

CWDM Power Meter

User Manual (V19.11.16)

2019-11

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1 Overall

1.1 Products Description

CWDM Power Meter is specially designed for CWDM system, covering wavelength from 1270~1610nm. It measures and monitors optical power and attenuation value of 18 channels from wavelength 1270nm to 1610nm wavelength.

All calibrated wavelengths will be tested simultaneously and all test results will show in the LCD screen.

This CWDM power meter features simple operation, quick response and high measurement accuracy which make it an ideal tester in CWDM system installation and maintenance.

1.2 Products Feature

1. Simultaneously test and show 18 wavelengths
2. Support dual port serial test, monitoring, without interrupting the communication equipment under test
3. Light weight compact and convenient, easy to operate
4. Color TFT-LCD display, high resolution 320*240
5. Columnar graphics or list mode to show test data
6. Threshold setting: user-defined threshold values can be stored for testing
7. Save and upload test results via USB port
8. Quick start operation, requiring no warm-up time
9. Intelligent power saving design
10. Built-in rechargeable battery for more than 10 hours of continuous testing
11. Storage of 1000 test records

2 Technical Specifications

Specifications	Parameter
Number of Channels	18
Wavelength resolution (nm)	20
Dynamic range (dBm)	+10~-40
Uncertainty (dB)	±0.5
Resolution (dB)	0.01
Measuring Wavelength (nm)	1270~1610/1271~1611
Serial test loss (dB)	≤1.5
Date Storage Capacity	1000 Group
Communication Port	USB
Optical interface	FC/PC (Can be Customizable)
Operation Temperature (°C)	-10~+50
Storage Temperature (°C)	-25~+70
Time of Auto-off (min)	10
Power supply	Rechargeable Battery/AC power adapter
Power adapter (V)	DC 12V/2A
Dimension (mm)	220*110*70
time of Operating (h)	>10
Weight (g)	<850

3 Standard Configurations

No.	Name	Qty
1	CWDM Power Meter	1
2	12V Power Supply Unit	1
3	User Manual	1

4	Cotton Swabs	1
5	Certificate	1
6	Carry Bag	1
7	CD	1
8	Micro USB Line	1

4 Function Description



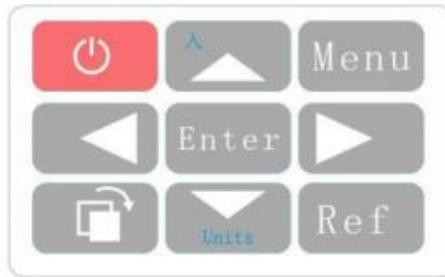
CWDM Power Meter

4.1 Key Function Description

4-1 Keypad function:

CWDM POWER METER provide 18 channels power testing, all test results will show in the screen. The calibration wavelength are 1270nm、1290nm、1310nm、1330nm、1350nm、1370nm、1390nm、1410nm、1430nm、1450nm、1470nm、1490nm、1510nm、1530nm、1550nm、1570nm、1590nm、1610nm.

Keypad 3-1:



4-1-1: Keypad

Function:



:Turn on or turn off unit;



:Switch wavelength and UP .



:Setting the threshold value and view the history



:Left;



:Enter the selected function in general mode



:Right;



:Switch the shortcut of function, one key to switch multi-channel power meter and histogram ;



:Switch unit and DOWN;



:Save date in Multi-channel opm funtion

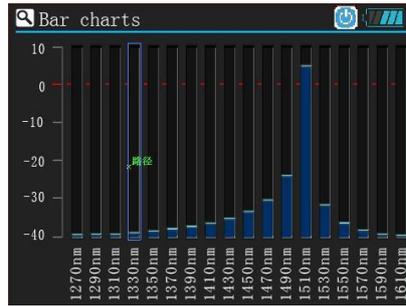
4-2 Main Menu Function description

Press "" to switch to multi-channel power interface, press "" could choose all channels. Pic 4-2-1



