Summary

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OPM/LS/Multimeter series products use high sensitivity detector, single chip microprocessor control.The body shape is novel, the design meets the requirements of human body function, which is beautiful and durable. Optical Power Meter and Visible Fault Location adopt embedded detector and laser，which can be well protected.

Optical Power Meter/Laser Source, RJ45 Sequence and flashlight are standard configuration.Visible Fault Location、RJ45 Tracking and Bluetooth are optional. They are mainly used for continuous optical signal power measurement, optical fiber link loss test and optical fiber line on-off test. They are widely used in optical cable construction and maintenance, optical fiber communication, optical cable sensing, optical CATV and other fields.

Note:① the functions of the instrument are different due to different models；
②Due to the need of design improvement, the contents are subject to change without notice.

Ports

2

Left
①Charging indicator（The red light is on when charging and off when fully charged)
②TypeC port
③RJ45 port
④LCD screen
⑤Sequence lights
⑥Function keys

Bottom
①Remote module

Top
①Dust cover
②Flashlight

Top ①

Left
①
②
③

Left
④
⑤
⑥

①

Bottom

Top
② ③ ④ ⑤

③VFL port
④OPM/LS port
② ③ ④

Top

③LS port
④VFL port
⑤OPM/LS port
② ③ ④ ⑤

⑥

Top
② ③ ④ ⑤
③LS port
④OPM port
⑤LS port
⑥VFL port

Keys

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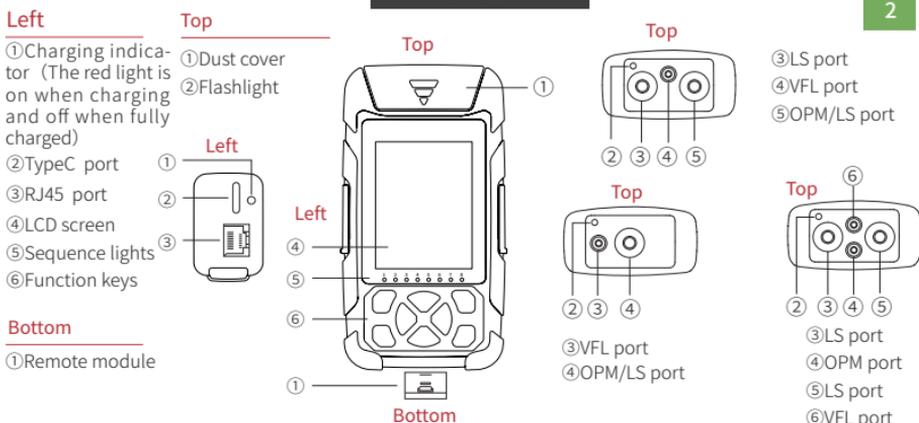
Function keys description：

⏻ REF/▲ MENU
◀ ▶
🔦 ▼/SAVE λ
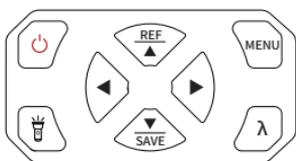
REF/▲ (Up key)   **◀(Left key)**

▼/SAVE(Down key)   **▶ (Right key)**

MENU   **λ**

⏻：①Short press to power on, long press to power off
②In addition to setting mode, short press to switch to the automatic shutdown mode
③Setting screen Tap to save the settings

🔦：①In addition to setting mode, short press to turn on the flashlight
②Long press to turn on and off the red light, short press to switch to 1Hz, 2Hz and off successively

Note:
1. Short press the **MENU** key to switch between optical power and light source interfaces in the Optical Multimeter
2. For detailed functions of other buttons, please refer to each function page

Icons

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According to different functions and specific operations, the corresponding icons will appear in the interface. When an icon appears, it means that the corresponding function has been opened or the corresponding operation has been completed.

