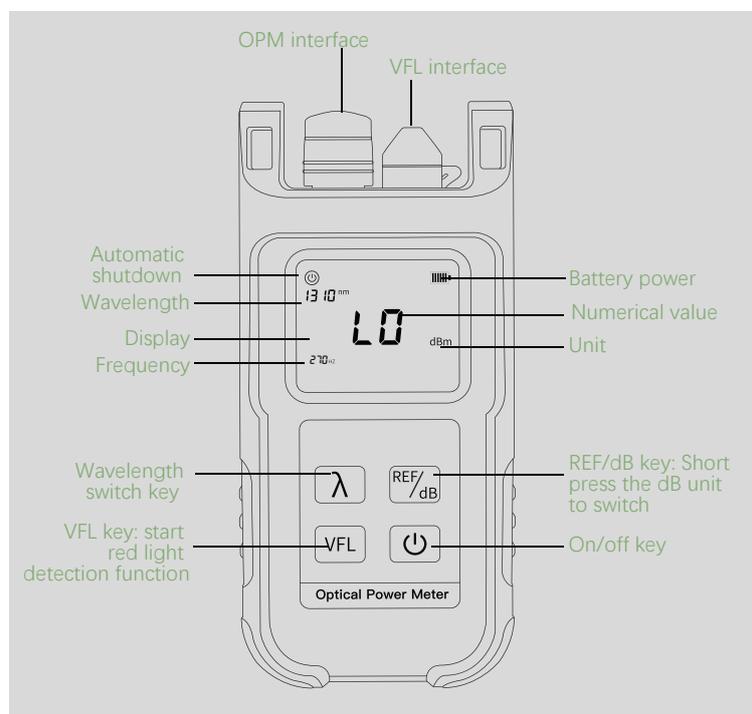


TPV-53 power meter User Manual

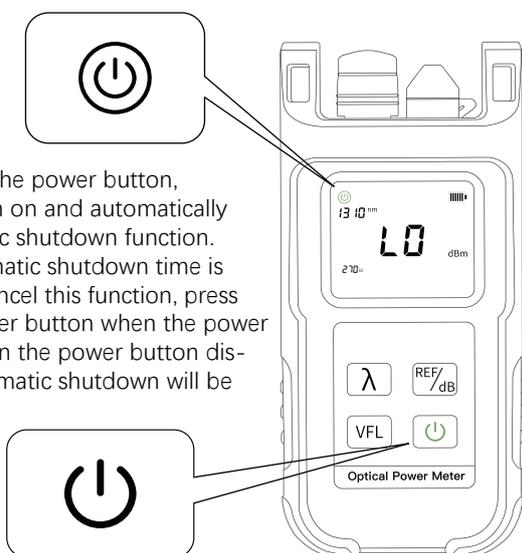
Products introduction

TPV-53 is a combination of optical power meter and VFL. Among them, the optical power module can be used to measure the optical power in mw, dB, dBm within the wavelength range of 850~1700nm, with high display resolution. There are seven wavelengths calibration points at 850nm, 980nm, 1300nm, 1310nm, 1490nm, 1550nm and 1625nm. It can display both linear and non-linear optical power at the same time, which can be used for direct measurement of optical power and relative measurement of optical link loss. The VFL module provides 650nm visible laser output, the test distance can reach 10km, and the output power can reach 1mW/10mW/20mW. It is suitable for single-mode or multi-mode fiber measurement and can identify optical jumpers, jumper boards, distribution frames, and connectors fault at the place. The instrument has a continuous backlight display function, a large LCD display, making the measurement work more conveniently and quickly, it is the construction of cable television systems, optical fiber communications and other fields indispensable equipment for maintenance.



1 Power on/Auto power off

After short press the power button, the meter will turn on and automatically start the automatic shutdown function. The default automatic shutdown time is 10 minutes. To cancel this function, press and hold the power button when the power is turned on. When the power button disappears, the automatic shutdown will be canceled.



2 Optical power reference value setting



Insert the fiber which is under test into the OPM interface. After booting, enter the optical power meter interface, short press the "REF" key to set the current power value as the reference power, which can achieve relative optical power test (insertion loss test) or absolute power test, enter the relative power test mode at the bottom of the screen Display insertion loss (dB). The screen displays the reference value; short press the "dB" key to switch between linear power and absolute power display. The units of linear power, absolute power, and relative power are nW, dBm, and dB respectively.

