Optical Fiber Measurement Instruments

USER'S GUIDE

Optical Power Meter

Optical Laser source

Visual Fault Locator

Optical Multi Meter

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Optical Power Meter

Optical Power Meter

WARNING

You are cautioned that changes or modifications not espressly approved in this document could void yout 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.

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

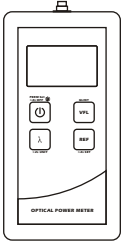
As much as possible, avoid sudden temperature changes. Do not attempt to use the drive immediately after moving it from a cold to a warm location, to raising the room temperature suddenly, as condensation may form with in the drive. If the temperature changes suddenly while using the drive, stop using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

Storage

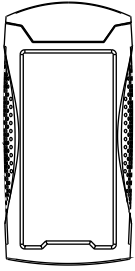
When long time no use, must take out the batteries to avoid destroying the device.

Check the accessories

Standard Edition

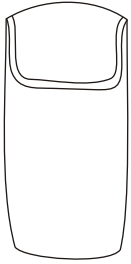


Host



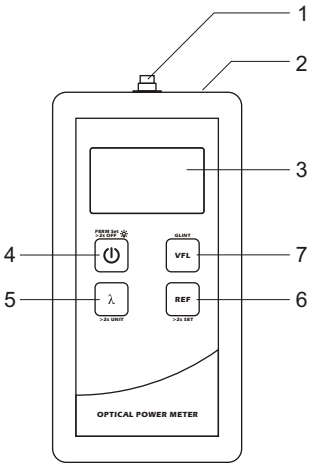
Rubber Jacket

User's Guide



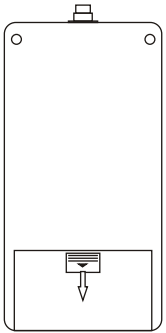
Soft Bag

Description

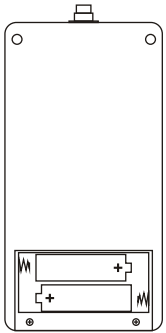


1	OPM connector
2	AC/DC Socket
3	LCD
4	Power Button
5	Wavelength/Unit Select Button
6	REF setting Button
7	VFL Control Button

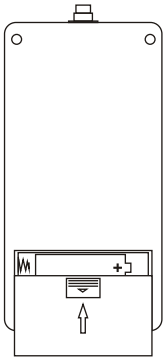
Installing the battery



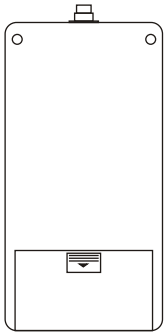
1.Pull the battery cover



2.Installing the battery

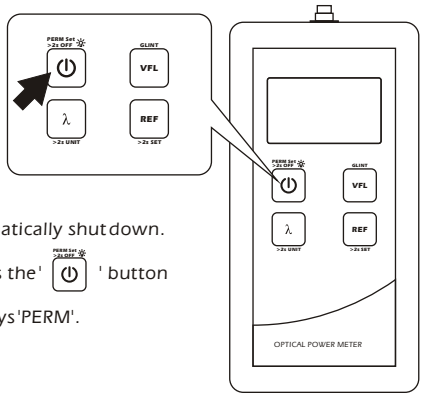


3.Push the battery cover



4.Complete

On/Off and Permanent On

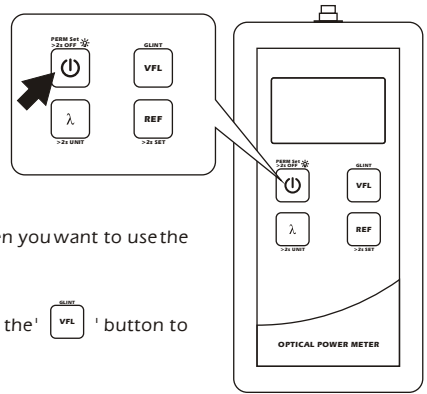


Press ' 'button to turn on the meter.

Press button again for two seconds or more to turn off the meter.

This meter has power-saving function, if ten minutes without any operation, the device will automatically shut down. If you need to disable this function, only need to press the ' ' button for 2 seconds when you turn on the meter till it displays 'PERM'.