⏻ **Automatic shutdown,** in the set time without any operation, the instrument automatically shut down

🔍 **RJ45 Tracking,** long press to enter the digital hunting mode, and the mark will be displayed at the bottom of the screen (optional)

▭ **RJ45 Sequence,**Long press ▶ to enter line alignment mode, the mark will be displayed at the bottom of the screen

🕐 **Time,** display the local time

🔦 **Flashlight,** turn on the LED light

🔆 **VFL,** long press 🔦 turn on red light(optional)

🔋 **Battery,** indicating battery capacity

✴ **Bluetooth,** connect to mobile phone

💾 **Save completed,** indicating that the test results have been saved

OPM

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The interface displays wavelength, absolute power, frequency, decision result and so on.

REF/▲：Press to switch between the < Rel.power + Ref.power > and <Lin.power + Abs. power > display modes. Long press to set the current power as the reference value and enter the < Rel.power + Ref.power > display mode.

▼/SAVE: Long press to save the current power. The save icon is displayed in the upper part and disappears after 1 second.

Short press to view the saved results, and press again to exit.

λ key: Short press to switch wavelengths (including user-defined wavelengths). Long press to enter wavelength ID identification mode, and long press again to exit.

In ID mode, if the wavelength is not recognized, it displays"----nm"; if the TWINS mode is recognized, it will display TWINS, and the wavelength will change with the change of the detected wavelength.

The units of Absolute Power, Relative Power and Linear Power are dBm、dB、mW/nW. The conversion relationship is as follows：PAbs.power=10LgPLin.power/1mW   PRel.power=PAbs.power-PRef.power

OPM
17:10
1310 nm
CW
Lo
-50.00 dBm ×

OPM

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▶◀：Press ▶and ◀ for 1s at the same time, to enter the user calibration mode, the left side of the second line displays Cal, the second line displays the current power, the third line displays the calibration value, press ▲ and ▲ to adjust the calibration value, press the λ key to switch wavelength.

Press ▶and ◀ for 1s at the same time, to save and exit the calibration mode. Press MENU not to save and exit the calibration mode.

Note: The calibration and adjustment range of the power meter is from -6dBm to +6dBm.

OPM
17:10
1310 nm
Cal
-50.00 dBm
00.20

Save interface:
It displays wavelength, serial number, storage time, power, frequency, linear power.
Display the latest saved entries by default. (a maximum of 1000 items can be saved).
►◄ : Toggle entries, minus left, plus right.
MEUN: After long press, DEL is displayed, short press λ key to delete all saved data, short press MENU key to exit without deleting.

Note: When there are 1000 pieces of data saved, the interface will display "FULL" when saving again. It is recommended to export the data in time and delete the internal data of the instrument, otherwise it cannot continue to save.

In the OPM interface, long press MENU key to enter the setting mode. In the setting mode, short press MENU key to cycle through the following three functions: threshold setting / time setting / custom wavelength setting, and long press MENU to exit the setting mode.
In the LS interface, long press MENU key to enter the time setting mode, and long press MENU key again exit the time setting mode.
Threshold setting:
►◄ : Switch threshold is increased by 0.01/0.1/1.0/10.0 dB a step.
REF/▲、▼/SAVE: Adjust the threshold according to the current step.
⏻ : Short press to save the current Settings.
Note: In the right interface, -25.00dBm indicates the current threshold and C 10.00 indicates the current step value.

Time setting:
►◄ : Select the item to be set.
REF/▲、▼/SAVE: Adjust the set item.
⏻ : Short press to save the current Settings.

Custom wavelength Settings:
►◄ : Switching wavelength step.
REF/▲、▼/SAVE: Adjust the wavelength according to the current step value.
λ key: Short press, the customized wavelength number plus 1, and long press to delete the current customized wavelength.
ἷ : Short press, the customized wavelength number minus 1.
⏻ : Short press, save the current settings.
Note: The wavelength range is from 800nm to 1700nm. A maximum of 50 customized wavelengths can be saved.

1. Install the serial port driver and the upper computer program according to the instructions, connect the computer to the instrument with the USB cable, and the instrument must be kept on.
2. Double-click "LcdOpmApp.exe" to open the software, after entering the software, click to open the serial port, click refresh, the instrument saved data is displayed on the right, click Delete all to delete all saved data. Click Export data to export the Excel table. Click the language drop-down box to switch the display language.
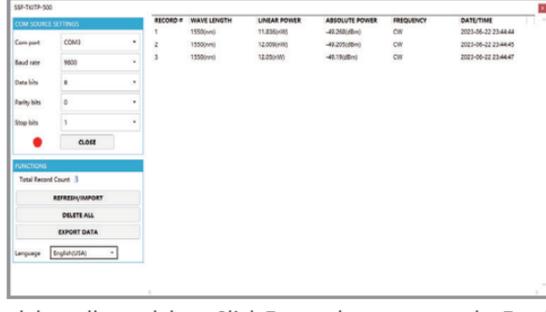
The interface displays wavelength, frequency, attenuation value and so on.

