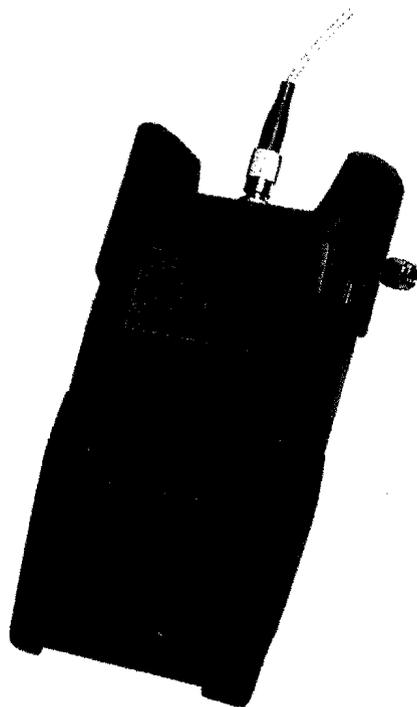


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**Optical Power Meter**

**1. Overall**

**1.1 Features :**

2. WaveID—Autowavelengthidentification&switching
3. FrequencyID—Autofrequencyidentification
4. 2typesofbacklightmodes,manualoroutsidelightintensity, whichindicatedbyLEDlightredorblue color.
5. Intelligentbacklight
6. 1000recordsstorageordownloadviaUSBcable
7. USBcommunicationportforsavedtestingrecordsdownload
8. Referencepowerlevelcanbesetupandstored
9. Userself-calibratingfunction
10. Auto-offfunction
11. Upto200hrsbatteryife
12. Specifications

| Type                        | A  | C       |
|-----------------------------|--|---------|
| Calibration Wavelength (nm) | 850/1300/1310/1490/1550/1625             |         |
| Detector type               | InGaAs                                   |         |
| Measurement Range (dBm)     | -70~+6                                   | -50~+26 |
| Uncertainty (dB)            | ±0.15 (3.5%)                             |         |
| linearity (dB)              | ±0.02                                    |         |
| Display resolution(dB)      | 0.01                                     |         |
| Frequency ID (Hz)           | 270, 330, 1K, 2K                         |         |
| Wave ID (nm)                | 1310, 1490, 1550, 1625                   |         |
| Date Storage Capacity       | 1000                                     |         |
| Communication Port          | USB                                      |         |
| Standard Connector          | FC /2.5mm universal                      |         |
| Optional Optical Connector  | FC/SC/ST Interchangeable/2.5mm universal |         |
| Optional Optical Connector  | LC/FC/SC/ST Interchangeable              |         |
| Alkaline battery            | 3*AA, 1.5V                               |         |
| Power Adapter(V)            | 8.4                                      |         |
| Battery Operating time (h)  | 200 without backlight                    |         |
| Operation Temperature(°C)   | -10~+60                                  |         |
| Storage Temperature(°C)     | -25~+70                                  |         |
| Dimension(mm)               | 175*90*44.5                              |         |
| Weight(g)                   | 231                                      |         |

3

Remark: Battery operating time is based on the condition of the power off the backlight. If power on the backlight continuously, the operation time will be shorter.

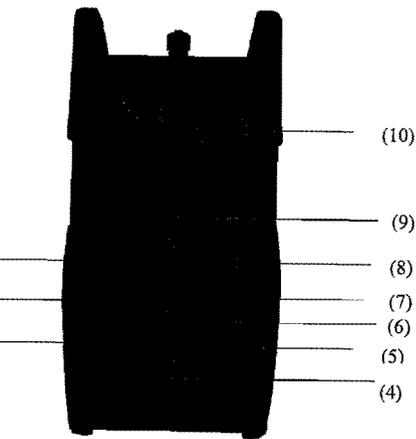
**Notes:**

1. Calibration Wavelength: 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.

13. Standard packages

| No. | name                | qty |
|-----|---------------------|-----|
| 1   | Optical Power Meter | 1   |
| 2   | User Manual         | 1   |
| 3   | USB cable           | 1   |
| 4   | CD                  | 1   |
| 5   | 1.5V AA battery     | 3   |
| 6   | Power Supply Unit   | 1   |
| 7   | Cotton Swabs        | 1   |
| 8   | Carry Bag           | 1   |

padFunctions:



2-1

(1)  PowerKey

ON/OFF the instrument

Power Saving setting: the unit will automatically shut off after 15 minutes idle time, whatever in the condition of battery power supply or AC power supply. Once choose this setting, the "auto-off" will display on the left bottom of the screen. This power saving is the default setting, once open the power meter, will enter into this mode. Short press the power key to off auto power saving mode.

Power Saving(Auto-off)



(2)  WavelengthSelection/WavelengthIdentify

Short press this key to switch the wavelength and display it on the top left of the LCD screen, 1310nm is the default wavelength



Press the  for 2 seconds, enter into wavelength auto-identify, on the upper right of screen have "AU", and also long press this key to quite this function.



(3)  backlight control(two mode of back light control, press this key to choose one mode):

"LDR" the intelligent backlight control mode. Power meter will off/on the backside in t 15second based on the outside light condition, and this is the default mode

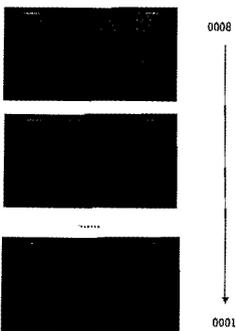
Back light control key mode. Press  to on/off the back light

(4)  Saving/data-view key.

