Pro'sKit®

# MT-7601 Optical Power Meter

# 用户手册
# USER'S GUIDE

English

繁體中文

简体中文

# 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.

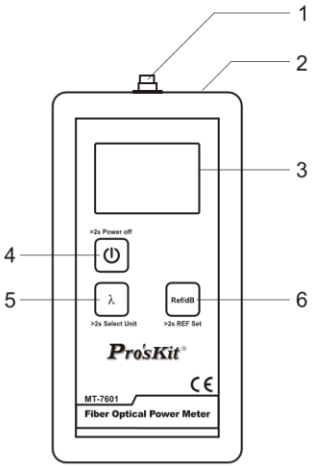
### Avoiding condensation problems

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

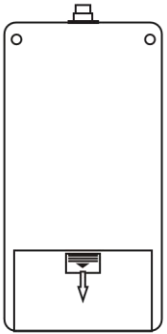
When long time no use,must take out the batteries to avoid destroying the device.

# Description



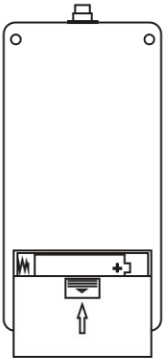

| | |
|---|---|
| 1 | InGaAs detector |
| 2 | Charging Socket |
| 3 | LCD |
| 4 | Power Button |
| 5 | Wavelength/Unit Select Button |
| 6 | REF setting Button |

# Installing the battery

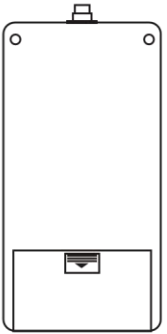


1.Pull the battery cover

2.Installing the battery



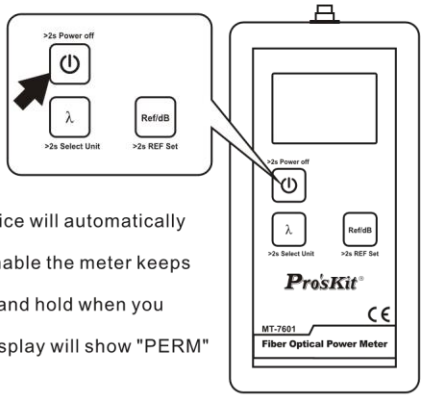
3.Push the battery cover



4.Complete

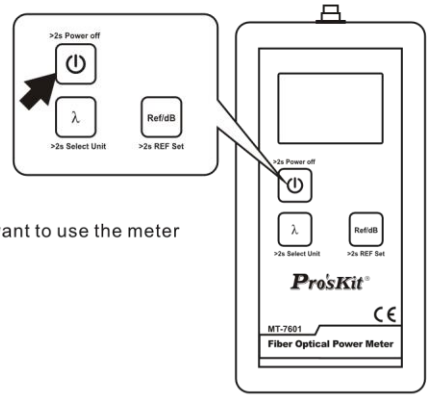
# On/Off and Permanent On

Press “ >2s Power off ” button will turn on the meter . Press button again for two seconds or more will turn off the meter.



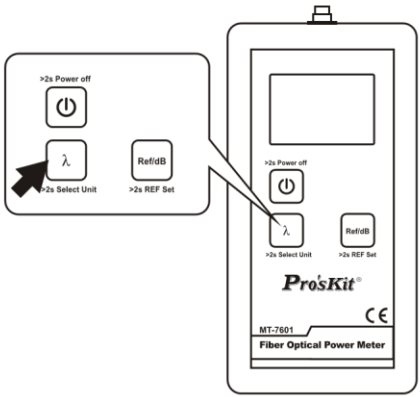

This meter has a power-saving function, normal boot and ten minutes without any operation, the device will automatically shut down. If you need to shield this function and enable the meter keeps on working, only need to press the “ >2s Power off ” button and hold when you boot the instrument. After two 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

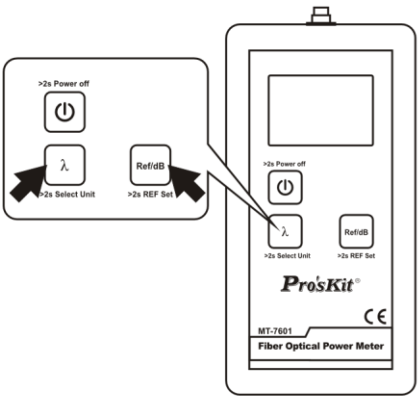



According to the project, we need to measure optical signals of different wavelengths. Then we need to select a corresponding wavelength to measure the optical power. If the wavelength needs to be measured does not match with the wavelength we select on the optical power meter, it will lead to the measuring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

Press " λ >2s Select Unit " 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.

