



QT-FOVIM-HH-LCD-4X

**250X - 400X Portable Fiber Optic Video Inspection
Microscope with 3.5 Inch Handheld LCD Display
Screen, and Carry Case for Inspecting 1.5mm and
2.5mm (LC, SC, ST, FC) Fiber Optic Connectors**

User Manual

SAFE GUARD

Thank you for purchasing our product QT-FOVIM-HH-LCD-4X Fiber Video Microscope.

Before assembly and use, make sure that all of parts are carefully read when utilizing the microscope, please pay attention to the following conventions.

WARNING: Refers to a potential personal hazard. It requires a procedure which, if not correctly followed, may result in bodily harm or injury. To avoid the electricity attack ,do not disassemble the product privately. Only the stuffs are allowed to maintain the trouble.

CAUTION: Refers to a potential product hazard. It requires a procedure which, if not correctly followed, may result in component damage. Only the stuffs are allowed to maintain the trouble.

IMPROTANT: Refers to any information regarding the operation of the product which you should not overlook.

1. DW-FMS-2 Fiber Video Microscope



QT-FOVIM-HH-LCD-4X Fiber Video Microscope can offer 600 magnification for the fibers of 125um(diameter), single-mode and multi-mode are all included. (based on **the magnification of the 9 inch display, which can inspect 685000um end-face.**) The enlarged picture is then sent to the display through a video signal. Consequently the status of fiber end-face is showed clearly.

QT-FOVIM-HH-LCD-4X features its unique design with making inspection of your fiber optic connectors easy.

For example, it can test the patch cord directly. It can work with either male connector ends or inspect through female bulkhead adapters. As a result, many hard-to-reach connectors that are installed on the ‘backside’ of patch panels or inside hardware devices can be easily inspected. It eliminates the need to access the backside of patch panels or disassemble hardware devices, bringing more convenience to the inspection.

Meanwhile, it avoids the potential eyes hazard, which may be caused by laser signal sent out from fibers if you inspect them directly. Since the product test the fiber through a display, such problem is totally not existed.

QT-FOVIM-HH-LCD-4X can be applied to anther situations familiar with the testing circumstance. It is suitable for the archaeological study. Besides, some special electronic kits and deep-hole plug-in can also be detected and so on. This book only refers to the application of optical magnification.

Magnification of QT-FOVIM-HH-LCD-4X

1.1 Magnification

QT-FOVIM-HH-LCD-4X enlarges the picture through an optical system and output them by CCD camera. Owing to its complex configuration and small size, the amplification is stably decided by the multiple of objective lens and the dimension of CCD. The larger the display is, the more magnification it offers. Normally the size is 3.5inch or 5.6inch or 9inch or Minch. The size of PC display is Minch or 17inch. When observing the image, to obtain a clear picture, you can adjust the contrast and brightness based on the spot light.

Display Index	3.5inch	5.6inch	9inch	15inch	17inch
Diameter	2.5	4.5	8.1	12.3	14.5
Magnification	200	360	600	980	1280

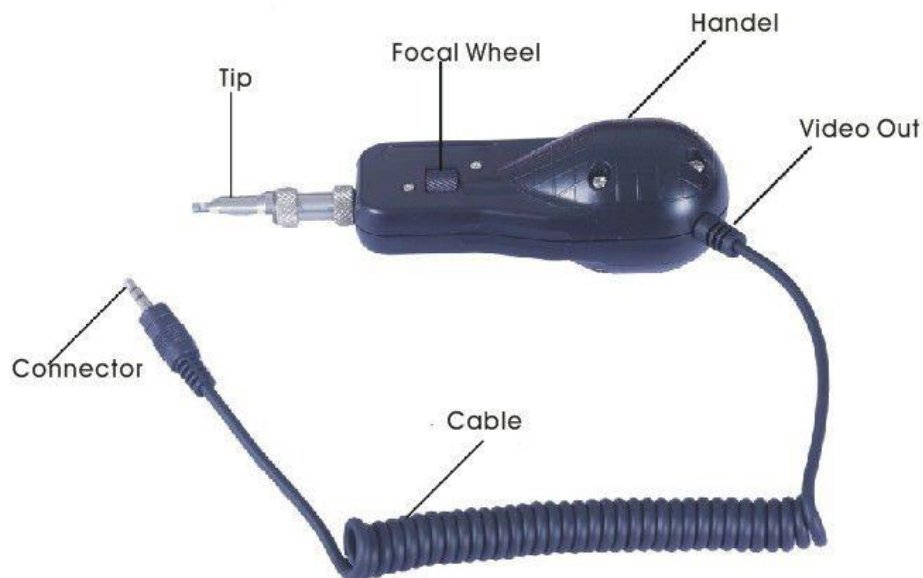
Note: 1) The data of diameters above are measured directly.
2) The magnification is calculated based on the fiber of 125um