P absolute power = 10lgP linear power / 1mW
 P relative power = P absolute power - P reference power

REF/dB

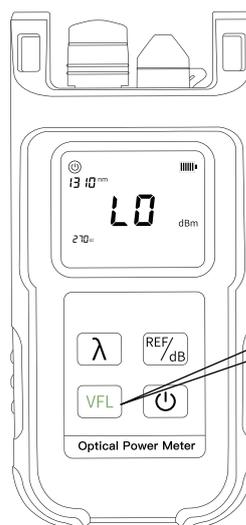
3 Optical power wavelength switching



On the optical power meter interface, short press the "λ" key to switch the measurement wavelength, select 7 different test wavelengths, 850nm/980nm/1300nm/1310nm/1490nm/1550nm, 850nm, 1625nm to ensure the accuracy of the test, select the wavelength should be consistent with the wavelength of the measured optical signal.

λ

4 VFL function



Insert the fiber under test into the VFL interface, press the VFL key to enter the VFL test interface.

VFL

5 Calibration function description

Press the VFL+REF keys at the same time to enter the calibration mode, and Cal will be displayed at the bottom of the screen. The next operation is only valid in the calibration mode. Enter key for downward adjustment, REF/dB key for upward adjustment. After adjustment, press VFL to save.

Keypad	Function
REF/dB	Add 0.1dB
λ	Reduce 0.1dB
VFL	Save
	Shut down

6 Common fault solutions

Fault prompt	Possible Causes	Solutions
LCD display is weak	Low battery	Replacement battery
Unable to boot display	Low battery or other	Reboot or replace battery
The optical power value is abnormal	Connector failure/dirty	Reconnect the connector or clean the sensor

7 Products features

- Two in one compact and convenient.
- 2.5mm universal connection is suitable for FC/SC/ST connector.
- Testing wavelength 850~1625nm.
- Testing range -70~+10dBm / -50~+26dBm.
- Resolution 0.01db.
- High-quality imported laser head, penetrating distance up to 10 kilometers.
- Waterproof keys suitable for various outdoor environments.
- Soft rubber shell protection, 2m fall prevention.

8 Products features

Power testing mode

Calibration wavelength(nm)	850/980/1300/1310/1550/1625
Probe type	InGaAs
Power testing range (dBm)	-70~-10/-50~+26
Calibration accuracy	±0.02dB
Display unit	dB/dBM/uW
Optical adaptor type	2.5mm universal+SC
Ato off(Min)	5
Dimension(mm)	88.5x57x19.5

VFL testing mode

Central wavelength(nm)	650
Fiber compatibility	Single & Multi mode fiber
Output power(mW)r	10
Optical adaptor type	For SC,FC,ST
Detection Distance(km)	10up
Battery	Alkaline Battery (3AA 1.5v batteries)
Working temperature (°C)	-20~+75
Storage temperature (°C)	-40~+85
Automatic shutdown time (min)	10
Battery keeps working (h)	100 hours (backlight off state)
Battery life(hrs)	50(Typ)
Relative Humidity (°C)	95% RH from 0~40

➤ Use environment

- **Operating environment altitude: areas below 2000m above sea level**

9 Tips

- ⚠ **Please read all instructions and warnings before using this product. Irregular use will cause. It will damage the product or personal safety.**

- 1) Do not store this product in high temperature, strong light and strong magnetic fields, and do not place it in other harsh environments such as fire sources.
- 2) Improper use of the product may easily cause the product itself or may endanger personal property safety.
- 3) If consumers violate the product manual and improperly use it, the personal and property damage caused by it will bear all the consequences, and the company will not bear any legal responsibility.
- 4) Non-professionals are strictly prohibited from disassembling this product.
- 5) Avoid using electrical appliances or loads that exceed the output current of this product (the circuit will be protected and there will be no output).
- 6) Avoid strong physical effects, including knocking, throwing, trampling, squeezing, etc.

➤ Standard configuration

- **Packing carton, optical power meter host, certificate, instruction manual.**

Contact us

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