User Manual

Optical DWDM Power Meter

ODPM-48

TheFibers Inc.
A-1109 Keumkang Penterium IT Tower,
282 Hagui-ro, Dongan-gu, Anyang-City, Korea
Tel: +82-31-381-6108
Fax: +82-31-381-6109
Email: sales@thefibers.com
Http://www.thefibers.com

TheFibers CREATIVE FIBERS

1. Introduction

ODPM-48 is developed to measure exact power and frequency adoptable to DWDM network conditions. This instrument is portable and made to be appropriate to the outside environment.

1.1 Main Functions

- Automatic Wavelength & Power detection
- It is compact in size and lightweight for excellent portability
- ODPM-48 is easy-to-use testing instruments for optical fiber DWDM network
- Auto shut off function
- Fast response for full 48-channels
- High-quality graphics
- Saves/ Stores measured large data

1.2 Standard Accessories

Accessories	Quantity
Power Meter Body (included Battery)	1 EA
Body Rubber Case	1 EA
USB Data Cable	1 EA
Typical 5-pin Charger	1 EA
User Manual	1 EA

1.3 Optical Standards

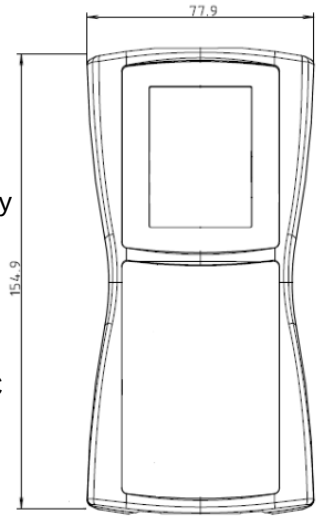
- Wavelength

Parameter	Unit	Specification
Channel Spacing	GHz	DWDM 100GHz (according to ITU-T)
Number of Channels		48
Channel Frequencies	THz	frequencies 196.3 ~ 191.6 (1527.21nm ~ 1564.68nm)

- Optical Power

Parameter	Unit	Specification
Range of display	dBm	+10 ~ -40
Accuracy	dB	±1.0dB @ -30dBm
Resolvability	dB	0.01
Measuring unit		dB / dBm

- Optical Connector
  Optical connector interchangeable adapter.
  SC, FC, ST, LC



1.4 Specifications

- Input voltage : 1800mAh 3.7v
- Electricity consumption : MAX 0.25A
- Power Supply : Rechargeable Lithium-Polymer Battery
- Weight : 250g
- Width : 77.9mm
- Height : 154.9mm
- Thickness : 35mm
- Display size : 2.8 inch
- Operating Temperature : -20℃~ +55℃
- Guaranteed time of operating
  : 420 minutes when fully charged
- Relative Humidity
  : ~90% RH from 0 ~ 40℃

1.5 About the charger

A rechargeable battery is installed inside the measuring instrument, and this charger module has the Ministry of Information and Communication standard 5 pin charger phot. Connect the connecting point to the top of the ODPM-48 after the included cable is connected to the charger.

[Typical 5-pin Charger]

-Charging conditions :

LED Color	Action of LED	Conditions for battery charge
Red	ON	Charging
Green	ON	Fully charged

※ Caution
- Do not allow battery to short circuit.
- Keep the battery away from fire.
- Never dismantle, change structure of distort the battery.
- Do not dip the battery in water or other liquid.
- Do not store the battery in places warmer than 60 degrees Celsius.
- Do not drop or give a shock to the battery.

1.6 Warranty

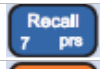
ODPM-48 you bought is passed our all inspection and then is shipped to the customers. TheFibers give you a warranty for one year from the buying date. During the warranty period, the returned product by freight prepaid from the customer, TheFibers will provide repair and replacement for any defective product without additional charge which is needed to repair or replacement.