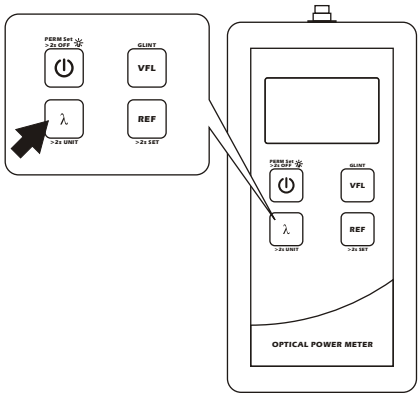
Backlight and Visual Fault Locator Function (VFL is Optional)



When the meter is power on, short press the ' PERM Set >2s OFF ' button, you can control the backlight function on or off. The backlight function is used when you want to use the meter at night or darker occasions.

Meter with visual fault locator ,you can short press the ' GLINT VFL ' button to control VFL on---glint---off.

Wavelengths



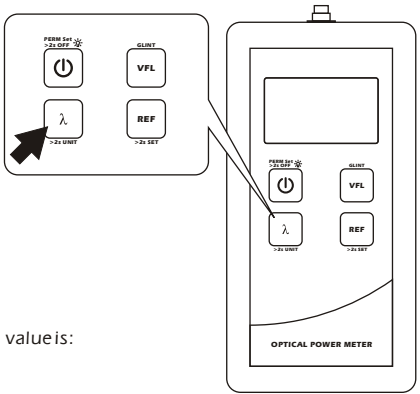
According to the project, we need to measure optical signals of different wavelengths. Then we need to select a corresponding wavelength to measure the optical power. If the wavelength needs to be measured does not match with the wavelength we select on the optical power meter, it will lead to the measuring values meaningless.

Press ' λ >2s UNIT ' button, the meter will change wavelength, and display.

This series of optical power meter calibration measured wavelength are:850nm, 1300nm, 1310nm, 1490nm, 1550nm, 1625nm.

Unit

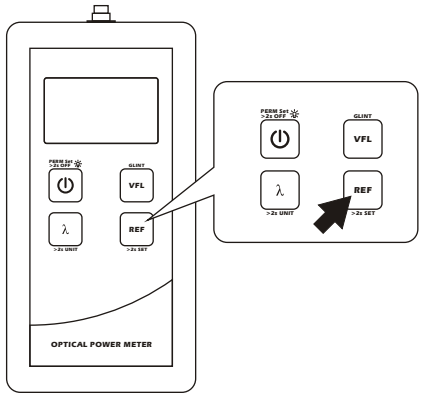
' λ >2s UNIT ' button can be used to change the display unit of the measurement data to meet the different requirement. When press this button for two seconds, the display will successively show the dBm value or mW/uW value .



The numeric relationship between mW value and dBm value is:

10lg(mW)=(dBm)

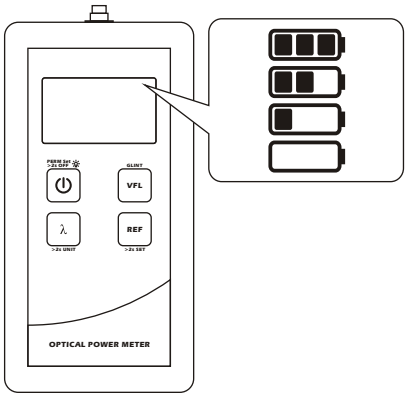
Reference



' REF >2s SET ' Button is used to set or check the reference value. Short press this button, the display will show 'REF' and the dBm value saved as reference value. When long press for two seconds or more, the device will save the current dBm value as a new reference value. Meanwhile the 'REF' sign will flash three times on the display. After that will show the dB value .

(Each wavelength can set their own reference value)

Power Indicator



Four levels indication of power detection

Represents the remaining 80%---100% electricity

Represents the remaining 40%---80% electricity

Represents the remaining 20%---40% electricity

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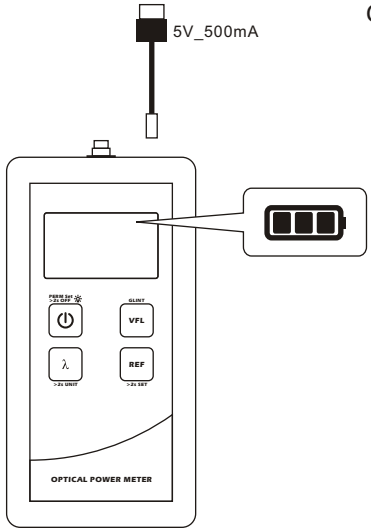

Charge

The instrument has a charging function. When use rechargeable batteries and a low battery indication shows on the instrument, you should promptly shut down it and recharge. Long time undervoltage will shorten the lifetime of the rechargeable battery.

