Multipurpose All-In-On Fiber Optic Visual Fault Locator, Optical Power Meter, and RJ45 LAN Cable Tester

Part # MP-VFL-OPM-LCT

Manual

Summary

Hand-held optical power meter, red-light integrated machine series products are mainly used for continuous optical signal power measurement, optical fiber link loss testing and optical fiber line on-off testing. It is controlled by a single chip microprocessor with complete functions. Widely used in optical cable construction and maintenance, optical fiber communication, optical cable sensing, optical CATV and other fields. The ergonomic design meets the requirements of human body function and adopts advanced thermoplastic molding technology, which is beautiful and durable. The red-light integrator of optical power meter can be well protected by using embedded detectors and lasers. The machine has compact shape, automatic shutdown function, three red light modes, back light display, wavelength memory function, optical fiber work identification, support user calibration, wide test range, support lighting.

Note: If there is any change in the version of the manual, no further notice will be given.

Product characteristics:

1. Support lighting

2. Support automatic shutdown

3. Support backlight switch

4. Supporting Wavelength Memory Function

5. Support frequency identification (selection)

6. Support user calibration

7. Supporting red constant and scintillation (optional)

8. Supporting simultaneous display of linear mW and non-linear index dBm

9. Supporting SCFCST Interface

10. Supporting external power supply such as charging treasure, computer, etc.

11. Supporting simultaneous linear (mW) and non-linear (dBm) display

12. Supporting RJ45 testing (optional)

13. Changing, work 72 hours (optional)

Technical Indicators:

Wavelength range(nm)	800-1700
Connector	FC/SC/ST
Type of connector	InGaAs
Power measurement range(dBm)	-70~+6
Uncertainty	±5%
Standard wavelength (nm)	850、980、1300、1310、1490、1550、1625、1650
Display resolution	Linear display: 0.1% logarithmic display: 0.01 dBm
650nm light source (Options)	1mw
Operating temperature (C)	-10~+60
Storage temperature (C)	-30~+70
Automatic shutdown time (min)	10
Continuous working hours of batteries (h)	≥72
Instrument size (mm)	112×66×30
Power Supply	Two Segment 7 Batteries （AAA）
Instrument Net Weight (g)	140g

Note:

1. Wavelength range: specify a standard operating wavelength range from 800 to 1700 nm, in which the optical power meter can work under the specified index.

2. Power measurement range: the range in which the maximum power can be measured according to the specified index.

3. Uncertainty: The error between the measured result of a certain optical power and the measured result of standard optical power.

Product key instructions

1、⏻

Short press can start the machine.

Auto-shutdown function is turned on by default (10 minutes). Auto-shutdown function can be turned on or off by pressing this button. The power icon on the upper left of the screen is turned on or off accordingly.

Long press this key, shut down.

2、LIGHT

1 > Backlight on/off: Short press to turn on the backlight function, then turn off the backlight.

2 > 650nm light source on/off: long press to the open red light - - then flicker at 1Hz - - then flicker at 2Hz - - then turn off the red light, and cycle in turn. When the red light is turned on, the first line of the screen displays 650 nm.

Warning! Do not look directly at the laser light, lest it cause damage to the eyes.

3、dB

By short pressing this key, the relative optical power test (insertion loss test) or absolute power test can be realized. After entering the relative power test mode, the insertion loss (dB) is displayed at the bottom of the screen, and the reference value is displayed at the second line of the screen. Open RJ45 test mode in 3 seconds, then display RJ45 in the third line, and then exit RJ45 test mode.

4、REF

Press this key to set the current optical power as a reference value and enter the relative optical power test (insertion loss test) mode. The second line of the display screen will display the set reference value, and the third line will display the relative power value (insertion loss dB).

5、λ

Eight different test wavelengths can be selected, 1310, 1550, 1490, 1625, 1650, 850, 1300 and 980, and the selected test wavelength is displayed on the upper screen.

6、LED

Turn on/off the lighting LED lamp, and turn on or off the lighting function by pressing short.

