RA3301Optical Multimeter

1．0verview

Handheld Optical multimeter is for the installation, operation and maintenance of a fiber optic network designed accurate, durable and portable instrumentation. It is with compact shape, automatic shutdown feature, wide range of optical power measurement, accurate measurement accuracy, and user self-calibration function and general interface design, while the linear index (mW) and nonlinear index (dBm) display on the same screen.

Stable optical handheld multimeter can be customized to provide 1 to 4 wavelength stability of the output, not only can provide 650nm visible red light, single-mode fiber can be measured to provide dual-wavelength 1310nm and 1550nm laser output, or provide 850/1300 / 1310/1550nm four wavelength laser output, fiber-optic project is the ideal test instrument.

2．Features

- Self calibration by user himself
- Rechargeable lithium battery used to reduce user costs
- Linear (mW) and nonlinear index (dBm) display on the same screen
- Can set the automatic shut down function
- High stability multi-wavelength single-(multi) mode laser output,
- CW mode or modulated mode
- Color LCD display
- Data can be uploaded to PC

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3. Specifications

Power meter parts

Measurement range	-70～+3 or -50～+26
Type of probe	InGaAs
Range of wave length	800～1700
Uncertainty	±5%
Standard wave length (nm)	850、980、1300、1310、1490、1550
Resolution	Linear indication: 0.1%　Logarithmic indication: 0.01dBm
Connector	General setupuration：FC/PC SC/PC Other setupuration：LC/FC/SC/ST Many common interface

Light source parts

Model	General setupurations	3 in 1 setupurations	Other
Working wavelength (nm)	1310/1550	1310/1490 650 red light source	D：850/1310/1550 E：1310/1490/1550 F：1310/1550/1625
Light-emitting device	FP-LD		
Optical output power (dBm)	-7/-7	-7/-7　Red light source：1mW	0DB-7DB
Modulation	CW/270/1K/2K		
Type of optical fiber	SM，MM		
Connector	FC/PC		
Multi-mode output power：	≥–20 dBm		

Other

Resolution	Linear indication: 0.1%　Logarithmic indication: 0.01dBm
Working temperature (℃)	-16～+60
Storage temperature (℃)	-25～+70
Auto power-off time (min)	10
Continuous working hours (h)	more then 15 hours
Display	2.4 TFT color LED with backlight
Dimensions (mm)	190×100×48
Power supply	Rechargeable lithium battery
Weight (g)	280

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4. Function

Key | Function

power on/off or auto-shutdown set
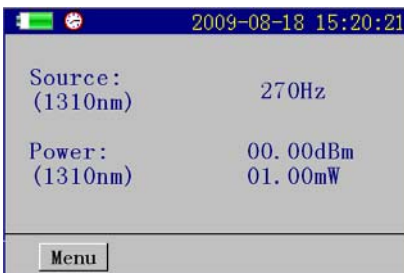
Menu and function selection

Enter the menu or select the current operation

exit the current operation without save

function selection, data decrease

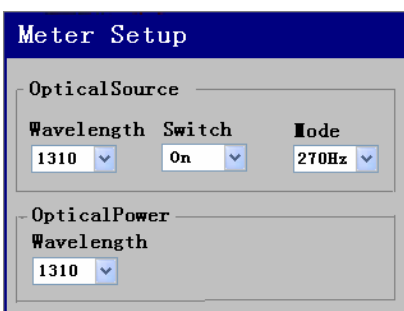function selection, data increase

5. Operations Guide

5.1 Power on
Press the power button to power on，and then will display the following interface：

5.2 Power off
When the meter is power on，press the power button for 2 sec to power off.

5.3 Meter setup
(1) Enter the setup interface，select meter setup，press **ENTER**, and display the following interface：

(2) Press **MENU** to select function，for example：select light source wavelength. Press ▲ or ▼ to select sub item，for example: select wavelength as 1490. Press **ENTER** to save setup and return to setup interface，press **CANCEL** to cancel, and return to setup interface.

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5.4 Language

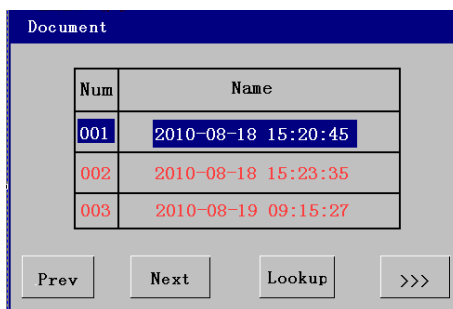The instrument can be set to Chinese, English.

(1) Enter the setup interface, select language, press **ENTER**, and display the following interface.

(2) Press **▲** or **▼** to select function item，if select Chinese and press **ENTER**, and return to setup interface and set language as Chinese. Press **CANCEL** to cancel，and return to setup interface the language will not change.

5.5 Date time

(1) Enter the setup interface, select time, press **ENTER**, and display the time set interface

(2) Press **MENU** to select item。**▲** or **▼** to increase or decrease value。Press **ENTER** to apply，and return to setup interface. Press **CANCEL** to cancel，and return to setup interface。When press enter，if the time is incorrect, cursor will focus on the error. Only correct time set will apply.

5.6 Document

(1) Press **MENU** at main interface，press **▲** or **▼** to move cursor，select file item，and press **ENTER** to enter file interface, and display the following interface.

(2) Press **▲** or **▼** to move cursor，**MENU** to move command item cursor. when command cursor is on "lookup"，press **ENTER** to view current file results。when command cursor is on "prev" or "next"，press **ENTER** to page up or down. There are "delete", "empty" commands and so on.

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5.7 Calibration settings

Calibration settings used to set the Offset size. Displayed value is the overall power to add a value.

Enter the setup interface，select Calibration item，press `ENTER` to enter Calibration interface.

Press `MENU` to select items. Press `▲` or `▼` to increase or decrease value by 0.01. When selected item is "save"，press `ENTER` to apply。

When selected item is "default"，press `ENTER` to restore to default。

5.8 Data upload

Measurement results can be stored in the instrument, or stored in the instrument through the host computer after the software uploaded to the PC. As long as the data line of a termination on the local PC Link interfaces, the other side access to PC-USB port, open the PC software, PC software by default settings, and then upload directly to the PC point, the data can be reached the PC.

6. Standard configurations

Name
instrument host
Rechargeable lithium battery (in the battery cartridge)
Warranty card
user Manual
Pass Certificate
Oxford soft bag
Charger
Special cleaning rod

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7. Maintenance

Precautions

1. Don't watch the output port with eyes while it is running, the laser will hurt your eyes

2. If you are not going to use the tester for long time, cover the dust-proof cap immediately to keep the end clean, don't expose it in air for long time, otherwise dust may gather polluting the output end.

3. After the stabilized light source works for a time, dirt or dust may gather at output end reducing output optical power, if so, user can gently wipe the surface using cotton swab dipped with alcohol, then remove the contaminants with dry cotton swab. If end still look dirty after doing so, please contact us

4. For any other fault, please immediately contact our technician, don't open the cabinet of the device to repair it by yourself, otherwise more serious problems may occur. We will not repair any product that have been disassembled by user himself

8. Troubleshooting

SN	Diagnosis	Solution
1	Output light is found unsteady	Please recharge the battery
2	The terminal of adapter is dirty	Clean it gently with alcohol
3	The output optical power is unsteady after startup	Pre-warm the device for 15 minutes before using it.