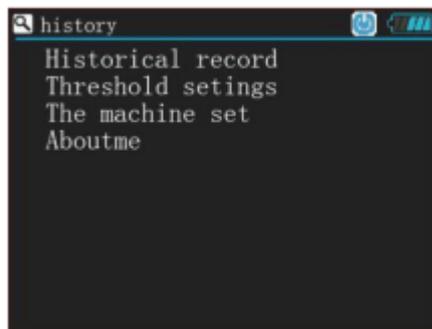
4-2-1 OPM Interface

Press “Display” to switch to bar charts interface, as shown in 4-2-2



4-2-2 Bar charts

Press “Menu” to enter main menu interface, as shown in 4-2-3



4-2-3 Main menu interface

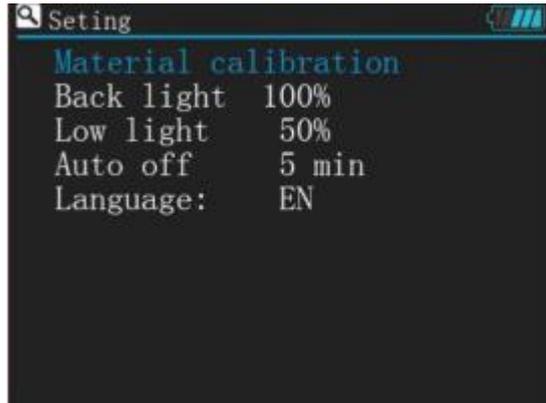
4.3 Submenu setting

Press ” M e n u ” to enter main menu, choose “History records “to check history records .As show in 4-3-1



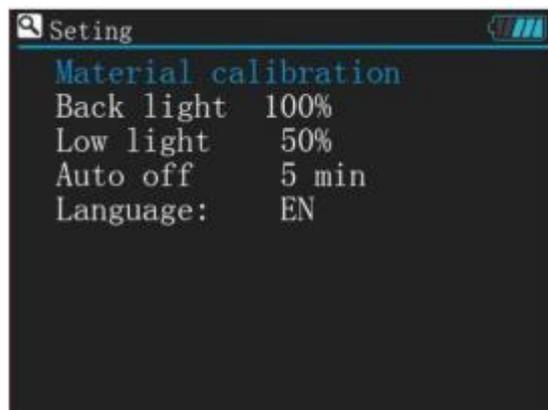
4-3-1 History records interface

Press ”Menu” to enter menu, Choose “Threshold setting” to set threshold value, As shown in 4-3-2



4-3-2 Threshold setting interface

Press "Menu" to enter menu, choose "Setting" can set "Loss calibration" (Minor deviation occurs during use can be calibrated here)、"Back light"、"Low light"、"Auto off" and "Language" As shown in 4-3-3

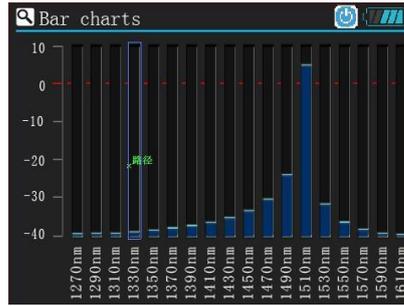


4-3-3

5 Instruction

5-1 interface.

Press the power button to enter "Bar charts" interface, access to the light source can display the current power value as shown in 5-1



5-1 Bar charts

5.2 Switch the display interface

Press the “display” button to switch to the multi-channel power display, if you want to choose single channel, press the "enter" button, select all channel through double click“enter” button, As shown in 5-2-1、 5-2-2;

CWDM power meter		
1270nm: -20.50 dB -20.50 dBm	1290nm: -20.50 dB -20.50 dBm	1310nm: -20.50 dB -20.50 dBm
1330nm: -20.50 dB -20.50 dBm	1350nm: -20.50 dB -20.50 dBm	1370nm: -20.50 dB -20.50 dBm
1390nm: -20.50 dB -20.50 dBm	1410nm: -20.50 dB -20.50 dBm	1430nm: -20.50 dB -20.50 dBm

5-2-1 Singal Channel

CWDM power meter		
1270nm: -20.50 dB -20.50 dBm	1290nm: -20.50 dB -20.50 dBm	1310nm: -20.50 dB -20.50 dBm
1330nm: -20.50 dB -20.50 dBm	1350nm: -20.50 dB -20.50 dBm	1370nm: -20.50 dB -20.50 dBm
1390nm: -20.50 dB -20.50 dBm	1410nm: -20.50 dB -20.50 dBm	1430nm: -20.50 dB -20.50 dBm

5-2-2 multi channel

Note: in edit mode, press the "Ref" key to the current channel or all for zero operation, in edit mode, press the "Units" key to switch the current channel or the whole unit display content;