Data-saving, THIS TYPE OPTICAL POWER METER can saving not less than 1000 data. Press , the screen will display the data saving No, tip saving the data, double press the  confirm the saving.



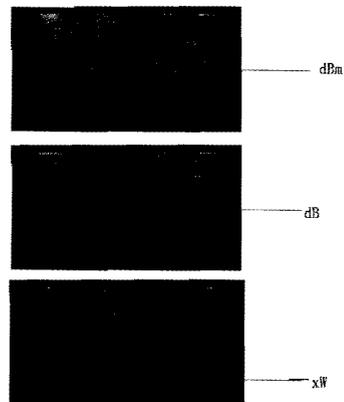
ew. Long press **MEM** enter into the data view  
 short press **MEM** can view the data.



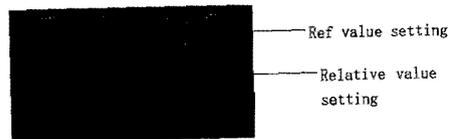
Delete/Cancel Key.  
 delete. When view the data, press **DEL** to delete the

the saving. When in the saving mode, press **DEL** to  
 e current data saving.

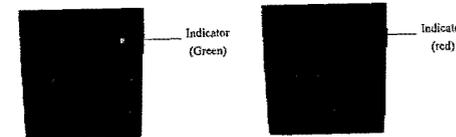
(6) **UNIT** unit switch key  
 Press this key to switch between the absolute measurement(dBm)  
 and relative measurement(dB) and xW of the optical power.  
 mW.dBm conversion:  $10 \log(mW)=(dBm)$   
 mW.uW.nW conversion:  $1mW=100uW=1000nW$



(7) **REF** REFsetting:  
 To store the current power value as the reference value which will be  
 displayed on the top right of the LCD screen, at the same time the  
 "Ref" also display on the right top. It will compare the current power  
 with the reference power and show the relative power value in dB.  
 The relationship between relative value(dB), absolute value(dBm), and  
 Ref value:  $relative\ value = | absolute\ value | - | Ref |$



(8) "B/L SET"backlight indicator  
 Indicate backlight control mode. Green light indicate that  
 "LDR" intelligent backlight control mode, Red light indicate that  
 key-control mode



(9) "LDR" intelligent backlight controller  
 In the intelligent backlight control mode, the controller will  
 automatically adjust the backlight with the outside light, which to  
 save the power.  
 (10)Screen  
 Display the data and the instrument working mode.

**3. Operation Instruction and Notes**  
**2.1 Powering the Optical Power Meter**  
 The optical power meter can be either battery powered or AC  
 adaptor powered, giving total flexibility for most testing sites and  
 situations  
 2.1.1 AA battery

attery,  will display on the left top of the screen, 3-1.



3-1

le:

at 70% ~ 100% electricity

at 40% ~ 70% electricity

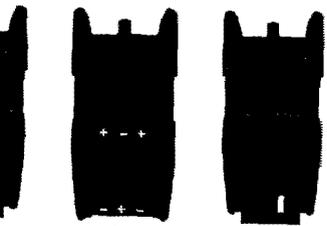
at 30% ~ 40% electricity

at 20% ~ 30% electricity.

at enough electricity, left less than 20%, the power

forced power off

the battery, 3-2



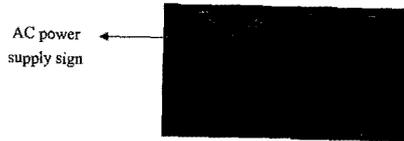
3-2



Notice: Make sure that you insert the batteries with their positive and negative connectors correctly aligned.

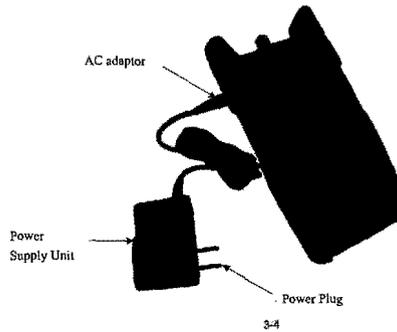
### 3.1.2 Power Supply Unit

When the battery is used out, can use the power supply unit, and at this time on the left top of the screen, there will be a  (3-3). When the battery in the power meter, and still have enough electricity, the tester will choose AC power supply as the priority.



3-3

When use the AC adaptor, connect the power plug as picture, and insert to the AC socket.



3-4



Notice: Please use only the power supply unit supplied with the tester, use other kind of PSU may cause damage for the instruments.

### 3.2 Power On the optical power meter

First of all insert the battery or the PSU, do not have any laser in, press  to open the tester, 6-5 is the opening interface



3-5

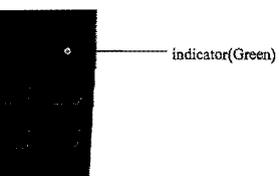
When the tester is standby, press  key can cancel or choose auto-off function. If auto-off function are chosen, the "Auto-off" will display on the left bottom of the screen.

### 6.3 Backlight setting

After open the optical power meter, long press , choose backlight control mode.