However please careful that the following are expressly NOT COVERED under warranty:

- Any loss, damage by using un-approved Battery and AC Adaptor
- In case the serial or warranty sticker is removed
- Failure to use products under abnormal operating conditions
- Any loss, damage by user fault
- Any damage by disassembly without permission

2. Getting Started

2.1 Explanation of user interface and operating keys

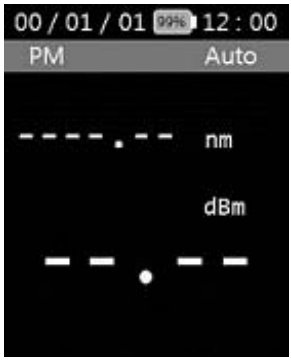
Key	Function	
Backlight		Power ON/OFF
PM		Power Display
DWDM		Scanned dB value of the wavelength is represented as a data.
SCAN		Wavelength is scanned and dB value is represented.
dB/dBm		Each time you press the key, dB and dBm are repeated.
▲		Up arrow
Graph		Scanned dB value of the wavelength is represented as a graph.
Recall		Recall data
ENTER		Enter
Save		Data Save
ESC		Cancel
▼		Down arrow
MENU		Set up and Data delete

2.2 Screen Information

1) Power ON / OFF

- Is used to turn the instrument power on and off. If you press the 

(Backlight) button for more than 2 seconds, the logo shown below appears and it moves to 'Power Meter', which is the basic channel.



- Press the 

(Backlight) button for more than 2 seconds to turn the power off.

2) Power Meter

- Power Measurement is divided into ‘Auto’ and ‘Manual’. If you select 'Auto', the largest value are shown after the measurement.

- Use the arrow keys to different values can be found.
- 'Manual' is the wavelength of the desired user is used to determine the value of dBm.
- In the above screen , click PM (PM) button, will write the wavelength to be measured. And click ENTER (Enter) button.

- If you want to re-select ‘Auto’, click PM (PM) button.

3) DWDM

- Depress the 

(DWDM) button, then the display will show as the figure below.

- 'DWDM' is divided into 'Auto' and 'Manual'.

- The moment you click on the 

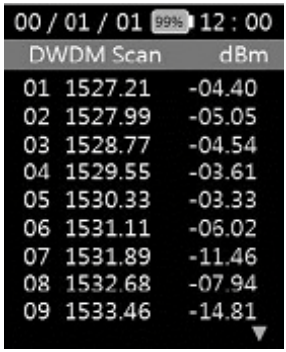
(DWDM) button, it is scanned only once in Manual mode.

- If a screen shows asking for a channel selection, input the channel you want and press the 
(Up arrow) and 
(Down arrow) key.

- Selection of 'Manual' and 'Auto' can be done by this 

(Menu).

4) SCAN



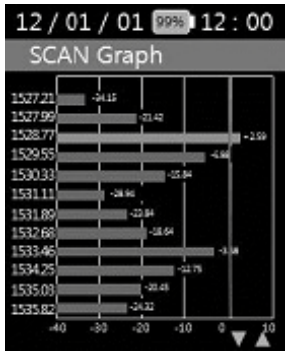
- If you press the SCAN 3 def (SCAN) button, The selected wavelengths are scanned.

5) dB/dBm

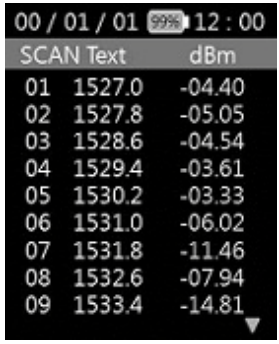
- Pressing the dB/dBm 4 ghi (dB/dBm) key alternately shows the ‘dBm’ and ‘dB’.

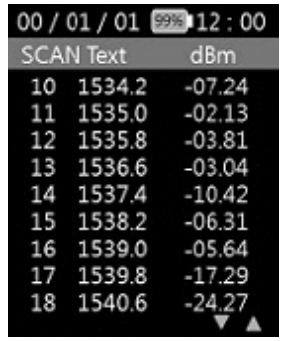
5) Graph

- If you press the Graph 6 mno (Graph) button after scanning, a graph screen like the one on the right show.



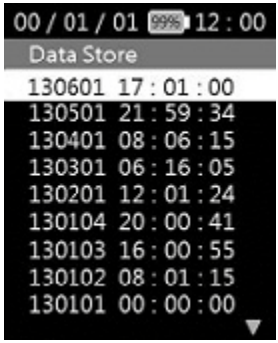
- If you press the Graph 6 mno (Graph) button again it returns to text mode.