1.3 Enlarged Area

As for the fiber ferrule, the detected size can reach up to 0.35mm diameter, which contains, not only the end-face of 125um fiber in the middle, but also the ceramic surface around. Adjusting the handle slightly will also help you obtain more enlarged ceramic area.

2. Probe Introduction

Body Part



2.1 Constitution

A Handle: the handle houses many things, like CCD camera, optical structure, optical routine system, coaxial lamp-house, focus control structure and video output, power supply system and so on. The output is PAL.

B The Inner Structure of Handle is so compact and complex that, if long time work it will

cause a fever. This isn't the mechanical failure but normal phenomena. If disassemble handle personally, it may cause damage. Meanwhile, you will lose the chance to troubleshoot freely.

2.2 Microscope Lens

A On the front of the handle locates QT-FOVIM-HH-LCD-4X optical system and the front end comes a lens-bar.

B The Barrel Assembly, mounted on the front body, houses lens-bar inside and used to match different tips. Turning the focusing wheel will change lens-bar meanwhile.

2.3 Barrel Assembly

Barrel Assembly plays a vital role in joining or fixing various tips.

2.4 Tip

To inspect different fibers, kinds of tips are needed. When using the tip, make sure the connection between barrel assembly and tip is firm enough.

Pictures of tips are as follows:



2.5 Tips introduction

Tips	Introduction
FC SC/F	insert to the FC/SC flange to inspect female fiber ends (dual use)
LC/F	insert to the LC/MU flange to inspect female fiber ends, no need to remove the fibers around when the connector port is of high-density (dual use)
2.5PC/M	Insert directly to inspect male fiber ferrules (normally SC, ST, and FC)
1.25 PC/M	Insert directly to inspect male fiber ferrules (normally LC)

2.6 Attention Points

As pictures shown above, please pay attention to the following when using different tips:

- 1) When using the tip, do not rotate it once insert. Screwing the retaining nut on the barrel assembly works.
- 2) When removing the tip or barrel assembly, make sure the removing direction is along the beeline rather than laterally.

3. Monitor Introduction

1) Portable product.

Portable product is able to use in any place and any time, it's easy to hold and do not need complicated equipment that hinders the inspecting and repairing.

2) Monitor

3.5" high image resolution monitor enable to show clear image that fits any place to use.

3) Long work time

Equips with Lithium battery of high capability, each 2 hours recharger durables 4.5~5 work hours

4) Humanized design of appearance

Hand-hold design for professionals. Easy operation without taking off gloves speeds your works. Clasp ring at bottom fits to all chains and use in all environments.

5) Support 12v max 400mAh DC power for camera

It's convenient for user to check camera condition and correct direction of camera, so to make installation and repairing easier.

Specification

Display	3.5" TFT color LCD
Image Resolution	640 x 480
Video in	Video in x 1
Power out	DC power out x1 (Support CCD camera of power source/Max electric currency 400mAh)
System Format	NTSC/PAL
Status Indicator	2 LED(Power IND=green/Charging IND=Red)
Power Source	Built-in rechargeable Lithium battery: 3.7V 2000mA
Power Source	External power: DC 5V 1,0A adapter
Dimension/Weight	180mm(L) x 98mm(W) x 30mm(H)/250g

4. QT-FOVIM-HH-LCD-4X Contents

NO.	Name	Quantity
1	Probe	1 pcs
2	3.5 Inch Display	1 pcs
3	LC, SC, LC APC, SC APC Ferrule Tips	4pcs
4	LC, SC, SC APC Adapter Tips	2 pcs
5	Charger	1 pcs
6	Case	1 pcs