

USER'S GUIDE

OPTICAL POWER METER

**English**

## 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 electrical shock, do not open the cabinet. Refer servicing to qualified personnel only.

## NOTE

As the laser is harmful to the eyes, do not attempt to disassemble the cabinet.



## CALSS I LASER PRODUCT

## Precautions for Use

### Use batteries

At the same time, can not use different style or different capacitance batteries.

And only charge the rechargeable batteries.

### Avoiding condensation problems

As much as possible, avoid sudden temperature changes. Do not attempt to use the drive immediately after moving it from a cold to a warm location, to raising the room temperature suddenly, as condensation may form within the drive. If the temperature changes suddenly while using the drive, stop using it and take out batteries for at least an hour.

### Storage

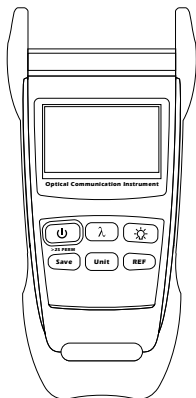
When long time no use, must take out the batteries to avoid destroying the device.

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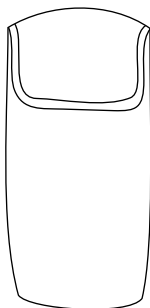
## First check the accessories

(If any accessory is short please relate with the dealer ASAP)

### Standard



Host



Bag



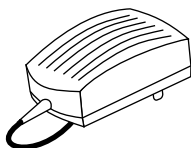
FC/SC Adapter



Manual

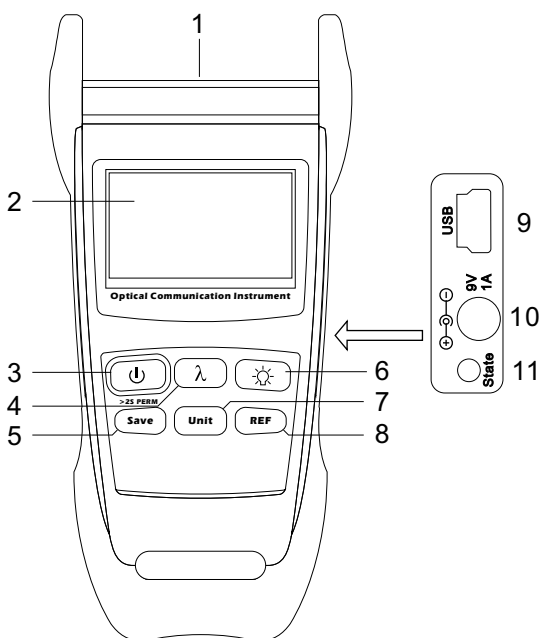
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### Optional



Charging

## Description



1-Fiber Adaptor

2-LCD

3-Power key

4-Wavelength shift key

5-Data Save/Recall key

6-Backlight key

7-Unit shift key(dBm,uW)

8-Reference key

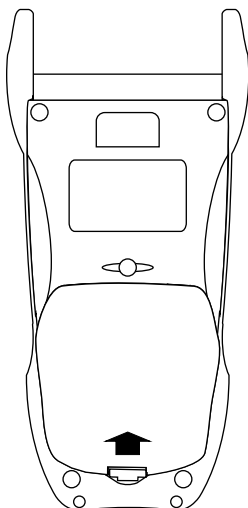
9-USB power supply

10-Battery charge jack

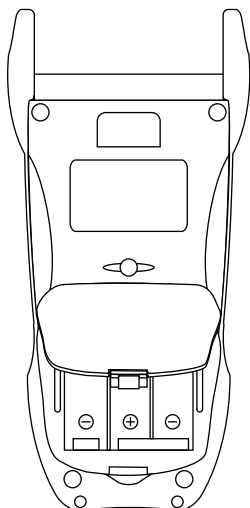
11-Led for battery charge

## Set batteries

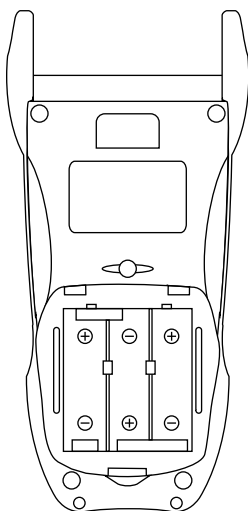
Warning: At the same time, can not use different style and different capacitance batteries.