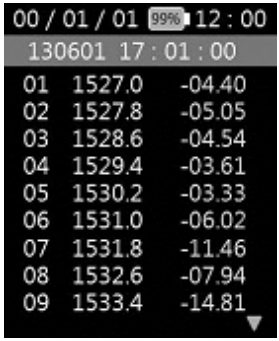


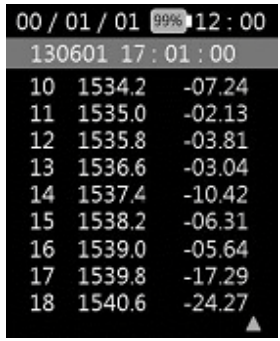
6) Recall

- Press the Recall 7 prs (Recall) button to access the menu that calls the measured result of optical power for each channel in the form of text.



- Press the ENTER - (Enter) button to select the data you want, the data saved are displayed.

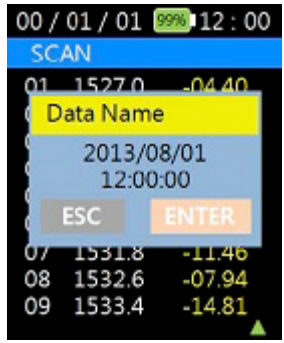




7) Save

- This saves the currently displayed value, and All text and graph modes are savable using the 

(save) button.



- When you press the 

(save) button the following message shows and asks the name of the Data to be saved, and the data based on the current data and time is saved if you press the 

(Enter) button.

- If you want to stop saving, press 

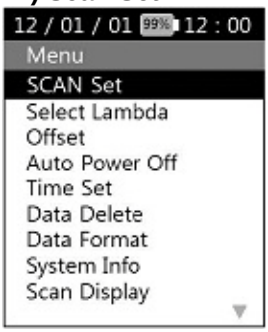
(ESC).

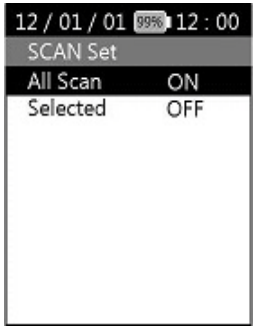
2.3 Menu

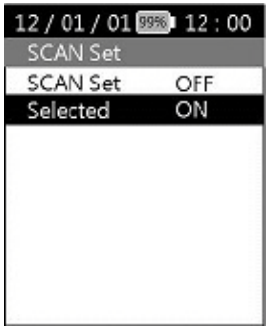
If you press the MENU 0 (Menu) button, it changes to a screen where you can configure the operating environment of ODPM-48.

- The menu consists of 'SCAN SET', 'Select Lambda', 'Off Set', 'Auto Power Off', 'Time Set', 'Data Delete', 'Data Format', 'System Info', 'Scan Display', 'SCAN Mode' and 'Threshold'.

1) Scan Set



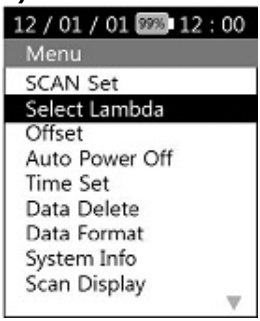


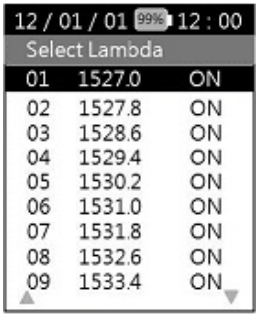


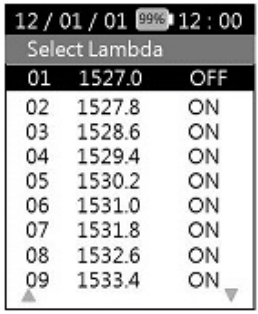
- If you press the ENTER - (Enter) button after selecting 'Scan Set', a set up screen for 'Scan Set' shows up. 'All Scan' is registered 48

wavelength. As the channel values that users mainly use are provided in the screen, it is easy to set up the channel value that the user wants.

2) Select Lambda

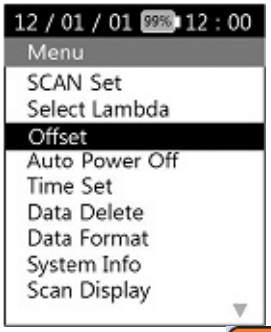


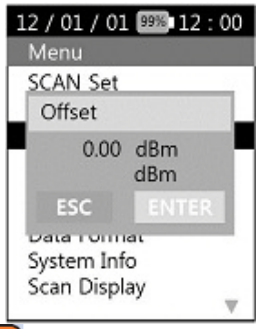


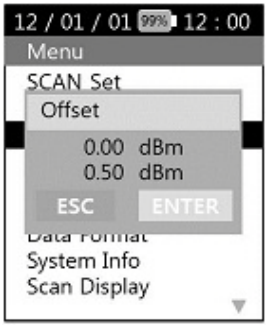


- If you press the ENTER (Enter) button after selecting 'Select Lambda', you can select the channel that you want. If you then press the ENTER button, it changes from OFF to ON.