#### 3.3.1 "LDR" Intelligent backlight control mode

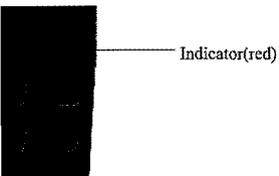
Long press , "B/L SET" is green (6-6), after 10 seconds, the green indicate off, the LDR the controller will automatically adjust the backlight within 15 seconds with the outside light, which to save the power.



indicator(Green)

-6

the key control backlight mode.  
), "B/L SET" indicator turns to red(3-7), enter into key  
t mode, after 10 seconds the indicator off, short press  
OFF the backlight.



Indicator(red)

-7

### 3.4 Output power measurement

3.4.1 Take off the dust cap, connect with the patch cord.



Notice: Make sure the connector and the end-face of the patch cord is clean, and take notice on the type of the patch cord, make sure the correct patch cord are connected.

### 3.4.2 Select the wavelength

Short press **[2]**, select the calibrated wavelength, notice that if the selected wavelength are not the same with the laser source wavelength, that will cause the error of the measurement value. There are 6 calibration wavelength for selection.  
(3-8)



Calibration wavelength

3-8

### 3.4.3 unit switch

Press **[UNIT]** to switch between the absolute easurement (dBm) and relative measurement(dB) and xW of the optical power.(6-9)



dBm



dB



xW

3-9

### 3.4.4 Relative value measurement

Each wavelength can set the Ref value, Press **[REF]**, set the current value as the ref value, and automatically calculate out the relative value. (Right top of the screen display the "ref" and setting dBm value 6-10)



Relative value setting

Relative value setting

3-10

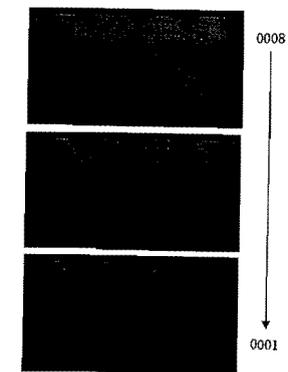
### 3.4.5 Data processing

Data saving and deleting. The power meter have 1000 data saving memory. When do the output power measurement, press **[SAVE]**, at the right top of the screen will display the data saving No. eg: "0008" (6-11), hint that if the data save or not, double press **[SAVE]** confirm the saving, **[DEL]** cancel saving.



3-11

view & delete. Long press **SAVE**, can view the record, the screen will display the last saving. Short press **SAVE**, can view the data from the record. (3-12) Press **SAVE** to delete the record, press **SAVE** exit the data view.



3-12

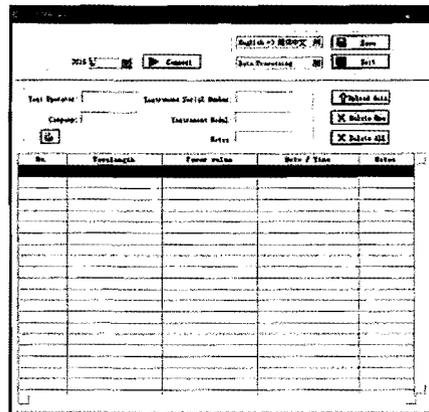
### 3.5 Data Communication



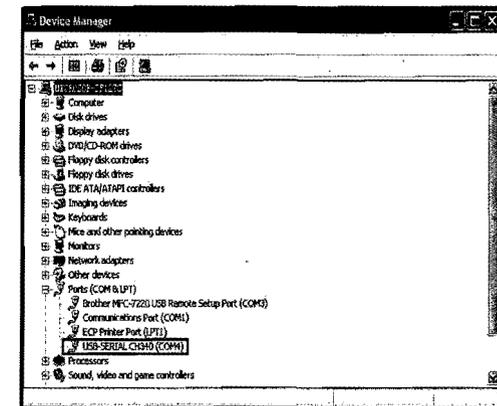
Note: Before proceed the data communication, make sure the driver and application software are installed successfully (Details of installation please refer to chapter 5)

#### 3.5.1 Open the software

Double click  icon to open the software, user can choose the language on request (Chinese or English), shown as figure 3-13

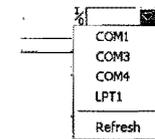


Connect Optical power meter with computer via USB cable, turns on the power meter. From the Device Manager: "Port (COM&LTP)", We can see that power meter port is "COM4", (3-14)



3-14

Therefore, choose "COM4" port shown as below figure (3-15)

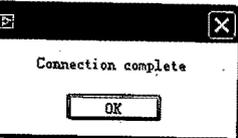


3-15

Click "Connect" as shown in below figure 3-16, will successful connection window shown as figure 3-17. Click "OK" to finish the connection, the unit can be communicated with computer properly.



3-16



3-17

### 3.5.2 Data edit

Firstly, input the following basic information as shown on figure 3-18.

Test Operator: \_\_\_\_\_ Instrument Serial Number: \_\_\_\_\_  
 Company: \_\_\_\_\_ Instrument Model: \_\_\_\_\_  
 Notes: \_\_\_\_\_

3-18

Then click "Upload data", the saved data in the unit will be uploaded into computer and shown as on below figure (3-19).