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 finished the fast recharge and can be used directly. If you do not stop recharging at this time, the in strument will continue the trickle charge state, using 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.

Detail Parameters

	T	C	Customize
Measurement Range	-70～+10dBm	-50～+26dBm	
Wavelength cal.	850nm,1300nm,1310nm,1490nm,1550nm,1625nm		
Resolution	+10～-60dBm(0.01dB)，-60～-70dBm(0.1dB)	+26～-40dBm(0.01dB)，-40～-50dBm(0.1dB)	
Accuracy	±0.2dB		
Linearity	±2%		
Detector type	InGaAs		
Fiber optic adapter	FC or customize		
REF setting	Yes		
response range	700～1700nm		
Freq. Identification	270Hz/1KHz/2KHz(Optic power>-30dBm)		
Battery Type	AA * 2		
Battery lifetime	>160H		
Waterproof	Can prevent small splash		
Size	140mm * 62mm * 32mm		
Weight	174g		

USER'S GUIDE
Optical Laser Source

Optical Laser source

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Storage

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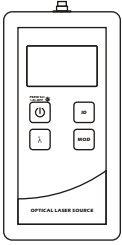
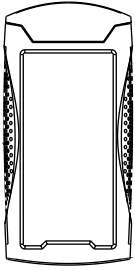
Check the accessories

Standard Edition

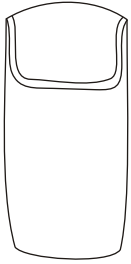


Host



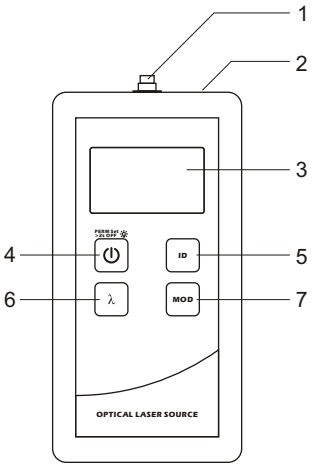
Rubber Jacket

User's Guide



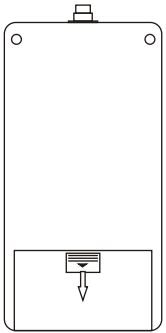
Soft Bag

Description

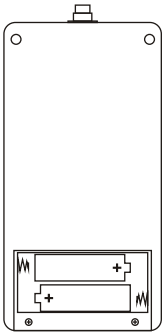


1	Laser Source Connector
2	AC/DC Socket
3	LCD
4	Power Button
5	Wavelength ID
6	Output wavelength switch button
7	Load modulation

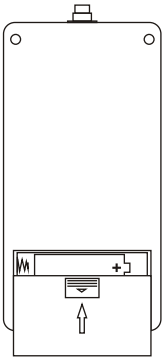
Installing the battery



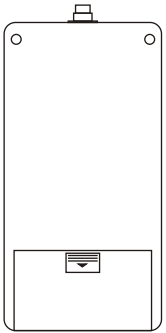
1.Pull the battery cover



2.Installing the battery



3.Push the battery cover



4.Complete

On/Off and Permanent On

Press ' ⏻ 'button to turn on the meter.

Press button again for two seconds or more to turn off the meter.