5.3 Power testing

5.3.1 IN single-port test: the current optical power value can be measured by connecting the optical signal IN port.

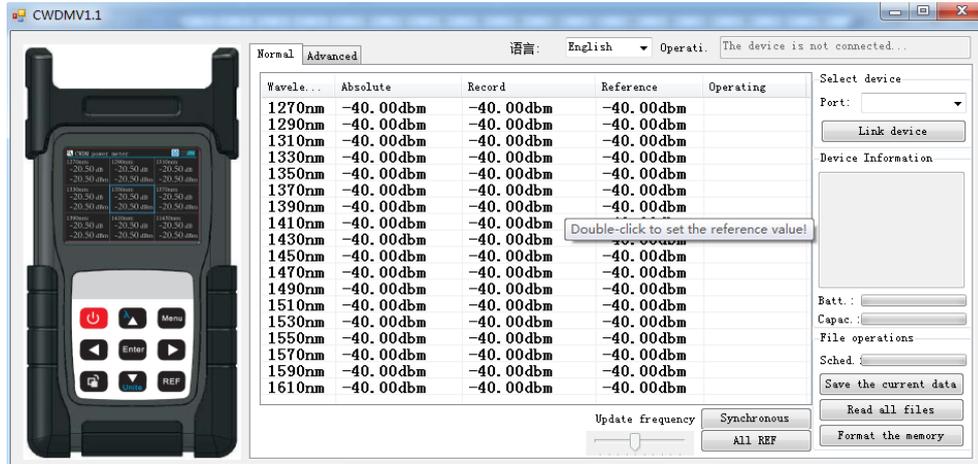
5.3.2 Double-port connection test: the optical signal in the optical link is connected through the IN port, and the output of the OUT port is connected to the original optical communication link, which can ensure that the device communication of the original optical link is not interrupted while the optical link signal is measured and monitored IN real time.

5.4 Connect the software

Connect CWDM power meter and computer using USB cable. Open the PC software, you can read record data and store it in computer with excel format, shown as figure 5-4.

Steps: 1. Select ports 2.Connect equipment 3.Read the data.

The data from CWDM power meter will save as excel format, coexist in the software in the folder.



5-4 Software

Note: You should install CH340 driver and Microsoft.NET.Framewrod4.0 before you use CWDM power meter software.

5.5 Other function

CWDM power meter must use matched charger (12 v / 2000 mA),The icon of showing battery level will be fill when charging battery. Charging time should not less than 10 h.

6 Maintenance

- 1) The tester should work without obvious vibration
- 2) Keep the end face of the outlet clean, do not use unclean and non-standard optical connectors, If there is contamination, remove the outlet flange and clean the end face with dust-free paper or clean cloth and anhydrous alcohol .When the light source is not in use , please cover the dust cap.
- 3) Be careful to plug and pull the optical connector.
- 4) Take it lightly to prevent the light source from falling and colliding .

7 Warranty

We do not recommend that users repair the tester by themselves.

Warranty period of the instrument is within 18 months from the date of shipment.

- Our Company will provide its product promise, and the warranty period is valid within 18 months from the date of shipment. When the purchased product was found to have quality problems during this period, we will make appropriate repairs or replacements.
- If a problem occurs during the use of the instrument, the solution based on the common failure indication cannot be resolved. Please contact the company's marketing or after-sales personnel. Users are not allowed to open the chassis without authorization; otherwise they will not provide warranty service.
- For quality failure due to production defects, the manufacturer is responsible for free repair or replacement of the meter. This guarantee is only applicable to the normal use of the meter and no one is damaged or improperly used.

Warranty of tester does not include wearing parts and problems/faults caused by the following reasons:

- 1) Unauthorized repair or modification of the instrument
- 2) Improper use, negligent use, accident, etc

Appendix I

Warranty Registration Card

Serial Number:

Model Number:

Date of Purchase:

Company Name:

Company Address:

TEL: _____ FAX:

E-mail:

(Please keep this contact, cut the link and send it on this basis) - - - - -

(Please cut along the dotted line and send back to us)

Product number: -----

Product Serial Number: -----

Purchase date: -----

User name: -----

Telephone / Fax: -----

Address: -----

Postal Code: E - mail: -----

Note: The user, please within one month after the purchase, this part of the company sent back to the party as valid.

Appendix II

Warranty notice

1. During the warranty period, the user can present this warranty card and invoice or receipt (photocopy) in the event of a malfunction in using this product under normal conditions, and can enjoy unpaid maintenance services.
2. In the following cases, it is necessary to pay for repairs, and charge certain materials, maintenance fees and shipping charges as appropriate;
 - 1) Failure occurred when the product is used under normal conditions, but it has exceeded the warranty period.
 - 2) The warranty card is not presented. The warranty card is missing, altered or missing.
 - 3) Use under abnormal conditions, such as man-made damage, or under abnormal conditions such as high temperature, high pressure, and humidity, pay for maintenance normally depending on the damage.
 - 4) Failure and damage caused by non-product quality problems.
 - 5) Faults and damages that are not caused by the instructions and precautions in the manual.
3. The following circumstances, the company will not be maintained:
 - 1) Unauthorized repair or modification of the instrument without the consent of the company.
 - 2) Products not produced and sold by the company.