REF/▲: Short press to increase the attenuation value by 1dB.
▼/SAVE: Short press to reduce 1dB attenuation value.
λ key: Press to switch wavelength.
►◄: Switch frequency and wavelength ID, TWINS mode.
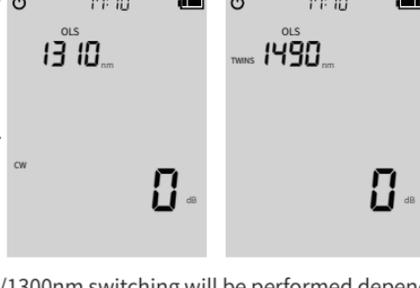
Note: In TWINS mode, 1310/1550nm switching or 850/1300nm switching will be performed depending on the instrument model.
The test frequency is 270Hz, 330Hz, 1kHz, 2kHz.

Time setting:
►◄ : Select the item to be set.
REF/▲、▼/SAVE: Adjust the set item.
⏻ : Short press to save the current Settings.

Note: Optical multimeter does not have this interface.

In the shutdown mode, long press the ⏻ key, after the display screen is lit up, press REF/▲、▼/SAVE key to switch the automatic shutdown time.
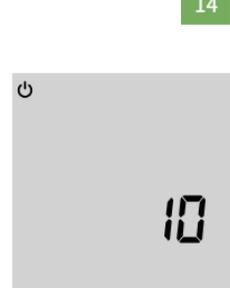
In addition to the save interface, setting interface and calibration interface, long press the MENU and REF/▲ keys at the same time, the screen is displayed as the picture on the right, press MENU key to restore factory settings, and short press the MENU key to not restore factory Settings and exit.

OPM		
Wave range	800~1700nm	800~1700nm
Connector	FC/SC	FC/SC
Detector type	InGaAs	InGaAs
Power range	-70~+10dBm	-50~+26dBm
Uncertainty	±5%	
Standard wave	850/980/1270/1300/1310/1490/1550/1577/1625/1650nm	
Custom wave	50	
Display resolution	Linear display:0.1%, Logarithmic display:0.01 dBm	
Wavelength recognition	Support	
Identified frequency	270Hz, 330Hz, 1kHz, 2kHz	
Storage	1000 items	

VFL	
Wavelength	650±30nm
Output power	≥10mW
Mode	CW/1Hz/2Hz
Connector	Universal jointFC/SC/ST

RJ45 Cable Sequence	
Test Range	≤300m

RJ45 Cable Tracking (optional)	
Test Range	≤300m
Tracking mode	Digital tracking
Live/line to line search	Support

LS		Others	
Wavelength	850/1300±20nm	Display	Black and white broken code screen display
	1310/1490/1550±20nm	Power Supply	Rechargeable Li-battery;1500mAh
Output power	≤-5dBm	Automatic shutdown time	10min/30min/60min/120min
Power regulation range	0~6dB		
Power regulation step	1dB	Battery duration	≥24h
Working mode	CW/270Hz/330Hz/ 1kHz/2kHz/ID/TWINS	Operating temperature	-10℃~+50℃
		Storage temperature	-40℃~+70℃
Stability	±0.2dB/15min(After 15 minutes of preheating)	Relative humidity	0~95% No condensation
		Weight	About 235g
Optical connector	FC/SC	Dimensions	140mmX32mmx73mm

Clean connectors

The optical output interfaces must be kept clean during use. When the test result is not accurate, first consider cleaning the connector.
When cleaning, be sure to turn off OPM and VFL function. Wipe the connection end face with a swab wetted with alcohol.
At the same time, please cover the dust cap after using the instrument, and keep the dust-proof clean at the same time.