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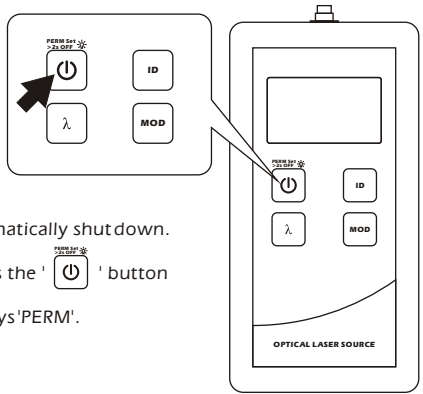
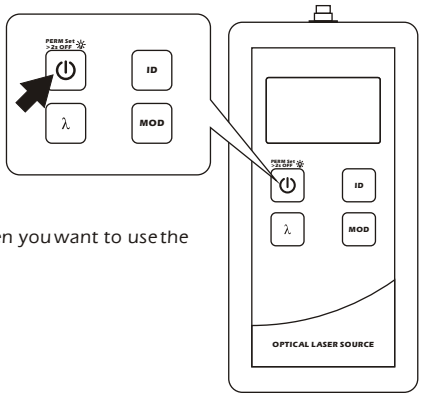
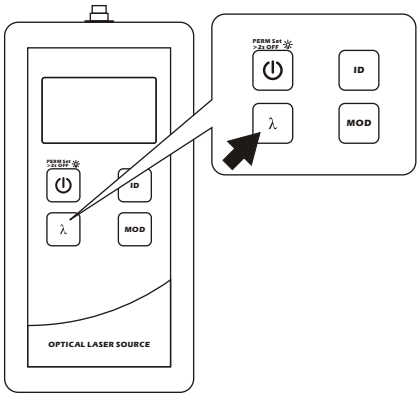


Backlight Function



When the meter is power on, short press the ' ' button, you can control the backlight function on or off. The backlight function is used when you want to use the meter at night or darker occasions.

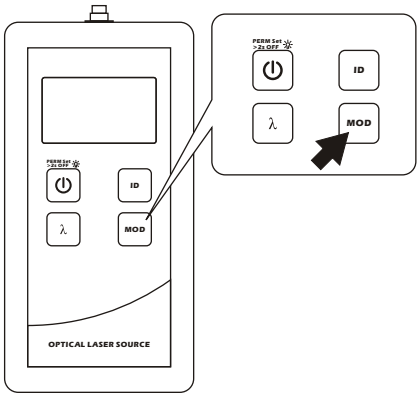
Select Wavelength



After pressing ' λ ' button, you can select the required output wavelengths. Details refer to the parameters table.

The power meter or other measuring equipments should select correspond wavelength of laser source.

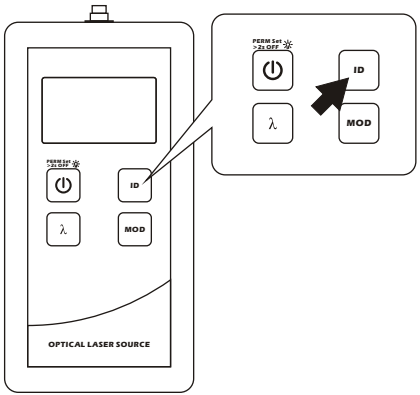
Modulation output



After pressing ' MOD ' button, you can load a modulation current output laser.

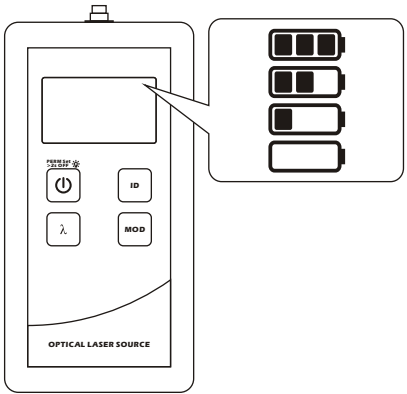
This instrument has three modulation for selection: 270Hz, 1KHz,2KHz.

Wavelength identification



Press ' ID ' Button, the laser source will output with wavelength ID and LCD will display 'Id'. and if works with the paired power meter with WAVE ID function, the optical power meter will change to the same wavelength automatically.

Power Indicator



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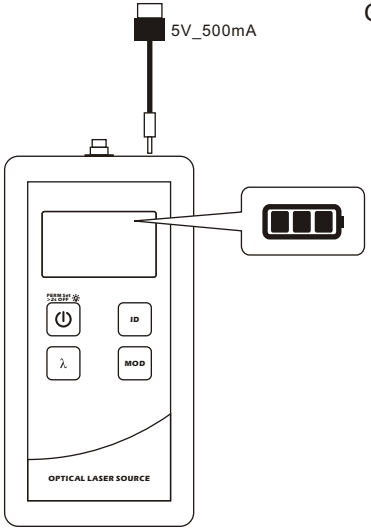

