

XL-FMS1315A OPTICAL MULTI METER

USER'S GUIDE



WARNING

You are cautioned that changes or modifications not expressly approved in this document could void your authority to operate this equipment.
To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture.
To avoid electric shock, do not open the cabinet. Refer servicing to qualified personnel only.



NOTE

Do not attempt to disassemble the device or look directly at the laser as it is harmful to eyes.

Precautions for Use

About Battery

The device supports alkaline or rechargeable batteries, do not install batteries in various specification/capacity. Only can be charged when with rechargeable batteries.

Avoid Condensation

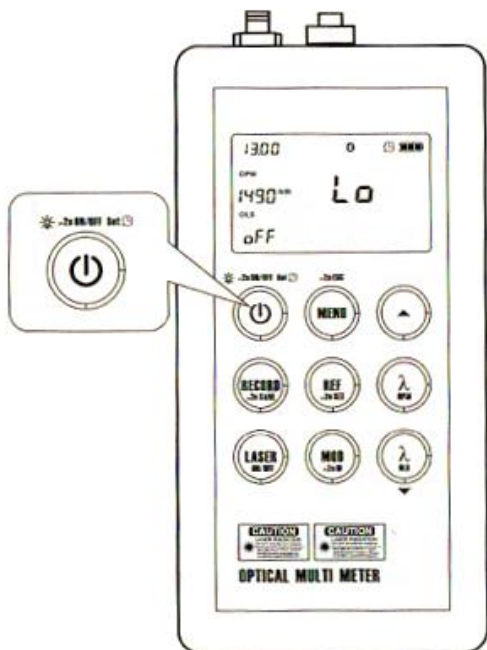
To avoid condensation problems, please stop using and take out the battery if sudden changes in temperature, like moving the device from cold to warm place or sudden temperature rising in room. And we suggest re-use the unit in one hour later.


Storage



If long-time no use, please take out the battery to avoid battery leakage, which may cause the device broken.

※This manual is just for reference, all is subject to the final products.

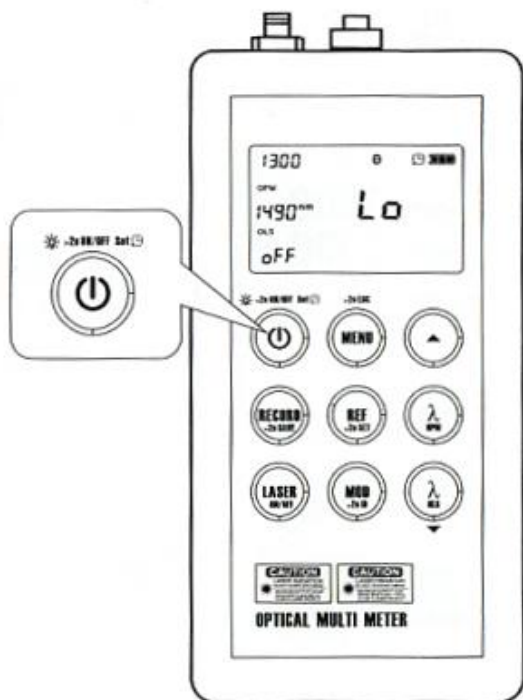
Power-saving function



Press "  " button to turn on the device, then press for 2 seconds or longer to turn off.

This device has power-saving function, if no operation after ten minutes, it will automatically turn off. If you need to shield this function and enable the meter keep on working, only need to press "  " button and hold on when you boot the meter. After two seconds, the device will display "  " which means permanent power on.

