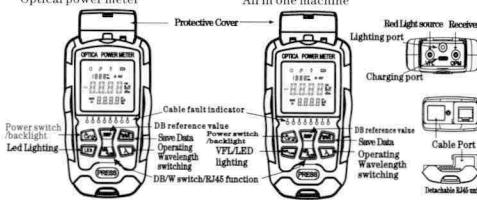


Optical power meter red light source integrated machine operation manual

Product overview

The hand-held fiber optic multimeter is a precise and durable portable instrument specially designed for the installation, operation and maintenance of fiber optic networks. It has exquisite shape, backlight display with optional switch and automatic shutdown function, ultra-wide optical power test range, accurate test precision, User self-calibration function and general Interface design. Add red light source test function and network line test function, a unique design of memory wavelength parameters, lighting, standby state after 10 minutes automatically shutdown, while linear index (MW) and non-linear index (DBM) display the same screen.

Optical power meter



Technical Index of Red Light Source Integrated Machine for optical power meter

Power measurement range	-70 ~ +10dbm / -50 ~ +26dbm			
Probe type	InGaAs			
Wavelength range	850 ~ 1650nm			
Standard Wavelength (NM)	850, 980, 1270, 1300, 1310, 1490, 1550, 1577, 1625, 1650			
Display resolution	LINEAR DISPLAY: 0.1% logarithmic display: 0.01 dbm			
Operating temperature	-10 ~ +60°C			
Storage temperature	-25 ~ +70°C			
Automatic shutdown time (min.)	Ten minutes			
Output Power of red light source	>1mW	>10mW	>20mW	>30mW
Output Wavelength of red source	650nm			
Contour dimension (mm)	111×69×30			
Power supply	Rechargeable lithium battery or 2 No. 7 Alkaline Batteries			

Function description

- power/backlight button long press the button to turn on or off, Short press the button to turn on or off backlight.
- REF Key short press key set the current power value to the relative power DB reference value.
- SAVE keystroke short keystroke browse saved measurement records or quit browsing, can SAVE measurement data 500. Long press the SAVE button to SAVE the current measurement at the light work measurement interface. In the record browsing interface, long press the SAVE button to clear the record.
- VFL/LED keypad short keypad switching red light source constant/strobe/off, default is constant light, blinking frequency is 2 Hz; long keypad switching on or off LED lighting.
- dB key short press key, in the set wavelength and REF reference value, the relative measurement of optical power, again short press exit relative measurement. Long press key is to enter the network cable detection function, and then long press is to exit the RJ45 detection function..
- Enter wavelength button short push button switch wavelength.

Special Function

- the combination of key, power at the same time long press the key + enter the wavelength key 2 seconds, after starting calibration function interface, REF key to increase 0.1 dB, dB key to reduce 0.1 dB. Short press the power button to save and exit.
- Special Keys, Ref keys for added function and DB keys for reduced function in calibration interface and record browsing interface.

Absolute optical power measurement

- Turn on the optical power meter.
- Set the measurement wavelength, select the measurement wavelength through the key, the default setting is 1310nm.
- Access the measured light, and the screen displays the current measured values, including absolute power of the linear, linear and nonlinear values.
- Relative optical power measurement
 - Set the measuring wavelength.
 - In the mode of absolute optical power measurement, the current power value is measured by connecting the measuring light.
 - Press the DB key and the current optical power value becomes the current reference value (in DBM).
 - access another measurement light, display the current measurement light absolute optical power value and relative, optical power value.

Common Malfunctions

Fault manifestation	Possible cause	The solution
The LCD display is weak	Battery's low	Change batteries or recharge
Power on, no display	Insufficient battery/others	Replace battery/reboot/recharge
The LCD display data remains the same or changes slightly	Light adapter connector failure or dirt/display locked	Check if the connection of the light adapter is correct; clean the sensor end

Quality Assurance

We do not agree with the User self-repair smart handheld optical power meter.

