MT-7601 Optical Power Meter

USER'S GUIDE
Optical Power Meter
MT-7601

Optical Power Meter

WARNING

You are cautioned that changes or modifications not expressly 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.

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.

Description
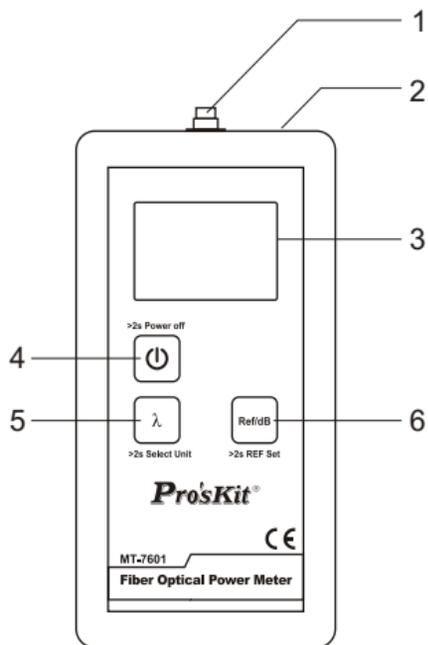
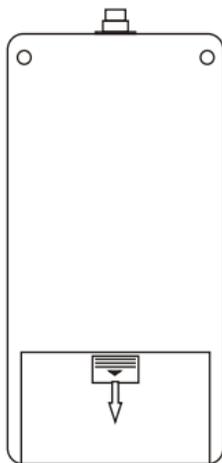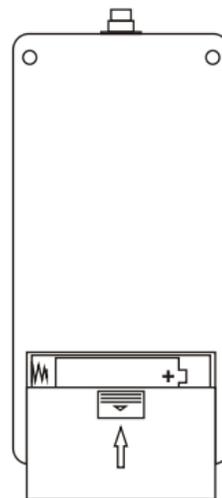|	
1	InGaAs detector
2	Charging Socket
3	LCD
4	Power Button
5	Wavelength/Unit Select Button
6	REF setting Button

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

This meter has a power-saving function, normal
boot and ten minutes without any operation, the device will automatically
shut down. If you need to shield this function and enable the meter keeps
on working, only need to press the " ⏻ " button and hold when you
boot the instrument. After two seconds, the meter display will show "PERM"
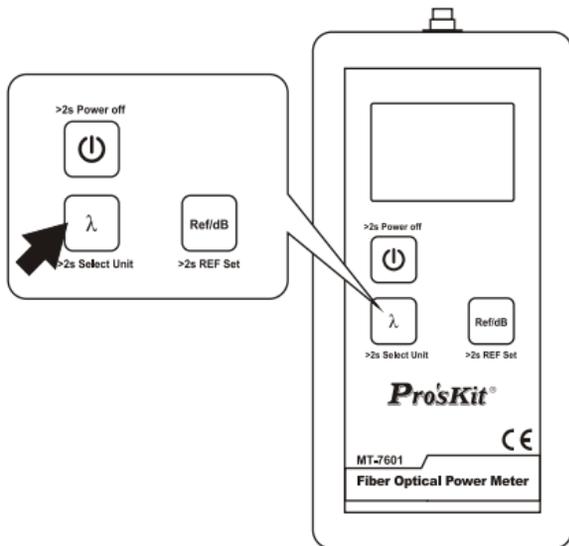which means permanent power on.
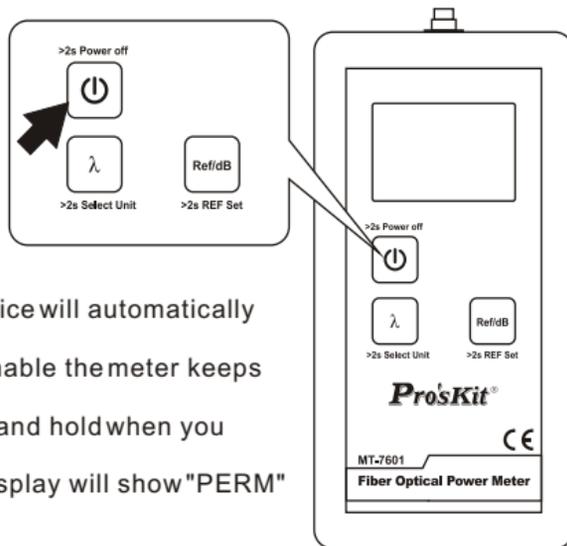
Backlight Function