Backlight Function

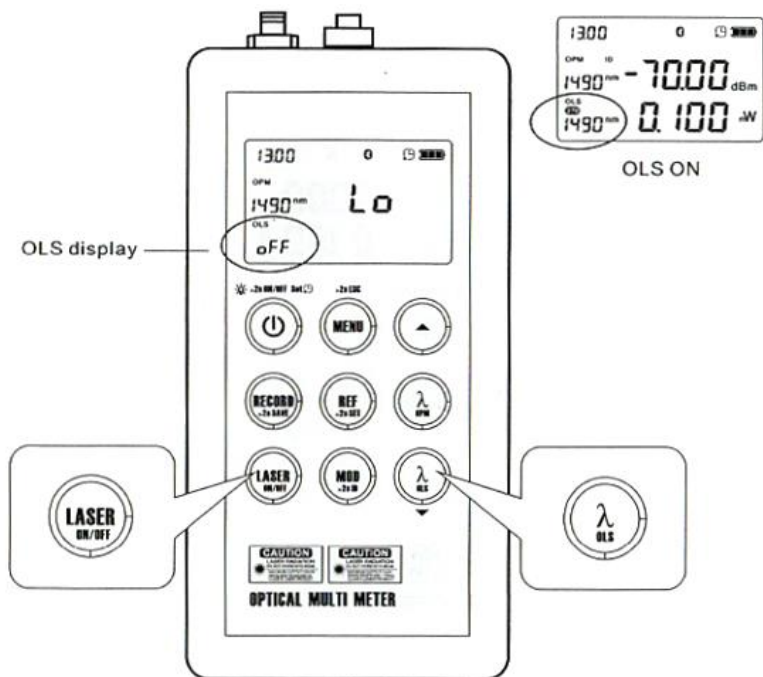


Under power on, short press "  " button to turn on/off backlight.

Backlight setting is for night or dark testing situation, you can set level 0-9.

If set as "0", backlight off, and no backlight even press button.

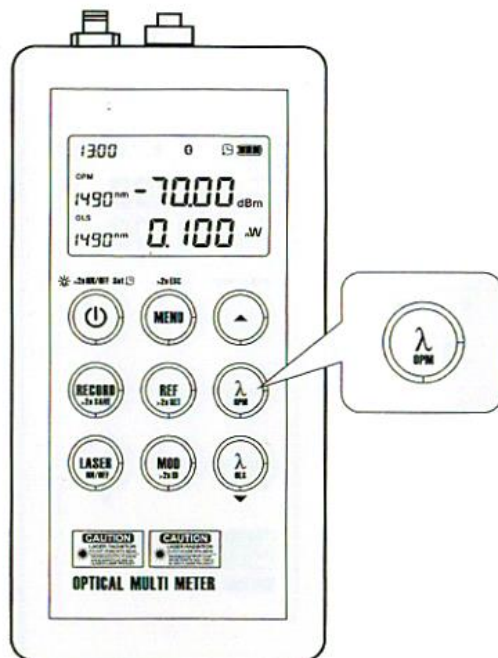
OLS



Under power on, short press "**LASER ON/OFF**" button to turn on/off OLS function. If "OFF", OLS also displays "OFF" in LCD; if "ON", it will show current wavelength of OLS.

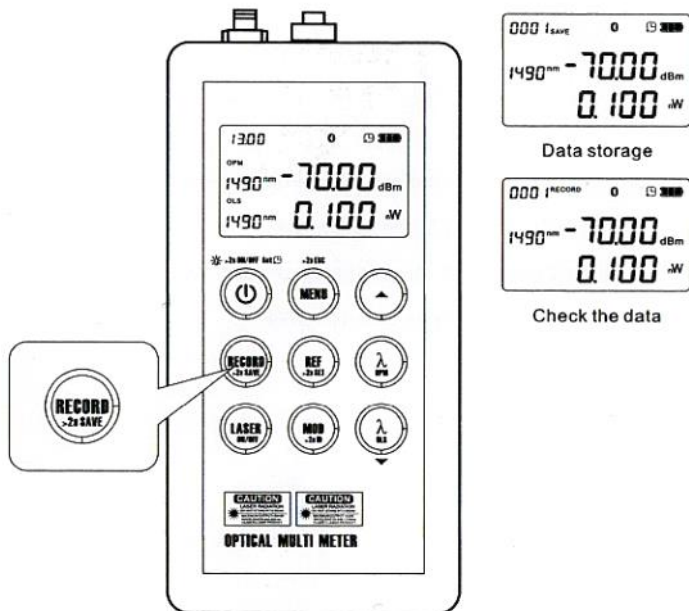
When turning on OLS, press "**λ OLS**" button to select the output wavelength you need. If using other OPM to test the OLS power, then should select same wavelength as OLS has.

OPM-Select Wavelengths



According to the project's demand, we need to measure optical signals of the different wavelengths. Then we need to select a corresponding wavelength to measure the optical power. If the measured wavelength is different from the wavelength we selected on OPM, it will lead to the measuring values meaningless. After turn on, press " λ OPM" button to switch OPM wavelength from 850nm, 1300nm, 1310nm, 1490nm, 1550nm, 1625nm.