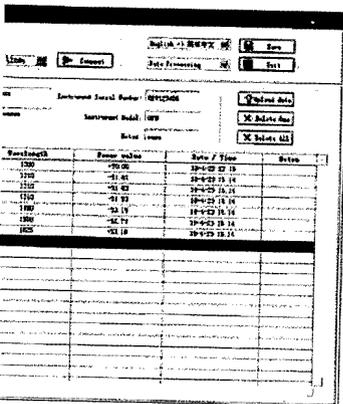
| No. | WaveLength | Power value | Date / Time   | Notes |
|-----|------------|-------------|---------------|-------|
| 1   | 1310       | -41.81      | 10-0-23 15:14 |       |
| 2   | 1310       | -41.43      | 10-0-23 15:14 |       |
| 3   | 1310       | -41.59      | 10-0-23 15:14 |       |
| 4   | 1310       | -43.14      | 10-0-23 15:14 |       |
| 5   | 1310       | -42.75      | 10-0-23 15:14 |       |
| 6   | 1310       | -42.39      | 10-0-23 15:14 |       |
| 7   | 1310       | -44.25      | 10-0-23 15:14 |       |
| 8   | 1310       | -44.25      | 10-0-23 15:14 |       |

3-19

| No. | WaveLength | Power value | Date / Time   | Notes |
|-----|------------|-------------|---------------|-------|
| 1   | 1310       | -40.20      | 10-0-23 15:14 |       |
| 2   | 1310       | -43.41      | 10-0-23 15:14 |       |
| 3   | 1310       | -40.14      | 10-0-23 15:14 |       |
| 4   | 1310       | -41.13      | 10-0-23 15:14 |       |
| 5   | 1310       | -43.14      | 10-0-23 15:14 |       |
| 6   | 1310       | -42.75      | 10-0-23 15:14 |       |
| 7   | 1310       | -42.39      | 10-0-23 15:14 |       |
| 8   | 1310       | -41.14      | 10-0-23 15:14 |       |

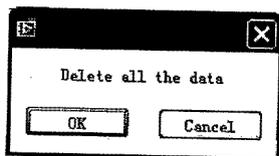
3-20

Data edit at data display area, including data delete, data save and data printing. Select the required data, click "delete one" to delete it from the sheet, as shown on figure 3-20 and figure 3-21, in addition, the corresponding data from the power meter also will be cleared accordingly.



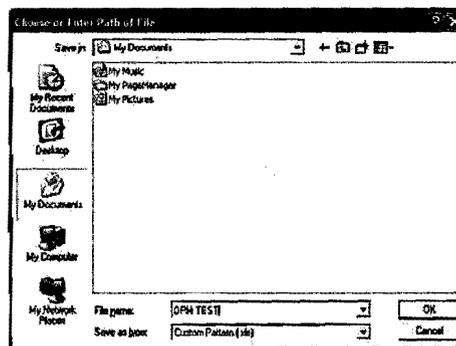
3-21

Click "Delete All" pop up a window shown as figure 3-22, click "OK" to delete all data, also will clear all data from the unit.

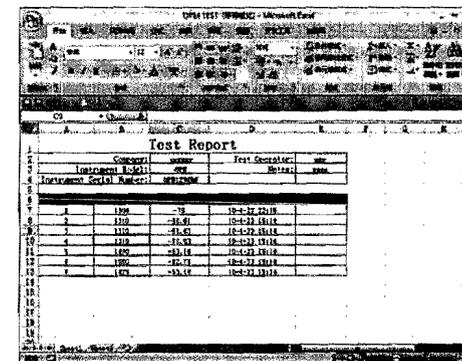


3-22

Click "Save" pop up a window shown as figure 3-23, input the file name, choose the save path and press "ok" for storage. File will be with EXCEL format and will pop up testing report automatically shown as figure 3-24.



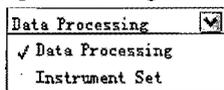
3-23



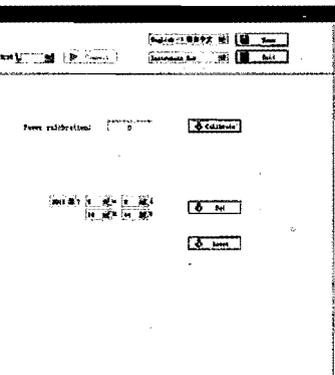
3-24

Click  on the software, you can print testing report directly, you can also print the testing report from Excel.

function setting on the unit  
 function setting mode to switch the interface  
 on figure 3-25 and figure 3-26:



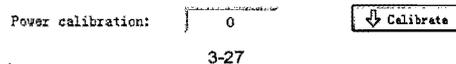
3-25



3-26

There are there items can be set on the unit:

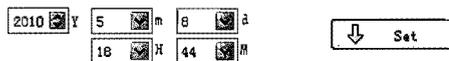
(1) Optical Power Calibration



3-27

Input the corresponding optical power and click calibration", users can recalibrate the optical power by themselves.

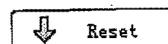
(2) Time setting



3-28

Input the corresponding date and time, and then click "Set" to modify the time and date accordingly.

(3) Back to factory mode

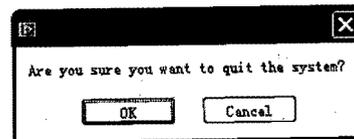


3-29

Click "Reset", the unit will be back to default setting (factory mode setting).