- When the purchased product is found to have a quality problem during this period, our company will make the corresponding repair or replacement. But under no circumstances will our liability exceed the purchase price of the product.
- if the instrument in the use of the process of problems, according to common failure tips solution still can not be solved, users shall not open the case, please contact our marketing department or agents around the world.
- Our company is responsible for repairing or replacing the products free of charge for the quality failure caused by the production defects. This guarantee applies only to the normal use of the instrument, and no damage or improper use of the conditions. The warranty does not cover problems/failures caused by:
 - 1) unauthorized repair or modification of the instrument .
 - 2) improper use, inadvertent use or accident, etc.

We have a warranty card with our products.

Please fill it out and

return it to us with a copy of the invoice so that we can maintain, update and calibrate your instrument, well, there's a root cause.

Appendix: fiber loss measurement

The first step set the reference (Reference) value

- Open the optical power meter and select the correct working wavelength through the A lambda key.
- Open the light source (the source), choose the right wavelength and stabilize it (the process takes about 1-2 minutes).
- Choose an optical fiber jumper to connect the light source. We call it the launch source jumper and clean the jumper.
- Connector. Note: the optical fiber used in the launch source jumper must be the same as the optical fiber used in the optical fiber link.
- The light source (source) is connected to the optical power meter using the source jumper.
- The value of the light power at this time is obtained.
- Note: the measured power value should be similar to the setting value of the light source (emission source) itself.
- Large deviation, pay attention to carefully clean each connection end or replace the launch source jumpers in time.
- According to the dB key of the optical power meter, the reading number of dB at this time is 0, and the optical power value is set at the same time.
- For reference (Reference) value.
- Note: after returning to zero, the number of decimal places will change slightly. This is a normal

Second step optical fiber link loss measurement

- The connection between the launch source jumper and the light source (source) is maintained.
- The light source (transmitter) is connected to the optical link separately and needed.
- Note: clean all connections, including the required optical fiber adapters.
- The reading shown at that time is the loss of the measured optical fiber link. The unit is dB (at the same time, it is displayed in dBm mode).
- The absolute value of the absolute optical power of the front.

Standard configuration

Configuration	Description
Fiber Optic multimeter I	Product Manual
Optional battery or self-charging Lithium Battery	LANYARDd
Charging wire (type selection)	Certificate of conformity

光纤多用表使用手册

产品概述

手持式光纤多用表是为安装、运营和维护光纤网络专门设计的一台精准、耐用的便携式仪表。具有精致的外形、可选择开关的背光显示和自动关机功能、超宽的光功率测试范围、精准的测试精度以及用户自校准功能和通用接口设计、增加红光源检测功能和网线测试功能，独特设计了关机后记忆波长参数、照明灯光、待机状态10分钟后自动关机，同时线性指标（mW）和非线性指标（dBm）同屏显示。



光功率计红光源技术指标

功率测量范围	-70~+10dBm/-50~+26dBm			
探头类型	InGaAs			
波长范围	850~1650nm			
标准波长 (nm)	850, 980, 1270, 1300, 1310, 1490, 1550, 1577, 1625, 1650			
显示分辨率	线性显示: 0.1% 对数显示: 0.01dBm			
工作温度 (°C)	-10~+60°C			
储存温度 (°C)	-25~+70°C			
自动关机时间 (min)	10分钟			
红光源输出光功率	>1mW	>10mW	>20mW	>30mW
红光源输出波长	650nm			
外形尺寸 (mm)	111×69×30			
电源	可充电锂电池或2节7号碱性电池			