Under boot status, 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
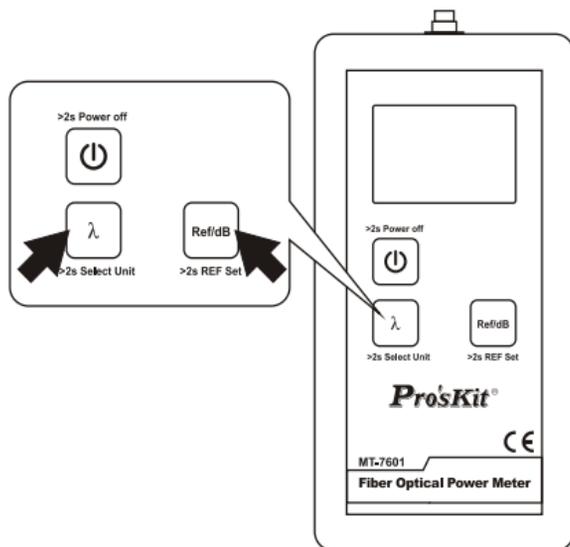at night or darker occasions.
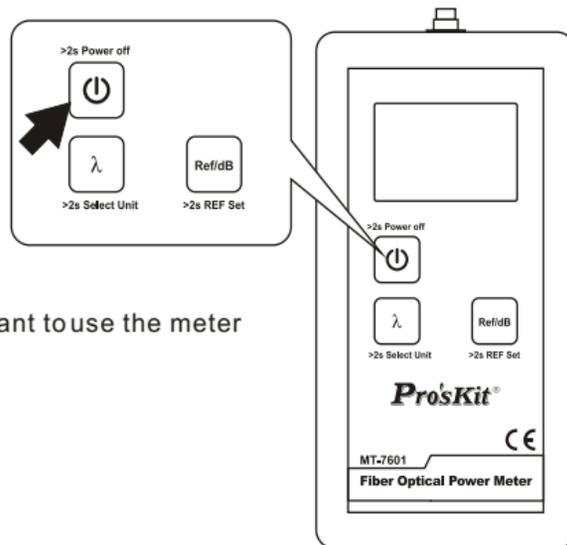
Wavelengths

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 " button after booting, the meter will switch to the measure status of a corresponding wavelength successively, and show on the display.

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

>2s Power off
(⏻)

λ Ref/dB
>2s Select Unit   >2s REF Set

>2s Power off
(⏻)

λ Ref/dB
>2s Select Unit   >2s REF Set

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MT-7601
Fiber Optical Power Meter

Wavelengths

The instrument has been equipped with activated wavelength identification function by the factory, and users can manually turn on or off this function. In the boot mode, please press the combination key " λ " and " Ref/dB ", if the center of the screen shows NO, which means the wavelength identification function has been turned off; but if the center of the screen shows EN, which means it turned on. When the wavelength identification function starts, and connects with laser source which has wavelength identification function, the optical power meter can identify the current output wavelength and automatically switch to the wavelength to measure.

>2s Power off

>2s Select Unit   >2s REF Set

>2s Power off

>2s Select Unit   >2s REF Set

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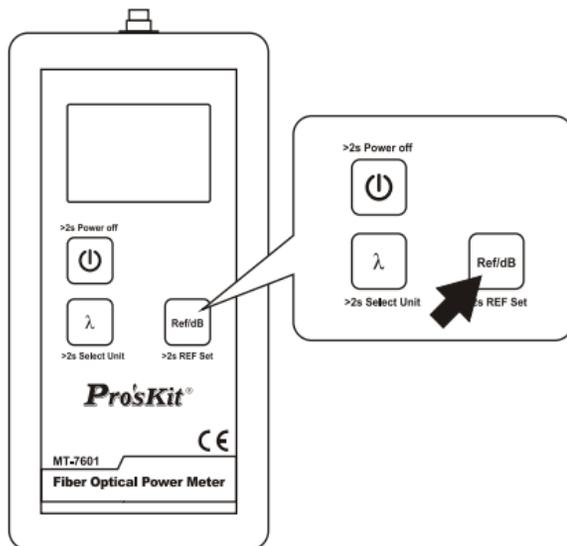**Fiber Optical Power Meter**

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Unit

" λ " button can be used to change the
>2s Select Unit

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 .
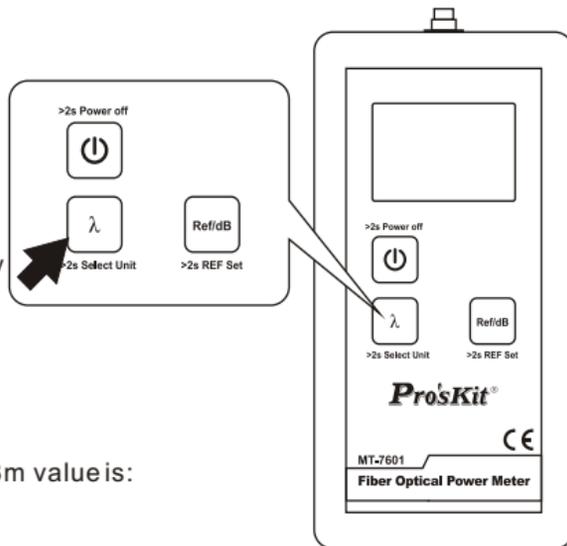
The numeric relationship between mW value and dBm value is:

10lg(mW)=(dBm)

Reference

" Ref/dB >2s REF Set " 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)

Power Indicator
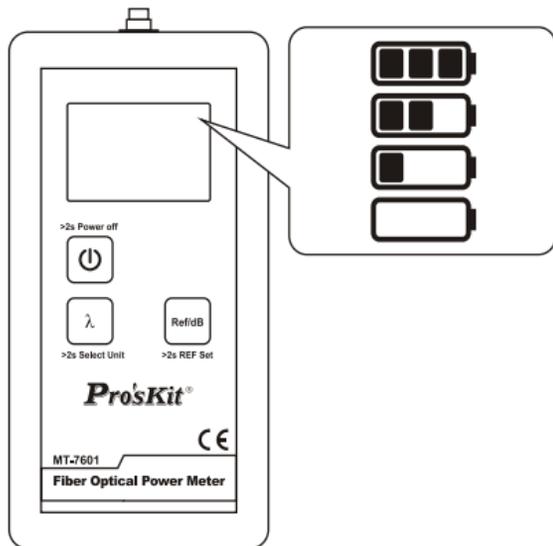
Four levels indication of power detection

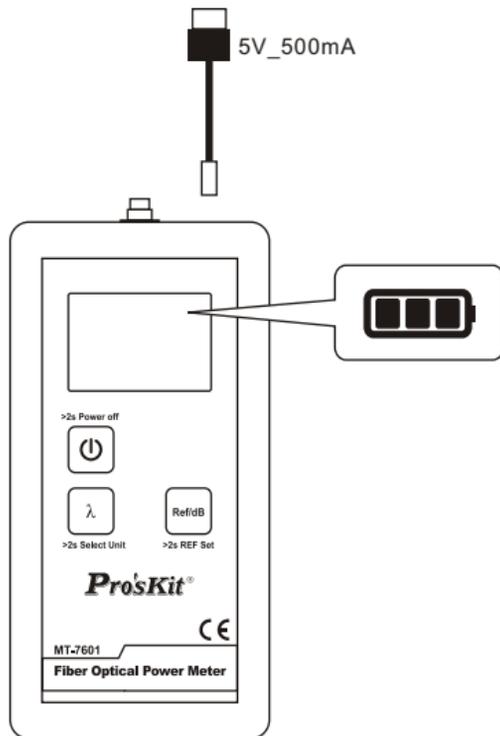Represents the remaining 80%---100% electricity

Represents the remaining 40%---80% electricity

Represents the remaining 20%---40% electricity

Represents the remaining electricity less than 20%

5V_500mA

>2s Power off

λ   RefIdB
>2s Select Unit   >2s REF Set

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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 instrument 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.

Meter Maintenance and Calibration

General maintenance

Optical fiber connect the adapter should avoid contacting with hard objects and keep clean.

Should be stored in a dry and ventilated place to avoid moisture.

When un use for long time, should remove the batteries before storage.

Fault and solution

Failure name	Failure Cause	Solution
Cannot boot	Check the battery has power or not	Check the batteries are installed correctly
Immediately shutdown after booting	Check the battery has power or not	Replace or recharge the batteries
Can display, but all operations are valid	The instrument program is disordered	Reboot
Cannot charge	Using did not use rechargeable batteries	Reinstall the rechargeable batteries
Garbled	Incorrect reset	Reboot

Detail Parameters

	MT-7601
Measurement Range	+6~-70dBm
Wavelength cal.	850nm,1300nm,1310nm,1490nm,1550nm,1625nm
Resolution	+10~-60dBm(0.01dB)，-60~-70dBm(0.1dB)
Accuracy	(1550nm,1310nm)$\pm$0.2dB/(1490nm,1625nm)$\pm$0.3dB/(850nm,1300nm)$\pm$0.4dB *
Linearity	$\pm$2%
Detector type	InGaAs
Fiber optic adapter	FC/SC/ST & 2.5mm Universal
Application fiber type	9/125μm~62.5/125μm
Power Display Units	dBm,mW,uW
Response range	700~1700nm
Freq. Identification	270Hz/1KHz/2KHz(Optic power>-30dBm)
Ref	Yes
Battery Type	AA/LR6 1.5Vx2 pcs
Battery lifetime	>100H
Key tone	Yes
Backlight	Yes
Automatic power off	10 min.(Can be cancelled)
Waterproof	Can prevent small splash
Operate temp.	-10℃~+60℃
Storage temp.	-20℃~+70℃
Relative humidity	<90% No dew
Size	165mm*80mm*35mm
Weight	180g(W/O battery)

Test conditions: -10dBm@1550nm23±2 degrees Celsius, 40%~60% humidity using standard test fiber
* +10~+5 dBm and -62~-70dBm measurement data for reference