3.5.4 Close software

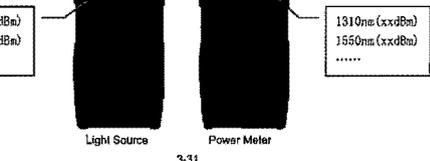
Click exit, pop up a window shown as below (figure 3-30):



3-30

3.6 Wavelength Automatic Identification

- Connect power meter with its same serials light source .
- Enable light source be Under "Wave ID" operation mode: press of light source to emerge light output from light source. Hold down for few seconds, light source will be enter into Wave ID mode, also "--AU" will be shown on the upper right of LCD for a indication.
- Enable power meter be under "Wave ID" operation mode: Hold down for few seconds, power meter will be enter into Wave ID mode, also "--AU" will be shown on the upper right of LCD for a indication.
- Once the ID information is changed from light source (press to change wavelength), after 3 to 5 seconds later, the detected information on optical power meter also will be changed automatically according to light source. Please refer to below figure(3-31) for easy understanding.
- Exit Wave ID mode: Hold down again to exit Wave ID mode from power meter and hold down again to exit Wave ID mode from light source.



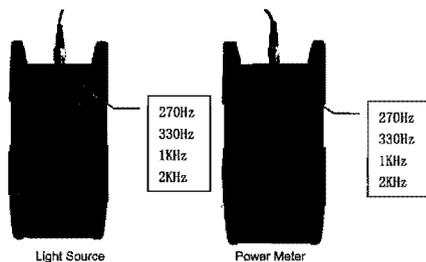
3-31 Frequency detection

When use tone detection function, following requirements have to be taken into account:

NOTE: Tone detection will be effective only with measurement range between +6~-40dBm.

NOTE: Tone detection can be worked only with measurement range between +26 ~ -20dB, because the detected frequency will be unstable when the power is weak. How to act tone detection on Power Meter?

- Connect power meter with its same serials light source .
- Output frequency from optical light source: Press **[λ]** to emerge light from the unit, press **[FREQ]** for very short second, light source will output frequencies of 270Hz-330Hz-1KHz-2KHz accordingly, which will be shown on the upper right of the LCD in light source. In the meantime, the power meter will detect the corresponding frequency automatically from light source. Please refer to below figure (6-32) for better understanding:



3-32



**Note:**

Frequency ID and wave ID cannot be operated at the same time.

To avoid risk of serious eye damage, please do not look into the optical port of laser source at any time.

**3.8 Power off**

**Automatic power off:** When auto-off function is activated, the unit will turn itself off automatically after 10minutes idle time, whatever the power supply is with alkaline batteries or is with power supply adaptor directly.

**Manual power off:** Under any operation mode, hold down **[OFF]** for a few seconds to turn the unit off.

Note: With either power off operation, the unit will store the last calibration wavelength and backlight control mode automatically, which will be the default setting when user turns unit on next time.

**4 Troubleshooting**

| Problems                        | Possible cause  | Solution   |
|---------------------------------|---|--|
| Faint display on the LCD screen | 1. Power is off<br>2. The battery power is too low                  | 1. Press <b>[ON]</b> key.<br>2. Change the batteries   |
| Inaccurate measurements         | 1. Optical connector is not clean.<br>2. incorrect fiber connection | 1. Clean optical connectors<br>2. Re-connect the fiber |

**5 General Maintenance**

5.1 Always keep the connector ports of your power meter are clean.

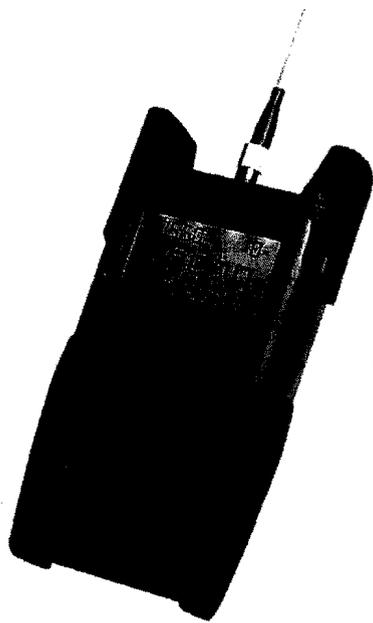
5.2 Do not use bad quality optical fiber connectors/adaptors, otherwise, it will damage the interface of detector that will greatly affect the performance of the unit.

5.3 Try to use only the adaptor supplied.

5.4 Once not in use, make sure dust-proof cap is placed properly over the optical ports.

5.5 Carefully plug in/out for fiber connectors/adapters to avoid scratches on the port of the power meter.

5.6 Keep regular cleanings on optical port of power meter, please clean with cotton swabs supplied using alcohol properly.



**Optical Light Source**

## **1. Overall**

### **1.1 Features :**

- Wave ID information can be transmitted when used with Optical Power Meter.
- Tone generation, 270HZ,330HZ,1KHZ,2KHZ
- Output power can be adjustable
- Output power value is shown on LCD display
- Intelligent backlight control (light intensity can be adjusted properly according to ambient light, which greatly reduced power consumption)
- AA alkaline and AC adapter for power supply
- Low battery indication