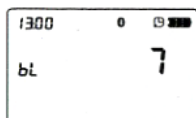
OPM-Data Storage/Query



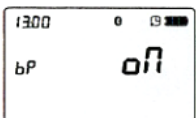
On the OPM interface, long press "RECORD -2x SAVE" button, the "SAVE" and the storage number which is at the bottom left of the screen will flash together three times, and at the same time on the screen will show the current stored power value. After two seconds the meter will restore to the measuring interface, then save the current measurements to the meter. The meter can store 1000 traces. Each storage number automatically increases one by one, if over the limit, the first data will be overwritten and so on.

Under the measuring interface, short press "RECORD -2x SAVE" button to data-saving interface, you can check the newest stored data. Then short press "UP" button and "λ" button to check the old stored data. Short press "RECORD -2x SAVE" button to exit the data reference interface.

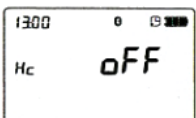
Menu setting



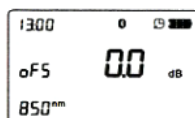
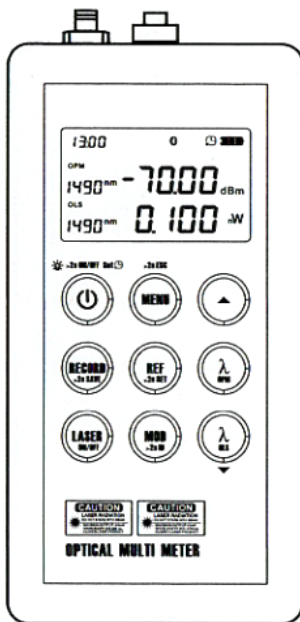
Backlight setting
0-9 level



Buzzer ON/OFF

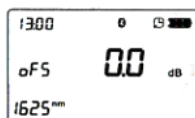


Modulation
identification ON/OFF




Manual calibration for
OPM wavelength

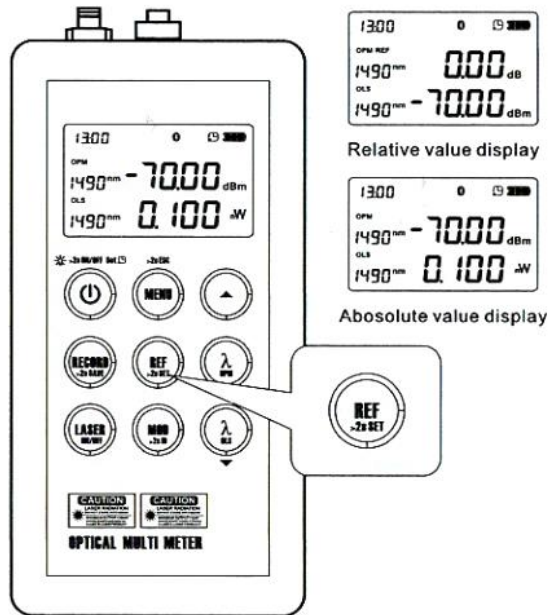
Calibration
one by one





Offset setting range
-5~5dB

Press "  " button to switch each setting interface, then press UP/DOWN key to modify the specification. If all finished, then press for 2s to exit Menu setting.

OPM-Reference

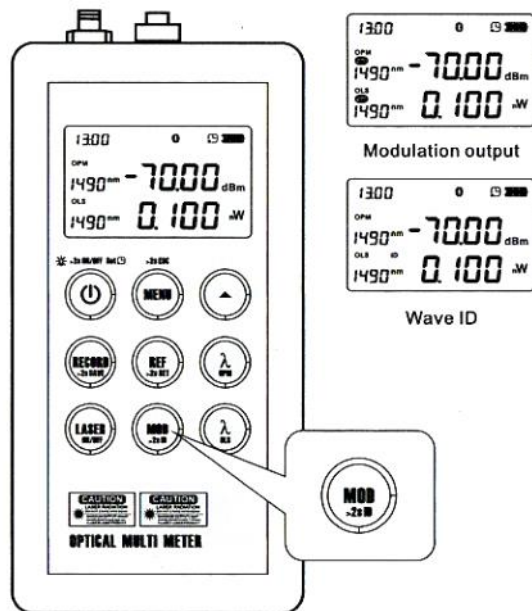


"" button is used to set the reference value or switch the absolute or relative value. Press for two seconds or longer, "REF" sign will display on the screen after flashing three times, the device will use the current measurements to overwrite the original setting value and set it as a new reference value. Meanwhile LCD will display REF value(dBm) and dB value.