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Detail Parameters

	Dual wavelength			Three wavelength		
Type Suffix	-M3M8	-S3S5	Cusomzie	-S3S4S5	-S3S5S6	Cusomzie
Output λ(nm)	850 1300	1310 1550		1310 1490 1550	1310 1550 1625	
Output power	>-10dBm	>-6dBm				
Laser Type	850nm,1300nm,1310nm,1550nm@FP 1490nm,1625nm@DFB					
Optic adapter	FC/PC or customize					
Modulation wave	270Hz/1KHz/2KHz					
Auto off	Yes					
Battery Type	AA * 2					
Battery lifetime	>40H					
Waterproof	Can prevent small splash					
Size	140mm * 62mm * 32mm					
Weight	174g					

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Visual Fault Locator

Visual Fault Locator

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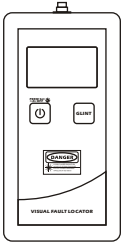
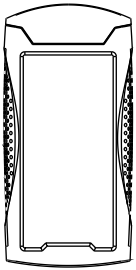


Host



Rubber Jacket

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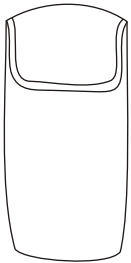
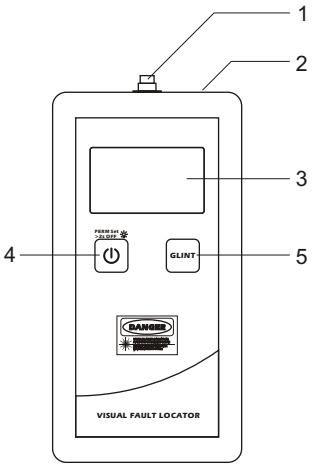


Soft Bag

Description



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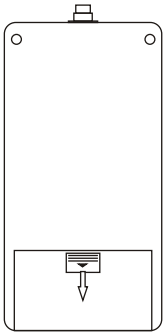
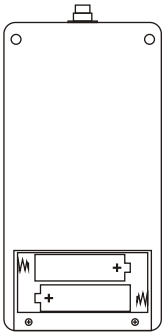
2	AC/DC Socket
3	LCD
4	Power Button
5	Glint Control Button

Installing the battery



1.Pull the battery cover



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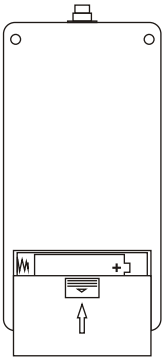
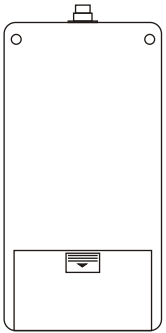


3.Push the battery cover



4.Complete

On/Off , Permanent On and Backlight Function

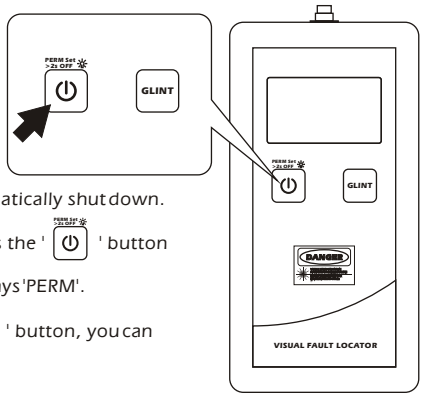
Press ' ' button to turn on the meter.

Press button again for two seconds or more to turn off the meter.

This meter has power-saving function, if ten minutes without any operation, the device will automatically shut down.

If you need to disable this function, only need to press the ' ' button for 2 seconds when you turn on the meter till it displays 'PERM'.

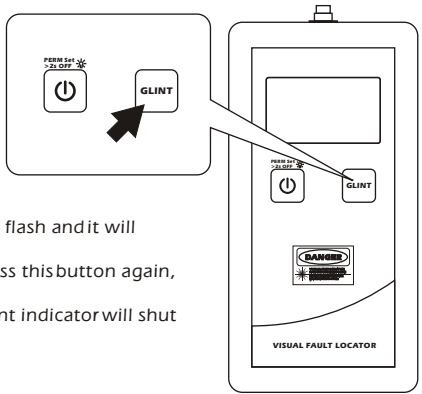
When the meter is power on, short press the ' ' button, you can control the backlight function on or off.



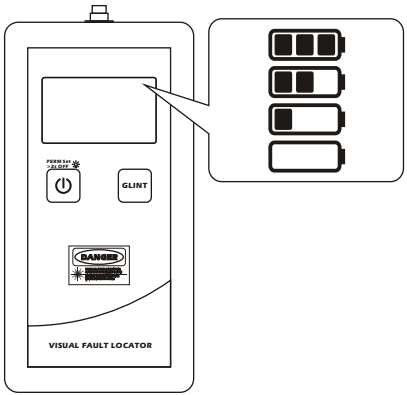
Glint Function

Glint function can allow the output laser shine Intermittently. It plays the role of indicating the breakpoint. You can find the breakpoint easily at night or in darker occasions.