3) Off Set



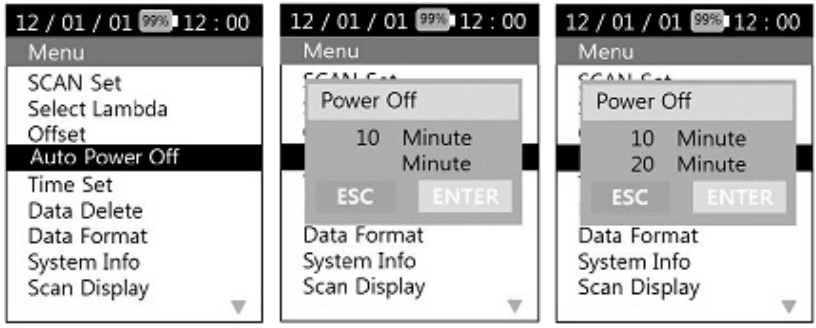




- If you press the ENTER (Enter) button after selecting 'Off Set', you can set up dBm value and the optical power value on the screen.

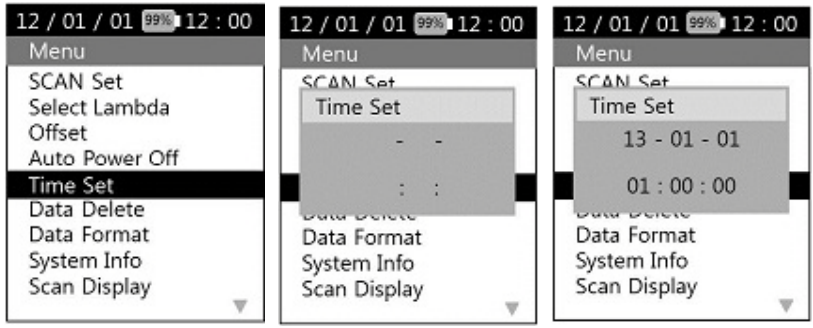
- You can set the 'Off Set' by pressing the ESC key and ENTER.

4) Auto Power Off



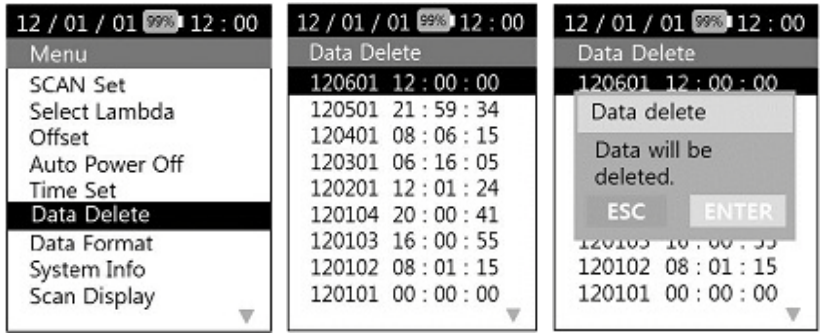
- The power automatically goes off if the user does not input any key in the determined time.
- If you press the ENTER (Enter) button after selecting 'Auto Power OFF', you can set the Auto power off time in minutes.
- You can set the time by the ESC (ESC) key and ENTER (Enter).

5) Time Set



- If you press the ENTER (Enter) button after selecting 'Time Set', you can set the today date and current time.
- You can set the time by pressing the ESC (ESC) key and ENTER (Enter) button.

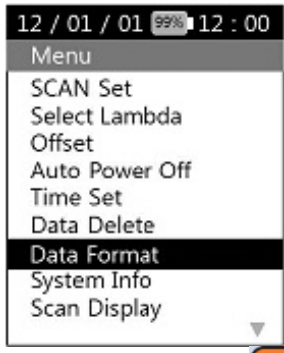
6) Data Delete

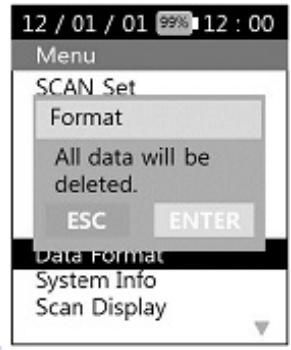


- If you press the ENTER (Enter) button after selecting 'Delete Data', you can delete the data.
- If you press the ENTER (Enter) key after choosing the data you want to delete, message appears on the screen.
- If you press the ENTER (Enter) button, it is deleted from the memory.

