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1. Overview

Our designs series optical power meter to meet the high demand. It intergrades the handheld optical power meter and the intelligent optical power meter in one unit.

It can be used for the absolute power measurement and relative measurement of the link loss in dB.

Its compact size, friendly operation interface, broad power measurement range, high precision and brand-new user automatic calibration function and high performance in application makes it an ideal tool for optical fiber network.

2. Specifications

Model	Optical power meter	
Wavelength Range（nm）*1	800~1700	
Detector Type	InGaAs	
Measurement Range（dBm）*2	-70~+3	-50~+26
Uncertainty *3	±0.15dB	
Accuracy	Linear 0.1% or Nonlinear 0.01dBm	
Operating Temperature（℃）	-10~+60	
Storage Temperature（℃）	-25~+70	
Auto-off Time（min）	10	
Operating Time（h）	≥200	
Battery	3 AA1.5V	
Weight（g）	285	
Dimensions（mm）	200X90X50	

Notes:

1. Wavelength Range: Specified standard operating wavelength range in which the Power Meter can work properly under certain technical specifications.
2. Power Measurement Range: The maximum and minimum range in which the Power Meter can work properly.
3. Uncertainty: Difference between two measurement results that were tested by Power Meter and another Standard Power Meter respectively.

3. Standard packages

1. Handheld Power Meter.....1
2. Manual.....1
3. Protective Holster.....1
4. 1.5V AA Battery.....3

5. Cotton Swabs.....1

4. Components Guide



(1) **LCD:**

The LCD screen display the measurement tested in dB, dBm, mW, uW, nW unit; the selected wavelength; the current operating situation and so on.

(2) ⏻ **Key:**

Press the key to turn the unit on/off.

(3) REF **Key:**

To test the power value under certain wavelength.

(4) UNITS **Key:**

Press this key for a few seconds to store the current power value as the reference value which will be displayed on the top left of the LCD screen

(5) **"λ" Key:**

To switch the current operating wavelength between 850nm、1300nm、1310nm、1490nm,、1550nm、 1625nm.

5.Operation and Notes

5.1 ⏻

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Press the (⏻) key for a few seconds to turn on or off the unit

5.2 Absolute power measurement

(1) Turn on the Power Meter

(2) Press the λ key to switch between the wavelengths. The default wavelength is 1310nm.

(3) Connect the light to be measured, and then reading will be displayed on the LCD screen, including Linear and nonlinear value.

5.3 Relative power measurement.

(1) Select the wavelength to be measured.

(2) Under "Absolute power measurement mode", connect to the light to be tested.

(3) Press (REF) key, then current power value is stored as a reference value in dB unit. At the same time it also display the current absolute power value and current relative value is 0dB.

(4) Connect to another beam of light to be tested, display the current relative power value and absolute power value under tested..

5.4 Special function

5.4.1 User Mode: Press the λ +(REF)+(UNITS) **key** synchronously, then enter the User mode. Numeral "CAL" will be displayed on the top right corner.

Function	Button	— — —
Plus 0.05	(UNITS)	— — —
Minus 0.05	dB	— — —
Store	(⏻)	— — —
Switch Wavelength	[λ]	— — —
Return to the Factory Setting	(REF)+(UNITS)	— — —

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Notes: If any errors or mistakes caused by the user self-calibration operation, please press the (REF)+(UNITS) synchronously under the user mode to go back to the factory setting.

5.4.2 Auto-off : Press (⏻) **key** to turn on the auto-off function. The auto-off symbol will be displayed on the left. The unit will be turn off automatically after 10 minutes idle time.

Appendix:

Optical fiber loss measurement

Step 1- Optical Reference Level

- Turn on optical power meter and press the λ key to select the wavelength.

- Turn on optical light source (emitting source) and select the wavelength. Wait for 1-2 minutes until it stabilize.
- Select a piece of patch cords, which is used to connect with the light source, we call it emitting patch cords. Cleaning connector of the patch cords. The fiber of the emitting source patch cords must be the same fiber type as the fiber under test.
- Connect the light source (emitting source) with the Handheld Power Meter through the emitting source patch cords
- Handheld Power Meter get the power measurement value.

This value should be close to the one that light source (emitting source) set. If it has wide disparity, please make sure the fiber connection is clean properly else replace another jumpers.

Step 2-Optical Loss Measurement

- Keep the emitting source patch cords connection with the light source (emitting source).
- Connect the Handheld Power Meter and light source (emitting source) to the optical fiber link respectively.

Notes: cleaning all the connectors surface including all the necessary optical adaptors. The reading in dB unit displayed on the screen is the tested optical fiber link loss.(also display the current absolute optical power value in dBm unit).

6.Maintenance

1. It is important to keep all optical connectors and surfaces free from oil, dirt or other contamination to ensure proper operation.
2. Keep using one type of adapter to avoid excess loss from different connectors.
3. Please use dust proof cap for protection to avoid begin scratched or contaminated when Handheld Power Meter not in operation.
4. Light interface is sensitive, please carefully plug in and pull out the connectors.
5. Please use clean cotton to clean the sensor surface, clean it in clockwise direction carefully.
6. If does not need to use for a long time, please take out the battery.

7.Troubleshooting

Description	Problem	Method
Faint LCD display \No display after turning on the unit	Battery is weak/Others	Turn on the unit again/Change battery
Insensitive display in LCD	Light interface is polluted/ broken/Display locked	Check connector carefully and clean sensor's interface

8.Change Battery

8.1 If you find battery is weak while operating it, please immediately turn the unit off and change a new battery.

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