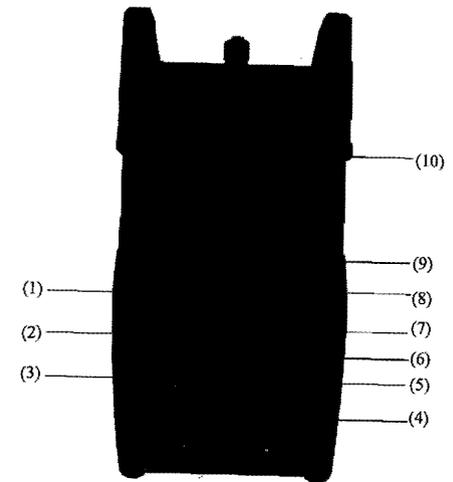
## Technical Specifications

|                            |  |
|----------------------------|--|
| Name                       | Optical Light Source                   |
| Operating wavelength (nm)  | 1310/1550 (others specify on requests) |
| Applicable fiber           | SM,MM                                  |
| Laser type                 | FP-LD(others specify on requests)      |
| Maximum Output Power (dBm) | -5 (can be adjustable, others specify) |
| Adjustable step size (dBm) | <0.5 (adjustable between -5~-12dBm)    |
| Stability(dB, 15min, 20°C) | ±0.1                                   |
| Stability(dB, 30min, 20°C) | ±0.05                                  |
| Modulation (Hz)            | CW, 270, 330, 1K, 2K                   |
| Fiber Port                 | FC/PC or FC,SC,ST interchangeable      |
| Alkaline Battery           | 3*AA, 1.5V                             |
| Power Supply Adaptor(V)    | 8.4                                    |
| Battery Operating time(h)  | 45                                     |
| Operation Temperature(°C)  | -10~+60                                |
| Storage Temperature(°C)    | -25~+70                                |
| Outline size (mm) /weight  | 175*90*44.5/255g                       |

## 1.3. Standard Packages

| No. | Name                 | Qty |
|-----|----------------------|-----|
| 1   | Optical Light Source | 1   |
| 2   | User Manual          | 1   |
| 3   | 1.5V AA battery      | 3   |
| 4   | Power Supply Unit    | 1   |
| 5   | Cotton Swabs         | 1   |
| 6   | Carry Bag            | 1   |

## 2. Keypad Functions



2-1

**Power Key**  
 the instrument  
 saving setting: the unit will automatically shut off  
 minutes idle time. Once choose this setting, the  
 will display on the left bottom of the screen.  
 er saving is the default setting, once open the  
 ater, will enter into this mode.

**Wavelength Selection**  
 the tester, first press **[λ]** to laser on, then  
**[λ]** to select the wavelength and display the  
 wavelength on the left top of the screen.

backlight control. JW3116 have two type of  
 t control, press **[\*]** to choose one mode:  
 e intelligent backlight control mode. Power  
 ll off/on the backlight within 15second based on  
 de light condition, and this is the default mode.  
 nt control key mode. Press **[\*]** to on/off the  
 t

Rated power:  
 output power  
 Down the rated power  
 the rated output power

(6) **[\*]** Modulation adjustment/wavelength identifying  
 Laser on. After on the tester, firstly press **[\*]**, to laser on  
 the light source. Short press **[\*]** shift the frequency.  
 (270-330, 1K, 2KHz) OHz means do not Loading  
 frequency. Long press enter into/exit the wavelength  
 identify mode, on the right top of the screen "--AU" display  
 when enter into the wavelength identify mode.

- (7) **[↑]** output power up  
 Up the output power
- (8) "B/L SET" backlight indicator  
 Indicate the backlight control mode, when the indicator  
 green, which means "LDR" in the Intelligent back light  
 control mode, when the indicator red, which means the  
 backlight in the key control mode.
- (9) "LDR" Intelligent backlight controller  
 In the intelligent backlight control mode, the controller  
 will automatically adjust the backlight with the outside  
 light, which to save the power.
- (10) Screen  
 Display the data and the instrument working mode.

### 3. Operation Instruction

#### 3.1 Ways of power supply

JW3116 can be either battery powered or AC  
 adaptor powered, giving total flexibility for most  
 testing sites and situations

##### 3.1.1 AA battery

When use AA battery, **[B]** will display on the  
 left top of the screen, 3-1.

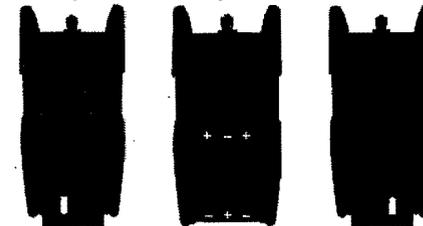


3-1

There are 5 Grades for the battery power indication:

-  left 70% ~ 100% electricity
-  left 40% ~ 70% electricity
-  left 30% ~ 40% electricity
-  left 20% ~ 30% electricity.
-  not enough electricity, left less than 20% ,

the power meter will be forced power off. Fit the  
 battery, refer to below figure 3-2



3-2

Press the clip fastener on the battery compart-  
 ment cover down. Remove the battery compart-  
 ment cover, remove all three batteries making a  
 note of their positive and negative connector  
 orientation. The negative battery connector  
 should be against the spring. Insert 3 new 1.5V  
 AA battery. Refit the battery compartment cover.  
 The clip fastener should click shut.

Notice: Make sure that you insert the test leads with their positive and negative connections correctly aligned.

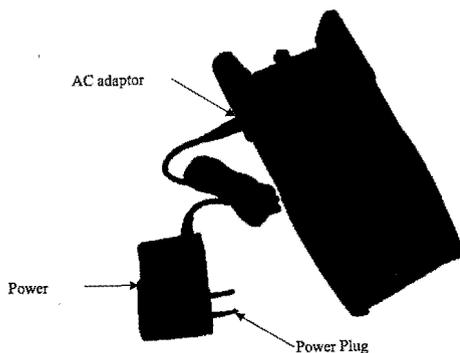
### Power Supply Unit

When the battery is used out, you can use the power supply unit, and at this time on the left top of the screen, there will be a lightning bolt icon (3-3). When the battery is in the power meter, and still have enough battery capacity, the tester will choose AC power supply as priority.