7) Data Format

- You can delete all saved files by formatting the transportable memory.



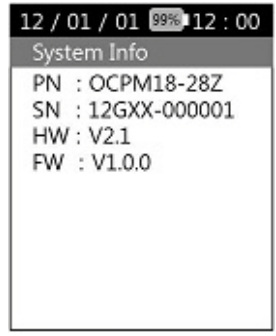


- If you press the ENTER (Enter) key after 'Data Format', message appears on the screen.

- If you press the ENTER (Enter) button, all files are deleted from the memory.

8) System Info

Generates information about the equipment.

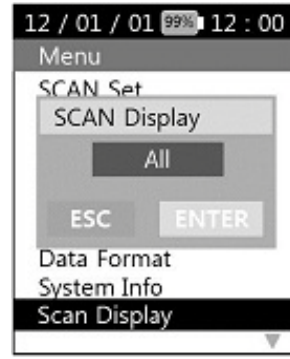


9) Scan Display

- ‘Scan Display’ consists of ‘All’ and ‘Measured’. This can be selected using 

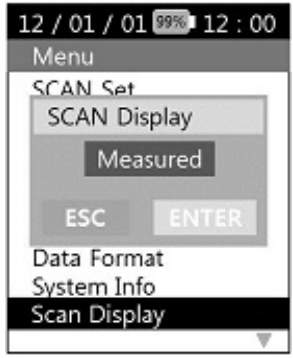
, 

the arrow keys .



- If you choose the ‘All’, from 1527.21nm to 1564.68nm values of 48 wavelengths are output.

- If you choose the ‘Measured’, the value of the wavelength to be measured are output.

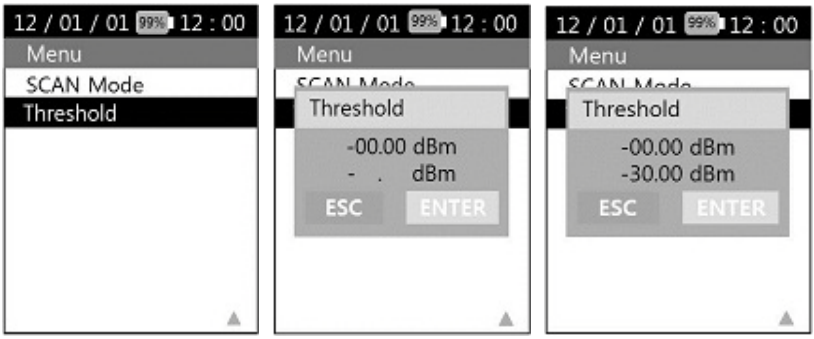


10) Scan Mode

- The ‘Scan Mode’ consists of the ‘Auto’ and ‘Manual’. This can be selected using  ,  the arrow keys.

- If you choose the ‘Auto’, when selecting ‘DWDM’, shows the real time changing values. If you choose the ‘Measured’, when ‘SCAN’ and selecting ‘DWDM’, shows the values.

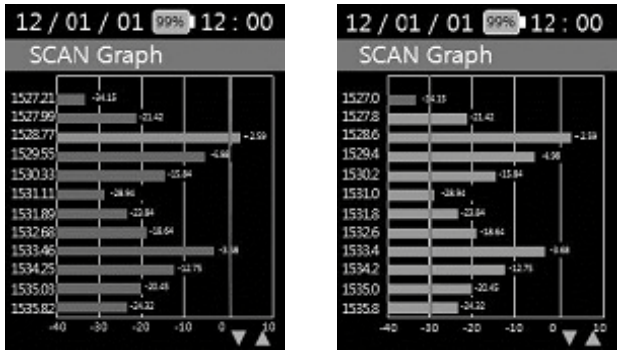
11) Threshold



- You can change the baseline.

- '-30.00dBm' is the default setting.

- If you press the ENTER (Enter) button after selecting 'Threshold', you can set the baseline.



- Baseline changes can be found at the graph screen.