Short press "" button can convert between absolute and relative value, the absolute value on the screen will display the measuring absolute value (dBm/uW), the relative value on the screen will display the "REF", the setting REF value (dBm) and the difference between actual measured value and reference value (dB).

(Each wavelength can set their own reference value)

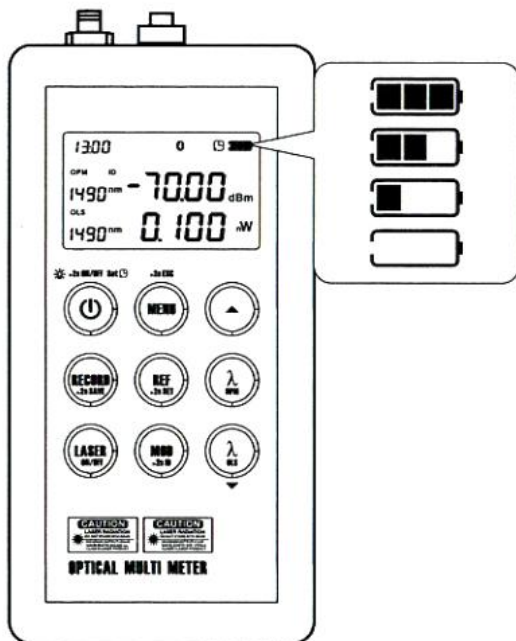
OLS-Modulation/Wave ID






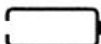
Short press "MOD" button, you can load a modulation in current output laser, and display modulation(270Hz, 1kHz, 2kHz). Connecting with optical power meter with frequency identification function, the OPM can identify the laser's current load modulation, and load a same frequency automatically.

Long press "MOD" button to turn on Wave ID function(OLS), it displays "ID" on LCD. Connecting with optical power meter with WAVE ID function, OPM can detect and switch to the same wavelength automatically. Wave ID function "ON", modulation function will be off, press again to turn off Wave ID function.

Power Indicator

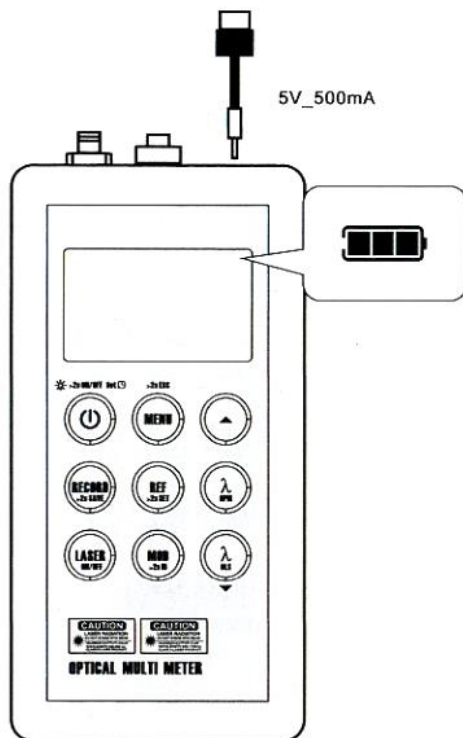


Power Indicator

-  Remain 80% --- 100%
-  Remain 40% --- 80%
-  Remain 20% --- 40%
-  Remain less than 20%

If the energy is too low, the beep will be on and device will auto power off.

Battery charge



The instrument has a charging function. When you use the rechargeable batteries and low battery indication shows on the instrument, you should promptly shut down and recharge. Under-voltage for long time will shorten the rechargeable batteries' lifetime. Only if you connect the AC adapter to the device correctly, it can charge automatically. Besides, computer USB port can also be used for charging. The battery remaining indicator keeps flashing during charging. It will stop when the charging is finished. The battery has been finished fast recharging and can be used directly. If not stop recharging at this time, the instrument will continue to the trickle charging state, to use small current to supply natural discharge. But this process is not more than 48 hours.

The instrument can still be used while charging. But do not plug in the AC adapter when it is not rechargeable battery inside, or it will cause a high temperature and combustion, even explosion.