3-3

Use the AC adaptor, connect the power supply cable, and insert to the AC socket.



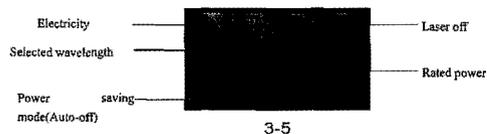
3-4



Notice: Please use only the power supply unit supplied with the tester, use other kind of PSU may cause damage for the instruments.

### 3.2 Power on the laser source

First of all insert the battery or the PSU, press the power button on the tester, at this time the laser are still off, the opening displaying as 3-5



3-5

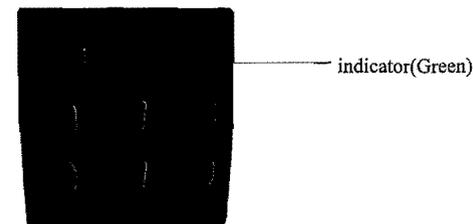
When the tester is standby, press the power button key can cancel or choose auto-off function. If auto-off function are chosen, the "Auto-off" will display on the left bottom of the screen.

### 3.3 Backlight Setting

After open the optical power meter, long press the star icon, choose backlight control mode.

#### 3.3.1 "LDR" Intelligent backlight control mode

Long press the star icon, "B/L SET" is green (6-6), after 10 seconds, the green indicator off, the LDR the controller will automatically adjust the backlight within 15 seconds with the outside light, which to save the power



3-6

Use the key control backlight mode

Press **[\*]**, "B/L SET" indicator turns to red(6-7), key control backlight mode, after 10 seconds on or off, short press **[\*]** can ON/OFF the



Indicator(red)

3-7

3.4 Output Power

Notice: Preheating is normally required to a stable output power for the laser source. less than 15 minutes would be okay. When open the dust cap, connect with the patch



Notice: Make sure the connector and the end-face of the patch cord is clean, and take notice on the type of the patch cord, make sure the correct patch cord are connected.

3.4.2 Laser on the light source.

When open JW3116, the laser source still laser off, only after press **[λ]** or **[\*]** can laser on the diode (3-8 & 3-9)



Laser off

Laser on(output wavelength 1310nm, rated output power-5.00dBm, 0Hz means do not load the frequency

3-8 Press **[λ]** to laser on the diode



Laser off



Laser on(output wavelength 1310nm, rated output power-5.00dBm, 270Hz frequency 0Hz means do not load the frequency

3-9 press **[CW]** to laser on the diode



Notice: To avoid risk of serious eye damage, Do not look into the interfaces at any time.

3.4.3 Select the wavelength

Press **[λ]**, select the output wavelength, display at the top of the screen. 3-10

Output wavelength



3-10

3.4.4 Output power

Every selected wavelength can adjust the output power within the range (-5 ~ -12dBm), and also can load with the output frequency.

Press **[\*]** to down the output power, while **[\*]** to load the output frequency, (3-11 ~ 3-13)



3-11



press  down the output power

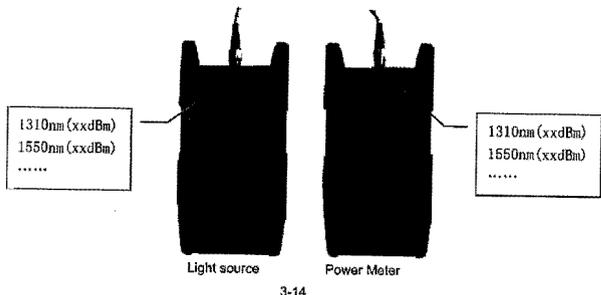


press  to load the frequency

For the same principle, press  to up the output power, while  to load the output frequency.

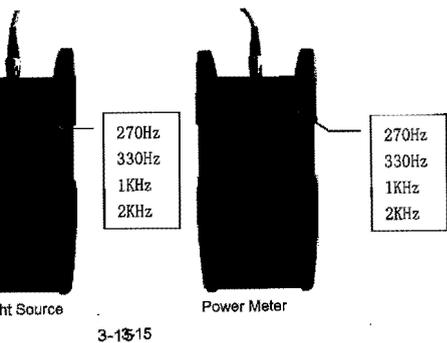
### 3.5 Wavelength Automatic Identification

- Connect light source with its same serials power meter .
- Enable light source be Under "Wave ID" operation mode: press  or  of light source to laser on JW2116, Hold down  for few seconds ,light source will be enter into Wave ID mode, also "--AU" will be shown on the upper right of LCD for a indication.
- Enable power meter be under "Wave ID" operation mode: Hold down  for few seconds, power meter will be enter into Wave ID mode, also "--AU" will be shown on the upper right of LCD for a indication.
- Once the ID information is changed from light source (press  to change wavelength), after 3 to 5 seconds later, the detected information on optical power meter also will be changed automatically according to light source. Please refer to below figure(3-14) for easy understanding.
- Exit Wave ID mode: Hold down  again to exit Wave ID mode from power meter and hold down  again to exit Wave ID mode from light source.