Press ' GLINT 'button after booting, the red laser will flash and it will show Glint on the display screen at the same time. Press this button again, the instrument will output continuous lasers, and Glint indicator will shut down.



Power Indicator



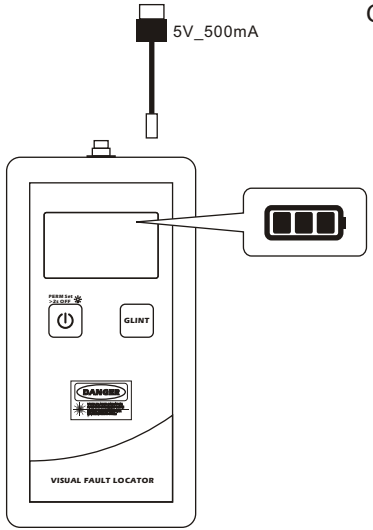
Four levels indication of power detection

Represents the remaining 80%---100% electricity

Represents the remaining 40%---80% electricity

Represents the remaining 20%---40% electricity

Represents the remaining electricity less than 20%



Charge

The instrument has a charging function. When use rechargeable batteries and a low battery indication shows on the instrument, you should promptly shut down it and recharge. Long time undervoltage will shorten the lifetime of the rechargeable battery.

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 finished the fast recharge and can be used directly. If you do not stop recharging at this time, the in strument will continue the trickle charge state, using 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.

Detail Parameters

	V1	V10	V15	V20	V25	Customize
Output power	>1mW	>10mW	>15mW	>20mW	>25mW	
Connector Type	2.5mm UPP or customize					
Battery Type	AA * 2					
Battery lifetime	> 50 hours of operation(1mW)					
Glint	Yes					
Waterproof	Can prevent small splash					
Size	140 (L) *62 (W) *32 (H)					
Weight	174					

USER'S GUIDE
Optical Multi Meter

Optical Multi Meter

WARNING

You are cautioned that changes or modifications not espressly approved in this document could void yout 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.

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

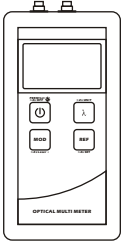
As much as possible, avoid sudden temperature changes. Do not attempt to use the drive immediately after moving it from a cold to a warm location, to raising the room temperature suddenly, as condensation may form with in the drive. If the temperature changes suddenly while using the drive, stop using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

Storage

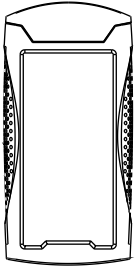
When long time no use, must take out the batteries to avoid destroying the device.

Check the accessories

Standard Edition

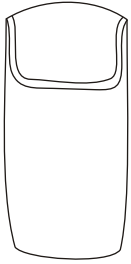


Host



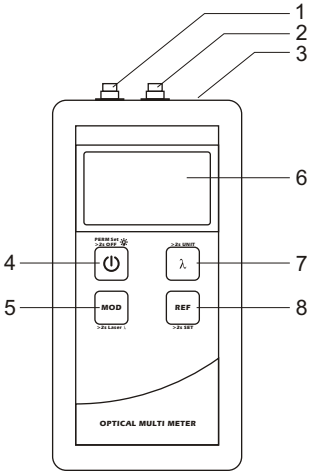
Rubber Jacket

User's Guide



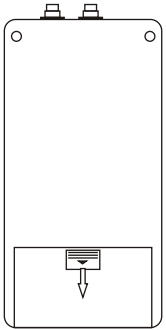
Soft Bag

Description

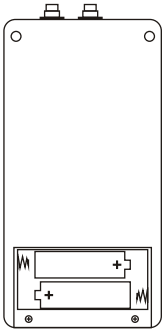


1	Laser source connector
2	OPM connector
3	AC/DC Socket
4	Power Button
5	Modulation/Output wavelength switch button
6	LCD
7	Wavelength/Unit Select Button
8	REF setting Button

