

## Common Troubleshooting Solutions

Failure Phenomenon	Possible Cause	Settlement
LCD displays dark	Low power	Replace the battery or charging in time
Boot is unable to display	Low power or other	Reboot or charging in time
LCD abnormal data display	Joint failure, foul or locked	Reconnect connector and cleaning sensor
Weak LS output power	Optical connector is not clean	Remove the FC interface and clean the end face

## Daily maintenance

1. Please keep the sensor face clean, do not use non-standard adapter connector, do not insert end polishing surface difference, otherwise it will damage the end face of the sensor, the test error.
2. Once not in use, cover the dust cap immediately and prevent the measurement error from being exposed to dust for a long time.
3. Carefully plug optical adapter connector.
4. Periodically clean the sensor surface. When cleaning, wipe gently in the circumferential direction with a special cleaning swab.

## Quality assurance

1. The warranty period of 18 months from the date of receipt; when the purchase of products during the period were found to have quality problems, we will make the appropriate treatment or replacement, but in any case, our the responsibility does not exceed the product purchase value.
2. If the instrument is in the process of using the problem, according to the common failure prompt program still can not be solved, the user must not open the shell, please contact us.
3. Our company is responsible for the free maintenance or replacement of product defects.

**Note:** This warranty is only applicable to the normal use of the instrument, and without damage or normal use, due to product quality or material defects caused by failure, our company is responsible for free repair or replacement. For unforeseen circumstances, improper use, unauthorized boot repair, we have the right to refuse warranty.

## Warranty regulations

Thanks for purchasing our products. In order to protect your legitimate rights and interests, and to improve the after-sales service, this warranty regulation is formulated. Please read it carefully.

1. 18 months free warranty for this product since the date of purchase, if it exceeds the warranty period, we will charge accessories.
2. During the free warranty period, we have the right to refuse the warranty service and collect the maintenance fee, if:

A: User improper or erroneous operation leads to product failure.

B: Accidents caused by lightning or improper installation;

C: Label is damaged or unauthorized to disassemble the equipment for maintenance.

3. Products under repair are properly packed and shipped. The company is not responsible for any damage or loss in the delivery process.

4. Please read the product instruction carefully before using the product.

5. The warranty card must be stamped and dated to ensure your rights.

Certificate  
of Quality

QC: 011

# Laser Source Optical Multimeter Instructions

## Overview

Hand-held laser source(LS), optical multimeter(contain LS、OPM(optical power meter) or VFL(visual fault location)) series is designed to be used to measure the power of the continuous light signal, fiber-optic circuit break, fiber-optic line failure and fiber-optic line loss testing. It is widely used in optical fiber construction and maintenance, optical fiber communication, optical fiber sensing, optical CATV and other fields. The fuselage design is consistent with ergonomic requirements, with thermal molding and durability. With multiple optional modules, to meet the different needs of users.

**Note:** The specification version is subject to change without prior notice.

## Product features

- ◆ Support automatic shutdown
- ◆ Large capacity lithium battery (optional), can be charged by USB charging port
- ◆ LS: support CW and modulation mode output
- ◆ LS: adjustable output power, 6dB adjustable range, 1dB step
- ◆ LS: support combination wavelength (1310/1490/1550nm, 850/1300nm)
- ◆ OPM: support mW、dBm display
- ◆ OPM: support 8 measuring wavelengths
- ◆ OPM: wave memory/reference power memory

## Function description

Short press: press less than 1 second;  
Long press: press than 2 seconds.

### 1. Turn on/off

Off state: press to start; On state: press to turn on/off the automatic shutdown function. When the automatic shutdown function is turned on, the machine will shut down after 10 minutes without operation. Long press it to shut down.

### 2. LIGHT

Press to turn on/off backlight.  
VFL function: Long press to turn on. Press it again to switch on and turn off the function.

### 3. /REF

LS: press it to adjust the attenuation or modulation frequency.

Optical multimeter - LS: press it to adjust the attenuation or modulation frequency.

Optical multimeter - OPM: Set the current optical power to the reference power and save it.

### 4. /dB

LS: press it to adjust the attenuation or modulation frequency.

Optical multimeter - LS: press this key to adjust the modulation frequency.

Optical multimeter - OPM: turn on/off relative optical power measurement, measure link loss.

### 5. MOD



LS: switch the modulation frequency of the LS.



Optical multimeter: switch the function of LS and OPM.

### 6. $\lambda$

Switch the wave of the LS and OPM.

## Optical power meter calibration

Press "MOD" and "LIGHT" at the same time to enter the calibration mode, and the character "K" will be displayed in the lower right corner. After entering the calibration mode, press " /REF" key to increase 0.05dB once; Press " /dB" key to reduce 0.05dB once; After the adjustment, press the switch key to save.

At the same time press " /REF" and " /dB" keys to restore factory settings.

## Technical indicators

Laser Source		
Center Wavelength	1310/1490/1550nm±20nm	850/1300nm±20nm
Output Mode	SM	MM
Laser Type	FP - LD / DFB - LD (optional)	
Output Power	≥-5dBm	
Power Adjustable Range	6dB, 1dB step	
Short-term Stability	±0.05dB/15min	
Long-term Stability	±0.2dB/8h	
Modulation Frequency	CW. 270Hz. 1kHz. 2kHz	
Connector		
Optical Power Meter		
Joint type	InGaAs	
Wavelength range	800nm~1700nm	800nm~1700nm
Measurement range	-70dBm~+6dBm	-50dBm~+26dBm
Detector Type	InGaAs#	
Connector	FC/SC/ST#	
Standard wavelength	850/980/1300/1310/1490/1550/1625/1650nm	
Uncertainty	±5%	
Display resolution#	mW: 0.1%, dBm: 0.01dBm#	
Visual Fault Location (optional)		
Wavelength#	650nm±30nm#	
Output power	2mW/10mW/30mW	
Mode#	CW/1Hz/2Hz#	
Connector#	FC/SC/ST#	
Others		
Power Supply	3 AA batteries/Lithium battery (optional)	
Automatic shutdown time	10min	
Working temperature	-10~+50°C	
Storage temperature	-40~+70°C	
Relative humidity#	0~95% Non Condensing#	
Size	186mm×100mm×50mm	
Weight	≤150g	

## Standard configuration

Hand-held LS/Optical multimeter series (host), Instructions, Bag (optional), SC Joint, Three AA batteries/rechargeable lithium batteries (optional), USB charger (optional), Data line (optional), Outer Box.