB Selection Switch* to . Wait until the green LED has lighted up continually. Turn on WiFi of your PC, connect it to instrument with the network name below,

Name: EasyGet_x x represents the serial number of instrument.

Password: 12345678

If prompted with the message, "Device connect failed", check that WiFi mode of instrument is enabled and stable (indicated by the green LED, *WiFi Mode Status Indicator* which is lighted up continuously), and the WiFi connection PC is enabled, and the correct connection type on PC display i.e. "WiFi" has been selected. You may need to re-establish the connection.

For USB mode connection:

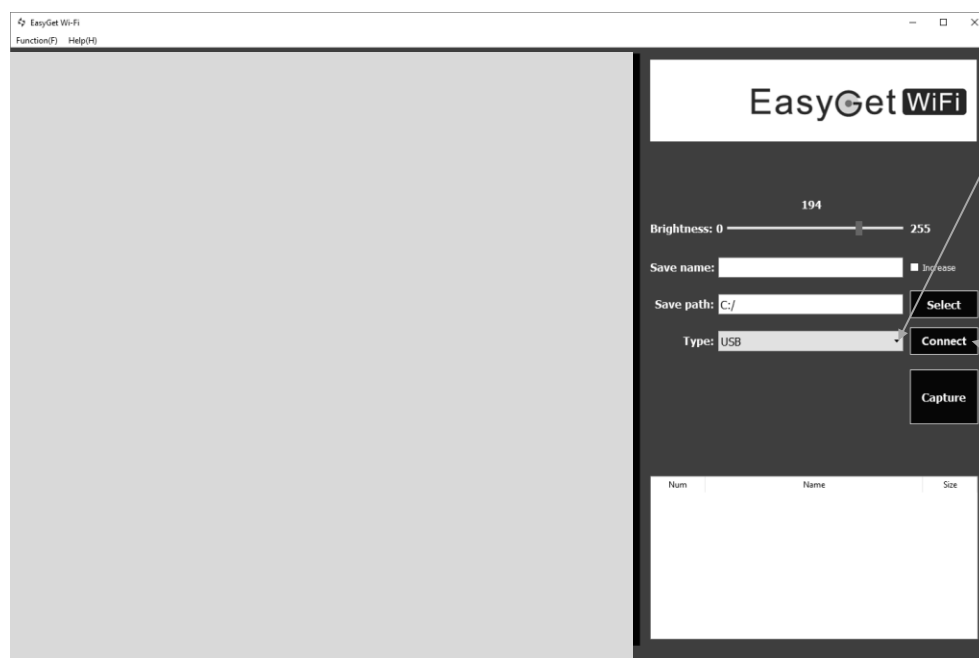
Flip *WiFi/USB Selection Switch* to the opposite side of . Connect instrument to PC using the supplied USB cable.

If prompted with the message, "Device connect failed", check that WiFi mode of instrument is disabled (indicated by the dimmed *WiFi Mode Status Indicator*), instrument has been properly connected to PC using the supplied USB cable, WiFi connection of PC is disabled, the correct connection type on PC display i.e. "USB" has been selected. You may need to re-establish the connection.

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5.3. Imaging Software Operation

Double click on icon, "EasyGetWiFi" on your PC to start the imaging software. The main display below will show up. Follow the steps below to connect instrument to software.



① For **WiFi mode** connection, select "WiFi" from drop down menu.

For **USB mode** connection, select "USB" from drop down menu.

② Click to connect instrument to software

Type in preferred file name here to save captured image.