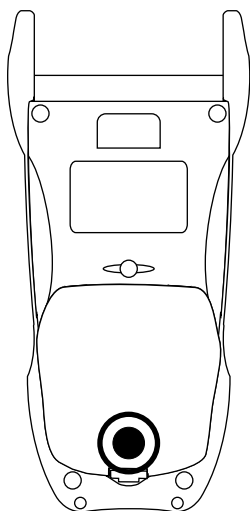
1. Press and push down



2. Open the lid



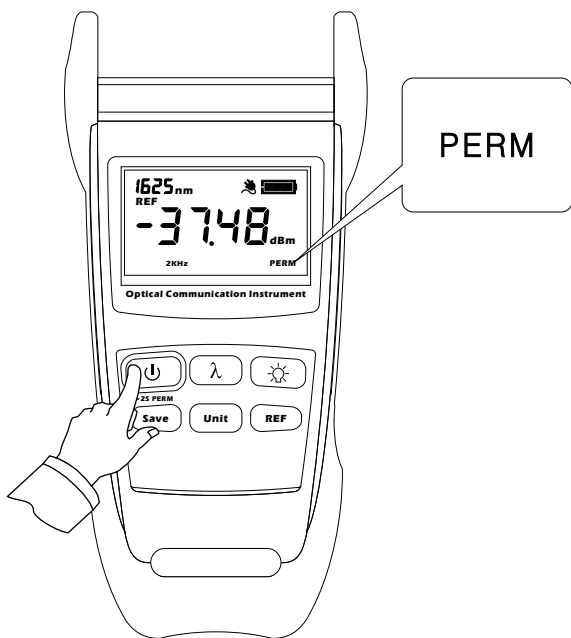
3. Place the batteries



4. Close the lid and push up

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## Power on/off, auto power off



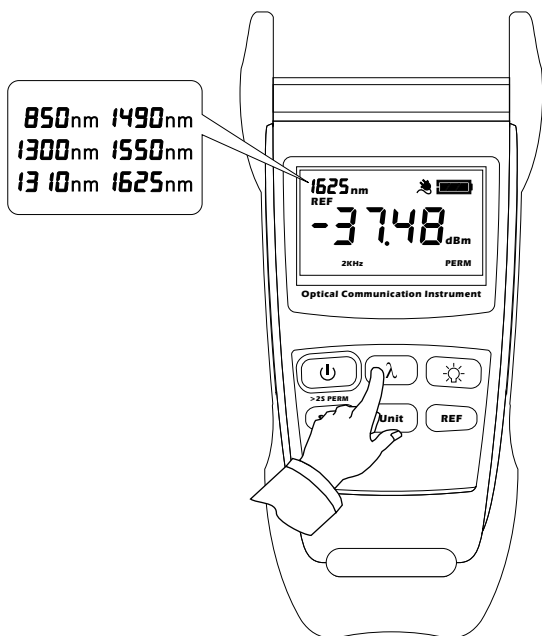
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Press the Powerkey to turn on the device with auto power off. (After 10 minutes no key pressed, it will auto power off.)

Press Power key for 2 seconds when turn on the device, the auto power off will be cancelled, and the LCD will show "PERM".

Also press it to shut the device.

## Wavelength select



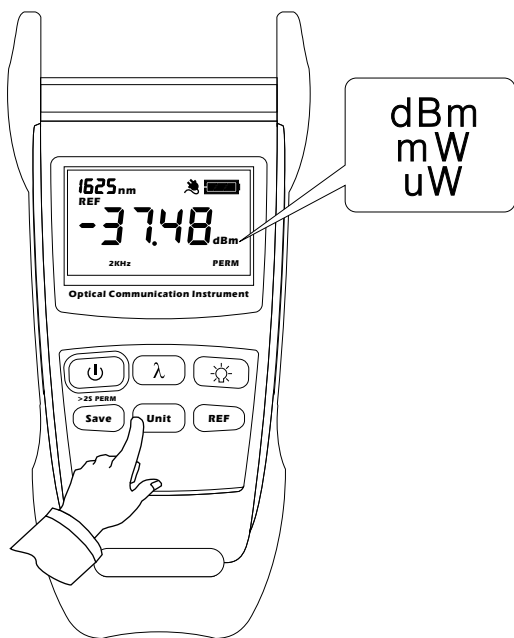
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When testing, you must select the right wavelength.

Press the “  $\lambda$  ” key for shifting the wavelength from:

850nm, 1300nm, 1310nm, 1490nm, 1550nm, 1625nm。

## Unit select



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Press the “ **Unit** ” key for shifting the unit from: dBm, mW/uW, dB.

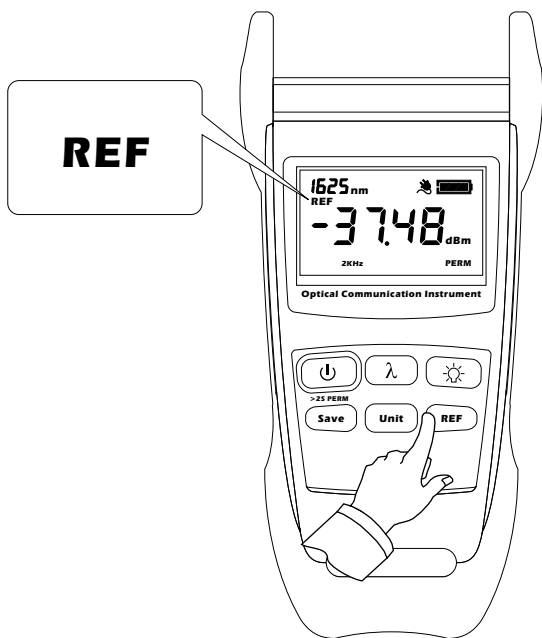
mW/uW:  $1\text{mW}=1000\text{uW}$ ,  $1\text{uW}=1000\text{nW}$