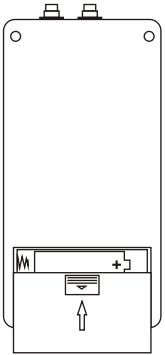
Installing the battery



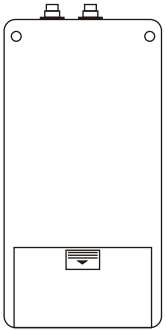
1.Pull the battery cover



2.Installing the battery



3.Push the battery cover



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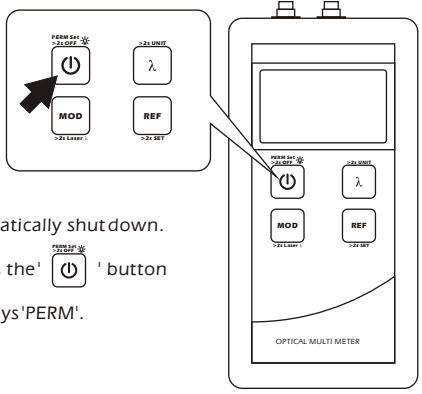
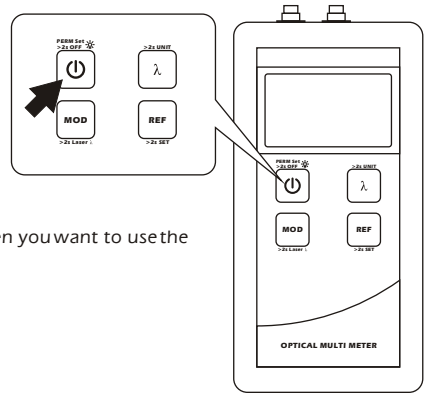


Backlight Function



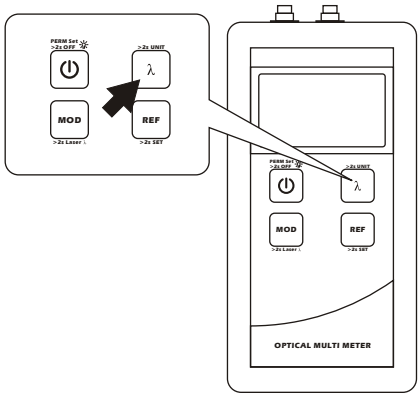
When the meter is power on, short press the

' ' button, you can control the backlight

function on or off. The backlight function is used when you want to use the

meter at night or darker occasions.

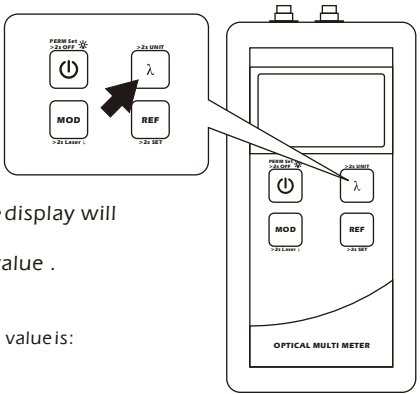
OPM - Select Wavelength



After pressing ' λ ' button, you can select the required output wavelengths. Details refer to the parameters table.

The power meter or other measuring equipments should select correspond wavelength of laser source.

OPM - Unit

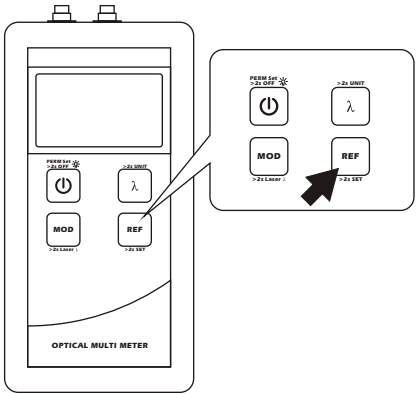


' λ ' button can be used to change the display unit of the measurement data to meet the different requirement. When press and hold this button for two seconds, the display will successively show the dBm value and mW/uW value .

The numeric relationship between mW value and dBm value is:

10lg(mW)=(dBm)

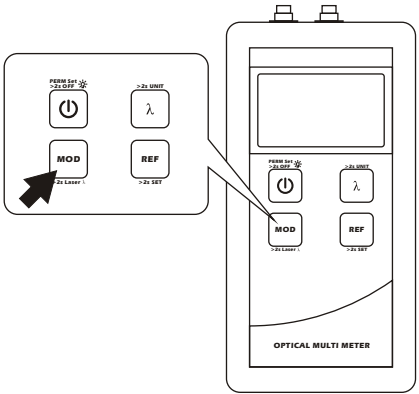
OPM - Reference



' REF ' Button is used to set or check the reference value. Short press this button, the display will show 'REF' and the dBm value which has been set up. When long press for two seconds or more, the device will use the current measurements to overwrite the original setting value and set it as a new preference value. Meanwhile the 'REF' sign will flash three times on the display. After that will show the difference(dB).