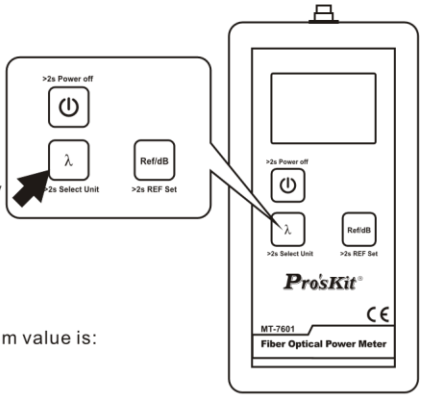
# Wavelengths




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 (>2s Select Unit) " and " Ref/dB (>2s REF Set) ", 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.

# Unit

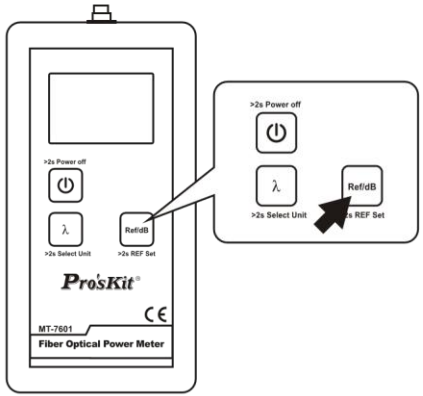
" λ >2s Select Unit " button can be used to change the display unit of the measurement data to meet the different requirement. When press and hold this button for two seconds, the display will successively show the dBm value and mW/uW value .




The numeric relationship between mW value and dBm value is:

10lg(mW)=(dBm)

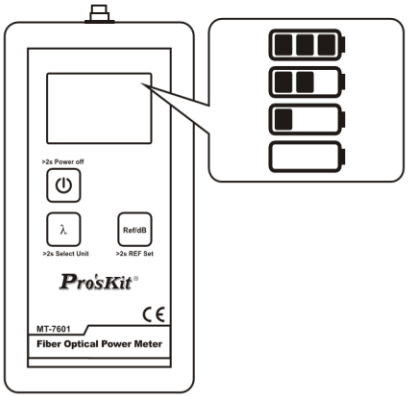
# Reference




" 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



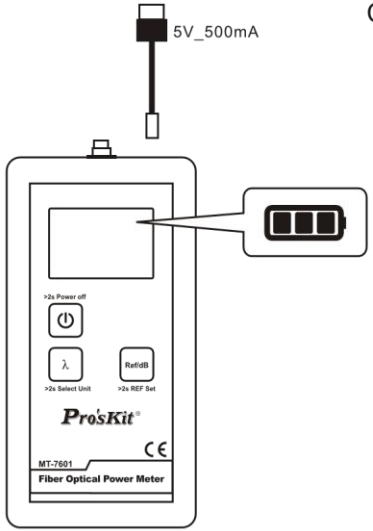

Four levels indication of power detection

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%




## 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.

# 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 | +10~-70dBm |
| Wavelength cal. | 850nm,1300nm,1310nm,1490nm,1550nm,1625nm |
| Resolution | +10~-60dBm(0.01dB), -60~-70dBm(0.1dB) |
| Accuracy | (1550nm,1310nm)±0.2dB/(1490nm,1625nm)±0.3dB/(850nm,1300nm)±0.4dB * |
| Linearity | ±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@1550nm 23±2 degrees Celsius, 40%~60% humidity, using standard test fiber
* +10~+5 dBm and -62~-70 dBm measurement data for reference