

**Precision Rated Optics** Work with a PRO!

# **PM-200B**

**Optical Power Meter** 



# **Operation Guide**

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# **Chapter 1 Using This Manual**

This manual contains operation information for the Precision Rated Optics PM-200B Power Meter. This power meter may be operated by using the key pad buttons.

### Precautions

The PM-200B Optical Power Meter is equipped with a Visual Fault Locator (VFL) which emits radiation at 650nm. Though this level of radiation is not considered a danger; there are safety considerations and certain practices that should be followed.

Please read and follow all warning and caution information noted in this manual.

# **Chapter 2 Safety**

### Prior to operating the equipment in any way, it is highly suggested the user reads all safety information.

This product has been designed and tested in accordance with the manufacturer's safety standards, and has been supplied in a safe condition.

This document contains information that must be followed by the user to ensure safe operation and to maintain the product in a safe condition. Failure to follow these safety warnings and cautions can result in harm to the user or damage to the instrument.

### Warning

Personnel should always be aware when working with fiber optic test equipment that active fibers may be present, therefore infrared optical energy may be present.

### Warning

Never look directly into the end of a connected fiber optic cable or fiber optic interface of optical test equipment, to do so could expose the user to laser radiation and could result in personal injury.

### Warning

To Prevent Fire or Shock Hazard:

- Do not install battery types other than those specified
- Do not puncture batteries.
- Do not incinerate batteries.
- All batteries should be disposed of in a proper manner.

# Failure to follow these caution statements could cause unsafe conditions for the operator and equipment and may void the warranty.

Failure to follow these cautions statements may void the warranty of, or cause damage to this equipment.

### Caution

Fiber-optic connectors are easily contaminated or damaged. The connection to the VFL is physical contact type of connections and dirty or damaged connectors may impair the instruments capabilities at minimum and at worst result in the need to return the VFL to the factory for expensive repairs. Prior to making any connection to the unit, ensure that all proper cleaning procedures have been followed.



### **Chapter 3 Summary**

The **Precision Rated Optics PM-200B hand-held optical power meter with built-in VFL** is used for continuous optical signal power measurement, optical fiber link loss testing and optical fiber line on-off testing. It is controlled by a single chip microprocessor with complete functions. The PM-200B Power Meter is widely used in optical cable construction and maintenance, optical fiber communication, optical cable sensing, optical CATV and other fields.

The PM-200B body is designed to be both ergonomic and durable. The optical power meter has compact shape, automatic shutdown function, three VFL modes, backlight display, wavelength memory function, optical fiber work identification, support user calibration, wide test range, support lighting.

Note: If there is any change in the version of the manual, no further notice will be given.

#### **Product features:**

- 1. Support lighting and backlight switch
- 2. Support automatic shut down
- 3. Supporting Wavelength Memory Function
- 4. Support frequency identification (optional)
- 5. Support user calibration
- 6. Supporting continuous and flashing VFL
- 7. Supporting SC/FC/ST Interface
- 8. Supporting external power supply such as charging treasure, computer, etc.
- 9. Supporting simultaneous linear (mW) and non-linear (dBm) display
- 10. Changing, work 72 hours (OPM Function)

#### Technical index: (The following indicators test at the temperature 23°C±5°C)

Parameters	<b>Optical Power Meter Specifications</b>
Wavelength range	800nm - 1700nm
Optical Connector	Universal FC/SC/ST
Detector Type	InGaAs
Power Measurement Range	$-50 dBm \sim + 26 dBm$
Uncertainty	± 5%
Calibration Wavelength	850/980/1300/1310/1490/1550/1625/1650nm
Display Resolution	Linear display: 0.1%, Logarithmic display: 0.01dBm
Power Regulation	0-6dB, 1dB step

Parameters	Visual Fault Locator Specifications
Wavelength	$650$ nm $\pm$ 30nm
Power	2mW
Mode	CW/1Hz/2Hz
Connector	Universal FC/SC/ST

Parameters	General Specifications
Size/Weight (WxDxH)	4.41 x 2.60 x 1.18in / 4.94oz (112 x 66 x 30mm / 140g
Operating condition	0~95% relative humidity, 14~120°F (-10~50°C)
Storage condition	0~95% relative humidity, -40~158°F (-40~70°C)
Automatic Shut-off	10 min
Power	AAA Lithium Batteries (x2)
Battery	$\geq$ 120h (OPM function)

# **Chapter 4 Operation Instructions**

- 1.  $\bigcirc$ : Multi-function key
  - Short press can start the machine.
  - Auto-shutdown function is turned on by default (10 minutes). Auto-shutdown function can be turned on or off by pressing this button. The power icon on the upper left of the screen is turned on or off accordingly.
  - Long press this key, shut down.
- 2. LIGHT:
  - 1> **Backlight on/off**: Short press to turn on the backlight function, then turn off the backlight.
  - 2> VFL 650nm light source on/off: long press to the open VFL - then flicker at 1Hz - then flicker at 2Hz
    - then turn off the VFL, and cycle in turn. When the VFL is turned on, the first line of the screen displays 650 nm.
- 3. **dB**: By short pressing this key, the relative optical power test (insertion loss test) or absolute power test can be realized. After entering the relative power test mode, the insertion loss (dB) is displayed at the bottom of the screen, and the reference value is displayed at the second line of the screen.
- 4. **REF**: Press this key to set the current optical power as a reference value and enter the relative optical power test (insertion loss test) mode. The second line of the display screen will display the set reference value, and the third line will display the relative power value (insertion loss dB).
- 5.  $\lambda$ : Eight different test wavelengths can be selected, 1310, 1550, 1490, 1625, 1650, 850, 1300 and 980, and the selected test wavelength is displayed on the upper screen.
- 6. LED: Turn on/off the lighting LED lamp, and turn on or off the lighting function by pressing short.

# **Chapter 5 Repair/Warranty**

### **5.1 Repair Information**

If repair is required, simply call PRO at 888-545-1254 for return instructions and a RMA number.

### **5.2 Warranty Information**

This product, including all mechanical, electrical, and optical parts and assemblies are unconditionally warranted to be free of defects in workmanship and material for a period of one (1) year from the date of delivery.

This warranty does not apply to expendable parts such as batteries or optical panel connectors, nor to any instrument or component which has been subjected to misuse, alteration, or fiber connector damage. It is the customer's responsibility to understand all the instructions and specifications prior to operating this instrument. This warranty does not extend to any loss or damage consequent to the failure of the warranted product.

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