(Each wavelength can set their own reference value)

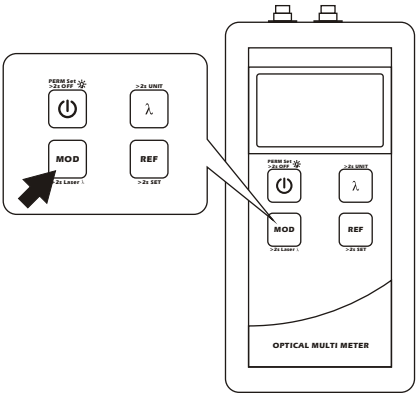
OLS - Select Wavelength



After pressing ' MOD ' button for 2 seconds, you can select the required output wavelengths. Details refer to the parameters table.

The power meter or other measuring equipments should correspond the wavelength of the light source.

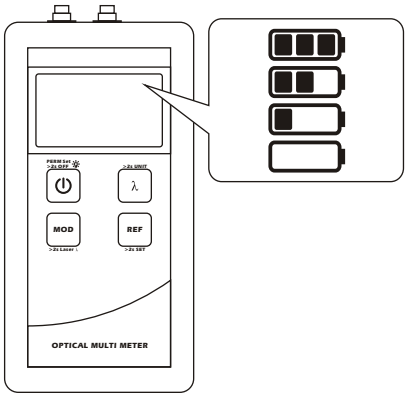
OLS - Modulation Output



After pressing ' MOD ' button, you can load a modulation current output laser.

This instrument has three modulation for selection: 270Hz, 1KHz,2KHz.

Power Indicator



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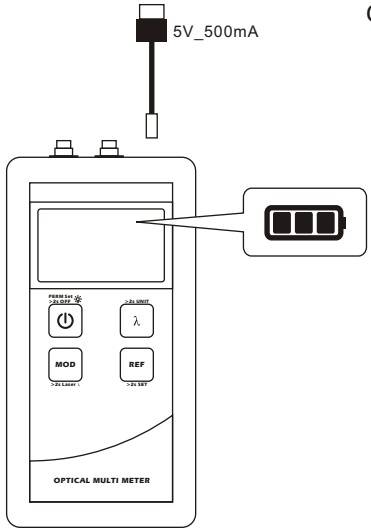

Charge

The instrument has a charging function. When use rechargeable batteries and a low battery indication shows on the instrument, you should promptly shut down it and recharge. Long time undervoltage will shorten the lifetime of the rechargeable battery.

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 finished the fast recharge and can be used directly. If you do not stop recharging at this time, the in strument will continue the trickle charge state, using 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.

Optical power meter Detail Parameters

	T	C	Customize
Measurement Range	-70～+6dBm	-50～+26dBm	
Wavelength cal.	850nm,1300nm,1310nm,1490nm,1550nm,1625nm		
Resolution	+6～-60dBm(0.01dB), -60～-70dBm(0.1dB)	+26～-40dBm(0.01dB), -40～-50dBm(0.1dB)	
Accuracy	±0.2dB		
Linearity	±2%		
Detector type	InGaAs		
Fiber optic adapter	FC or customize		
Response range	700～1700nm		

Optical laser source Detail Parameters

	Dual wavelength			Three wavelength		
Type Suffix	-M3M8	-S3S5	Cusomzie	-S3S4S5	-S3S5S6	Cusomzie
Output λ(nm)	850 1300	1310 1550		1310 1490 1550	1310 1550 1625	
Output power	>-10dBm	>-6dBm				
Laser Type	850nm,1300nm,1310nm,1550nm@FP 1490nm,1625nm@DFB					
Optic adapter	FC/PC or customize					
Modulation wave	270Hz/1KHz/2KHz					

Part of Public Detail Parameters

Auto off	Yes
Battery Type	AA * 2
Battery lifetime	>40H
Waterproof	Can prevent small splash
Size	140mm*62mm*32mm
Weight	200g