3.6 Frequency detection

- Connect light source with its same serials power meter
- Output frequency from optical light source: Press  or  to emerge light from the unit, press  for very short second, light source will output frequencies of 270Hz, 330Hz, 1KHz, 2KHz accordingly, which will be shown on the upper right of the LCD in light source. In the mean time, the power meter will detect the corresponding frequency automatically from light source. Please refer to below figure (3-15) for better understanding:



### 3.7 Power Off

**Automatic power off:** When auto-off function is activated, the unit will turn itself off automatically after 10 minutes idle time, whatever the power supply is with alkaline batteries or is with power supply adaptor directly.

**Manual power off:** Under any operation mode, hold down  for a few seconds to turn the unit off.

Note: With either power off operation, the unit will store the last calibration wavelength and backlight control mode automatically, which will be the default setting when user turns unit on next time.

Note: Frequency ID and wave ID cannot be used at the same time.

To avoid the risk of serious eye damage, please do not look directly into the optical port of laser source at any time.

## 4. Troubleshooting.

| Problems   | Possible cause                                     | Solution   |
|--|--|--|
| Faint display on the LCD screen                          | 3. Power is off<br>4. The battery power is too low | 3. Press  key.<br>4. Change the batteries |
| When on the laser source, the output power is not stable |  | After 15 min. preheat  |

## 5. General Maintenance

5.1 Always keep the connector ports of your laser source are clean.

5.2 Try to use only the adaptor supplied.

5.3 Once not in use, make sure dust-proof cap is placed properly over the optical ports.

5.4 Carefully plug in/out for fiber connectors/adapters to avoid scratches on the port of the power meter.

5.5 Keep regular cleanings on optical port of power meter, please clean with cotton swabs supplied using alcohol properly.

**Warranty and Service**

on: Repair the instruments in the field is prohibited.

18 months warranty for Fiber Optic Test & Measurement  
instruments

Warranties that each of Instruments will be free from defects in  
craft and workmanship for 18 months. This warranty covers the  
normal user only and is not transferable. Should the device fail at any  
time during this warranty period, OUR COMPANY will, at its sole  
discretion, replace, repair or refund the purchase price of the product.  
This warranty is limited to defects in workmanship and materials and  
does not cover damage from accident, acts of God, neglect,  
misuse, tampering, misuse or abnormal conditions of operation or  
handling.

To establish original ownership and provide date of purchase, please  
complete and return the registration card to OUR COMPANY. This  
warranty card will not go into effect until the warranty registration has  
been received by OUR COMPANY.

A warranty registration card is included with the original shipment of  
equipment. Please take a few moments to fill out the card and mail or fax  
it to OUR COMPANY to ensure proper initiation of your warranty term.

To return a defective product for warranty coverage, contact OUR  
COMPANY for a written authorization. Failure to properly protect the  
product during shipping may void this warranty.

OUR COMPANY will pay return transportation for products repaired or  
replaced in warranty period. Before making a repair not covered by  
this warranty, OUR COMPANY will estimate cost and obtain authorization,  
then invoice for repair and return transportation. OUR COMPANY  
reserves the right to charge for all testing and shipping costs incurred, if  
test results determine that the device is without defect.

An important message from  
OUR COMPANY

OUR COMPANY guarantees that any information you supply will remain  
confidential.

By returning this card, you will automatically be notified about updates, modifi-  
cations, and recalibration.

**Warranty registration card**

Serial Number: \_\_\_\_\_ Date of Purchase: \_\_\_\_\_

Model Number: \_\_\_\_\_ Company Name: \_\_\_\_\_

Company Address: \_\_\_\_\_

TEL: \_\_\_\_\_ FAX: \_\_\_\_\_

E-mail: \_\_\_\_\_

**VOICE YOUR OPINION**

Do you have any comments on the quality of this OUR

COMPANY product or the service from OUR COMPANY?

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**OpticalFiberIdentifier**

**Optical Fiber Identifier** can quickly identify the direction of transmitted fiber and display the relative core power without any damages to the bended fiber. When the traffic is present, the intermittently audible tone is activated. The optical fiber identifier also recognize the modulation like, 270Hz, 1kHz and 2kHz. When they are used to detect the frequency, the continuously audible tone is activated. There are four adapter heads available: Ø0.25, Ø0.9, Ø2.0 and Ø3.0. The optical fiber identifier is powered by a 9V alkaline battery.



**FiberRanger**

**Optical Fiber Ranger** is the most portable test instrument in the industry. It adopts the OTDR technical principles and integrates the powerful analysis software, which enables the fiber ranger detect fiber faults location more accurate and easy.

### **PON Power Meter**

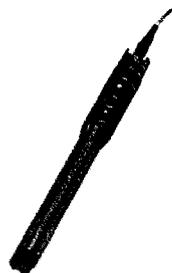
**PON Optical Power Meter** is an upgraded version of old version PON power meter. It aims at the FTTx application and maintenance which not only can be used to test and estimate the PON signals at the same time, but also the normal power measurement and fault identification. It is a useful, essential and ideal tool for the construction and maintenance of the PON projects.



### **Pen-type Visual Fault Locator (VFL)**

**Pen-type VFL** is specially designed for field personnel who need an efficient and economical tool for fiber tracing, fiber routing and continuity checking in optical network. It includes:

- Finding the breakpoint, poor connections, bending or cracking in fiber optic cables.
- Finding the faults of OTDR dead zone
- End-to-end visual fiber identification



# User Guide