dBm:  $(\text{dBm})=10*\log(\text{mW})$

dB:  $(\text{dB})=\text{dBm}-\text{REF}$



## Reference



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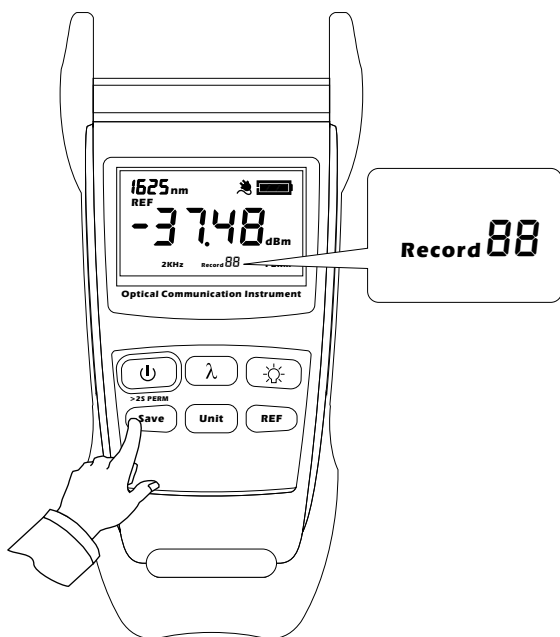
Press “ **REF** ” key to check the reference value you set last time.

And if keep pressing for 2 seconds, you can store the current dBm as a new reference value. Then it automatically shift to dB.

$$\text{dB} = \text{dBm} - \text{REF}$$

You can store the REF value for each wave.

## Data Storage and backlight

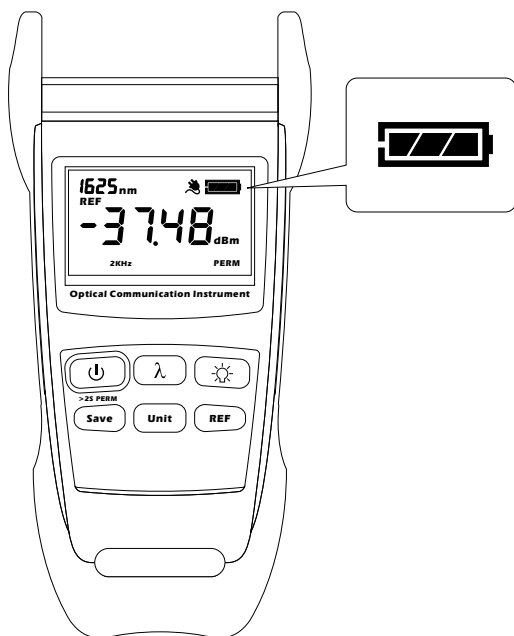


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When in testing interface, user can press “ **Save** ” key to the History interface. And press the “ **Save** ” key for 2 seconds to save current value.

☀ Turn on or turn off the backlight

## Battery energy detect



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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.

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## Battery charge

First you must use the rechargeable batteries. When the energy is less than 20%, you should charge the batteries. Long time low energy, the life of the batteries will be short. When charging, the battery indication on LCD will flash. After charging fully, the indication will stop flashing and show full. Don't charge for more than 24 hours. If charging while using the device, the time will be longer. The rechargeable batteries must be in device when you use the AC/DC adaptor for charging. And do not charge the non-rechargeable batteries, or the device will be destroyed and also lose the guarantee.

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# Maintenance and calibration

## Routine attention

- 1.Fiber-optical adapter should keep clean.
- 2.Please store the device in dry and ventilated place.
- 3.The long period no use ,please take out the batteries.

## Common malfunction

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Described	Malfunction cause	Handle way
Can not turn on	No battery	Check battery setting
After turn on shut it immediately	Check battery capacities	Change battery
Can not charge	Use Non-rechargeable batteries	Change battery
Display the messy code	Reset is incorrect	Reset
Operation do not have reaction	Program is disorderly	Reset

## Detailed

	T	M	C
Measuring range	-70~+10dBm	-60~+18dBm	-50~+26dBm
Calibrated wavelengths	850nm,1300nm,1310nm,1490nm,1550nm,1625nm		
Display resolving power	+6~-60dBm(0.01dB) -60~-70dBm(0.1dB)	+16~-50dBm(0.01dB) -50~-60dBm(0.1dB)	+26~-40dBm(0.01dB) -40~-50dBm(0.1dB)
Accuracy	$\pm 0.2\text{dB}$		
Linearity	$\pm 2\%$		
PD Type	InGaAs		
Connector adapter	FC(or SC) & 2.5mm UPP		
REF set	Yes		
Wave respond	700~1700nm		
Auto off	Yes		
Power supply	Size AA Alkaline cell or NiMH cell		
Battery life	>100H		
Waterproof	A small amount of spilled		
Operating temp	$-10^{\circ}\text{C} \sim +50^{\circ}\text{C}$ <90%RH		
Storage temp	$-20^{\circ}\text{C} \sim +60^{\circ}\text{C}$ <90%RH		
Size(H*W*D)	190mm*90mm*40mm		
Weight	About 400g		

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