Calibration Function Description

At the same time, press the "LED"+ "LIGHT" key, then enter the user calibration mode, the upper left corner of the screen shows the calibration icon "CAL". The following operations are effective after entering the calibration mode.

Function	Key	Remarks
Increase 0.05dB	LIGHT	
Reduce 0.05dB	dB	
Store	⏻	
Switching wavelength	λ	
Restore factory settings	Simultaneously press the "LED"+ "REF" key	Successful recovery of full screen display prompt

Measurement of Relative Power and Absolute Power

1. Absolute power

The test wavelength is set and the measured light signal is connected. The current value displayed on the screen includes the linear value and the non-linear value of absolute light power.

2. Relative power

Set the test wavelength, in the absolute optical power mode, access the reference light signal, measure the reference light power value, then press the REF key, set the reference value; then the second line shows the reference value, and the third line shows the relative power (insertion loss).

Standard configuration

Optical power meter host, optical power meter red-light integrated machine (optional), certificate, instructions for use, product warranty card, two No. 7 batteries/rechargeable lithium batteries (optional), universal connector (FC, SC, ST) (optional), packaging carton.

Note: Charging voltage of rechargeable lithium battery is 5V, mobile phone charger is enough.

Solutions to common failures

Fault hint	Possible reasons	Terms of settlement
LCD display is weak	Insufficient power supply	Battery replacement
Boot-up cannot be displayed	Insufficient power supply or other	Reboot or replace batteries
Abnormal optical power values	Joint failure, dirty	Reconnect Connector and Clean Sensor

Daily Maintenance and Maintenance

1. Keep the end face of the sensor clean, grease-free, pollution-free, do not use unclean and non-standard adapter connectors, do not insert poor polished end face, otherwise it will damage the end face of the sensor and make the test error.

2. Stick to using an adapter whenever possible.

3. Once the optical power meter is not in use, cover the dust cap immediately to protect the end surface from cleaning, and prevent dust from attaching to the air for a long time to cause measurement errors.

4. Carefully plug and pull the optical adapter connector to avoid scratches on the port.

5. Clean sensor surface regularly. When cleaning sensor surface, please use special cleaning cotton swab to wipe gently in the circumference direction.

Quality Assurance

1. Within eighteen natural months after the receipt of the goods, our company will promise the quality and technology of its products, with a guarantee period of eighteen months from the date of receipt. When quality problems are found in the purchased products during this period, our company will make corresponding treatment or replacement, but in any case, our responsibility will not exceed the purchasing value of the products.

2. If there are problems in the process of using the instrument, according to the common fault prompting scheme, it is still impossible to solve them. Users may not open the case without authorization. Please contact us.

3. Our company is responsible for repairing or replacing products free of charge for the failure caused by product defects.

Note: This guarantee is only applicable to the normal use of instrumentation, and without damage or normal use, due to product quality or material defects caused by failure, our company is responsible for free maintenance or replacement. For unexpected cases, we have the right to refuse warranty for improper use and unauthorized start-up maintenance.

Warranty Ordinance

Respected customers:

Thank you for buying our products. In order to protect your legitimate rights and interests and improve the after-sales service to customers, this warranty regulation is specially formulated. Please read it carefully and welcome your valuable comments and suggestions.

1. The product is guaranteed free of charge for 18 months from the date of purchase, and if it exceeds the warranty period, it will be considered as a failure and charged zero attachment cost.

2. During the free warranty period, the company has the right to refuse the warranty service and charge the original maintenance fee and service fee as appropriate.

A: User's improper use or incorrect operation results in product failure.

B: Burning accident caused by lightning strike or improper installation;

C: Label damage or unauthorized disassembly of equipment for maintenance;

3. Please pack and deliver the repaired products properly. If there is any damage or loss in the process of delivery, the company will not be responsible for it.

4. Please read the product instructions carefully before installing and testing our products.

5. The warranty card must be sealed and dated by the seller to ensure your rights and interests.