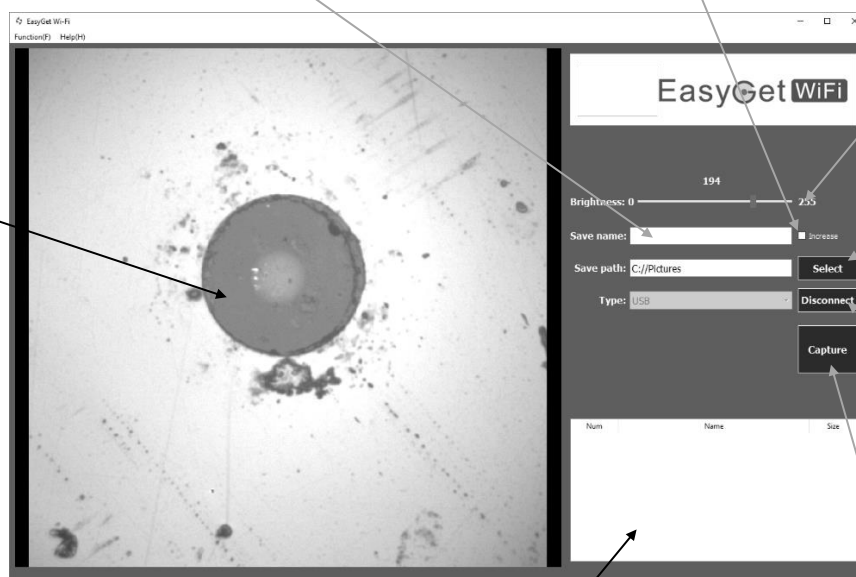
Note: If no file name is typed in here, images will be saved in the default file names which auto increment after each image saving operation.

"Increase" box:

checked: A preferred text filename will be appended with number which auto increment after each image saving operation.

unchecked: Content of the preferred filename will be over written with that of the last image saving operation.

Focused (by turning Focus Ring on instrument) end-face image of inserted fiber connector at adaptor tip.



Adjust display brightness

Select the directory to save image files.

Disconnect instrument from software

Click to capture and save image.

Note: The Image Capture Button on instrument only works in WiFi Mode.

The saved images files will be listed in this area of the display.

5.4. To Captured and Save Images on PC

Click on “Capture” button (see figure above) to capture and save images on PC using default or preferred file names as described in the figure.

Alternatively, press *Image Capture Button* on instrument to capture and save images when connected in WiFi mode. This button does not work when instrument is connected in USB mode.

6. Pass / fail Acceptance Guidelines

Proper guidance on pass/fail criteria is beyond the scope of this manual, since it is likely to vary significantly. The Standard ISO/IEC14763-3 Testing of optical fibre cabling specifies requirements and visual standards for connector end face inspection with a microscope.

The standard and common industry practices recommend the following pass/fail acceptance criteria:

- Markings on the core or damage to the cladding close to the core are unacceptable.
- Slight scratches and small pits on cladding, away from the core, are acceptable.
- Cracks are not permitted in either core or cladding.

7. Eye Safety Precaution

While handling live fibers, always observe eye safety procedures compliant with your company policy, relevant laser safety standards and safety practices.

8. Care of Your Instrument

This is a precision optical instrument. Keep it clean, dry and do not drop. Avoid exposure to moisture or excessive vibration. When not in use, always replace the dust cap to protect the instrument’s adaptor or adaptor head from accidental damages.

9. Service and Support

For assistance, please visit our web site www.kingfisherfiber.com for your local contact details, or for return material instructions (RMA). Our application support or service team would be pleased to help.

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10. Disclaimer and Warranty

This manual is given in good faith for the benefit of the user. It cannot be used as the basis for claims against Kingfisher International or its representatives. This product is guaranteed against defective components and workmanship for 1 years from delivery, unless stated in the purchase contract. This warranty excludes connector adaptors or incorrect use. Opening the instrument invalidates the warranty. Liability is limited solely to repair of the equipment. Ordering Information

11. Ordering Information

Description	Part Number
Instrument, Mini Fiber Inspection Probe, WiFi / USB connection	KI 6680

12. Optional Interchangeable Inspection Adaptors

Description	Part number
Option, Mini Insp Probe Adaptor, 1.25mm Male, APC	OPT630A
Option, Mini Insp Probe Adaptor, 2.5mm Male, APC	OPT631A
Option, Mini Insp Probe Adaptor, LC Female, APC	OPT632A
Option, Mini Insp Probe Adaptor, SC Female, APC	OPT633A
Option, Mini Insp Probe Adaptor, FC Female, APC	OPT634A
Option, Mini Insp Probe Adaptor, MPO, PC/APC Interchangeable	OPT635

Please enquire for other PC or APC adaptor types

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Scan to download iOS version of imaging software, KI6680 Img Viewer



Scan to download Android version of imaging software, KI6680 Img Viewer