功能说明

1. 电源/背光按键

长按按键开机或关机，短按按键打开或关闭背光。

2. REF 按键

短按按键将当前功率值设置为相对功率 dB 的参考值。

3. SAVE 按键

短按按键浏览保存的测量记录或退出浏览，可保存测量数据500条。在光功测量界面长按 SAVE 按键保存当前测量值。在记录浏览界面长按 SAVE 按键清空保存记录。

4. VFL/LED 按键

短按按键可切换红光源常亮/频闪/关闭，默认为常亮，闪烁的频率为2Hz；长按按键打开LED 照明或关闭 LED 照明。

5. dB/RJ45 按键

短按按键，在设定的波长和 REF 参考值下，进行光功率相对测量，再次短按退出相对测量。长按按键是进入网线检测功能，再长按是退出RJ45检测功能。

6. 入波长按键

短按按键切换波长。

特殊功能

1. 组合按键，关机状态下同时长按电源按键+入波长按键2秒，开机后进入校准功能界面，REF 按键为增加 0.1dB，dB 按键为减少 0.1dB，短按电源按键保存并退出。

2. 特殊按键，在校准界面和记录浏览界面，REF 按键为增加功能，dB 按键为减小功能。

绝对光功率测量

1. 打开光功率计。

2. 设定测量波长，通过 λ 键选择测量波长，缺省设置为1310nm。

3. 接入被测光，屏幕显示为当前测量值，包括绝对功率的线性和非线性值。

相对光功率测量

1. 设定测量波长。

2. 在绝对光功率测量模式下，接入测量光，测得当前功率值。

3. 按动dB键，当前光功率值成为当前参考值（以dBm为单位）。

4. 接入另一测量光，显示当前测量光的绝对光功率值和相对

光功率值。

常见故障

故障表现	可能原因	解决办法
LCD显示微弱	电池不足	更换电池或充电
开机无显示	电池不足/其他	更换电池/重新开机/充电
LCD显示数据保持不变或变化微弱	光适配器接头连接是否正确；清洁传感器端面	检测光适配器接头连接是否正确；清洁传感器端面

质量保证

我们不赞成用户自行修理智能手持式光功率计。

1. 当购买的产品在此期间被发现有质量问题，我公司将会做出相应的修理或更换。但在任何情况下，我公司的责任不会超过该产品的购买价。

2. 如果仪表在使用过程中出现问题，根据常见故障提示的解决方案仍无法解决，用户不得擅自打开机壳，请与我公司市场营销部或各地代理商联系。

3. 对于因生产缺陷造成的质量故障，我公司负责免费维修或更换产品。此保证仅适用于正常使用仪表，而且无损坏或使用不当的条件下。产品的保修并不包括由以下原因引起的问题/故障：

- 1) 对仪表进行无授权修理或修改
- 2) 非恰当使用、疏忽使用或意外等

随同我产品均有一张我公司的保修卡 (warranty registration card)

请您填写后连同发票复印件一同寄回我公司，以便日后我们需要对您的仪表进行维护、技术革新、校准等情况，有根源记录。

附录：光纤损耗测量

第一步 设定基准（参考）值

打开光功率计，通过 λ 键来选择正确的工作波长。

打开光源（发射源），选择正确的波长并使其稳定（本过程大约需要1-2分钟）。

选择一根用来连接光源的光纤跳线，我们称之为发射源跳线，清洁发射跳线的连接器。注意：发射源跳线所使用的光纤必须与被测光纤链路所使用的光纤相同。

用发射源跳线将光源（发射源）与光功率计相连。

用得到此时的光功率值。

注意：此时测得的功率值应该与光源（发射源）本身的设定值相近，如果有较大偏差，注意仔细清洁各个连接端面或者及时更换发射源跳线。

按光功率计的dB 键，此时的dB 的读数为0.00，并同时将所测的光功率值设置成基准（参考）值。

注意：归零后，小数点后的位数会有轻微变化，这是正常现象。

第二步 光纤链路损耗测量

保持发射源跳线与光源（发射源）的连接。

把光源（发射器）与分别和需要的光纤链路进行连接。

注意：清洁所有的连接端面，包括所需的光纤适配器。

此时显示的读数就是被测光纤链路的损耗，单位为dB（同时以dBm方式显示当前的绝对光功率值）。

标准配置

配置描述	
光纤多用表1台	产品使用手册
选配电池或自带充电锂电池	挂绳
充电线（机型选配）	合格证