

G7



USER MANUAL

Overview

G7 series handheld optical power meter products are mainly used for continuous optical signal power measurement and fiber line continuity test. It is controlled by a single-chip microprocessor with complete functions. It is widely used in optical cable construction and maintenance, optical fiber communication, optical fiber sensing, optical CATV and other fields. The optical power meter has a compact shape, the body shape design meets the ergonomic requirements, and the advanced cold plastic molding process is used, which is beautiful and durable. The built-in detector can be well protected.

Note: The manual version is subject to change without notice.

Function overview

- ◆ Multi-band high-precision light attenuation test.
- ◆ Color LCD screen display.
- ◆ Frequency automatic identification function, the corresponding frequency icon is automatically displayed when the frequency is received.
- ◆ Large-capacity lithium battery, longer battery life, real-time display of battery power in five bars, and the remaining power at a glance.
- ◆ The standard mobile phone USB charging interface is convenient to use the mobile phone charging adapter and mobile power supply to supplement the power of the machine at any time.

1

Technical indicators

Model	G7-00	G7-10	G7-50
Measurement range(dBm)	-70~+6	-70~+10	-50~+26
Wavelength range	800~1700		
Interface Type	2.5mm universal adapter		
Probe type	InGaAs		
Detection area (um)	300		
Uncertainty	±5%		
Standard wavelength (nm)	850,980,1270,1300,1310,1490,1550,1577,1625		
Display resolution	Linear display: 0.1%, logarithmic display: 0.01dBm		
Operating temperature	-20~+60°C		
Storage temperature	-25~+70°C		
Drop height	≤2m		
Quiescent Current (uA)	≤2		
Working current (mA)	≤35		
Recharging current (mA)	300		
Charging time (h)	≤3		

2

Technical indicators

Automatic shutdown time	10min
Battery life(h)	≥13
Standby time (Day)	≥3
Instrument size(mm)	127*48*26
Power supply	lithium battery
Net weight(g)	86

Note:

- ◆ Wavelength range: Specify a standard operating wavelength range from input min to input max, and set the optical power meter to work under the specified indicators within this wavelength range.
- ◆ Power measurement range: the range where the maximum power can be measured according to the specified index.
- ◆ Uncertainty: the error between the test result of a certain optical power and the standard optical power measurement result.

3

Use function details

	Toggle Switches	<ol style="list-style-type: none"> 1. Lightly press inward and push up the power meter to turn on, and the detector automatically extends, lights up the display, and can perform light decay test. 2. Lightly press the switch inward to return the power meter to shut down, and the detector automatically retracts, turning off the display.
	Power meter button	<ol style="list-style-type: none"> 1. Short press the wavelength to switch, and multiple wavelengths can be switched in cycles sequentially 0850nm,980nm,1270nm,1300nm,1310nm,1490nm,1550nm,1577nm,1625nm, and the last test wavelength will be automatically saved when shutting down. 2. Long press for 2 seconds to turn on the automatic shutdown function for 10 minutes and light up the power icon on the display. The machine starts timing, and the display will be turned off after 10 minutes without any key action. At this time, if you want to turn it on, you must return the toggle switch to turn it on again; press and hold for 2

4

Use function details

	Power meter button	seconds again to turn off the automatic shutdown function for 10 minutes. The power icon goes out.
	Flashlight button	<ol style="list-style-type: none"> 1. Short press to turn on the LED flashlight. 2. Long press for 1 second to turn off the LED flashlight. 3. When the power meter is turned on, short press is the power meter unit (nW, dB) switch, at this time long press for 1.5 seconds to turn on the LED flashlight, long press for 2.5 seconds to turn off the LED flashlight.
	Combination keys	<ol style="list-style-type: none"> 1. When the power meter is on, press and hold the key combination for 2 seconds at the same time, the third row of the display shows "CAL" to enter the user calibration mode, at this time, press the key+0.05 dbm once, Short press the key once is -0.05dbm, after calibration, short press the key combination again to save and exit the user calibration mode "CAL" disappears. 2. Long press the key + short press the key to reset the dB value of this wavelength to zero.

5

Use function details

	Combination keys	3. Long press the key + short press the key to restore the factory settings. At this time, "nm" flashes 3 times, indicating that the factory settings are restored successfully.
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Charging function

Standard USB +5V charging. When the USB cable is plugged in, the "USB" icon will light up in the power-on state. During the charging process, the five-segment battery will be cycled and the battery will be fully charged.

Measurement of relative power and absolute power

- ◆ Absolute power
If the current measurement wavelength is 1310nm and the measured light is connected, the current value displayed on the screen includes the linear value and the nonlinear value of the absolute optical power.
- ◆ Relative power
After setting the wavelength, in the absolute optical power mode, connect to the measuring light and measure the current power value. At this time, press the key frequently, and the current power value becomes the current reference value (in dBm).

6

Battery display

The power indicator does not display during work. When the power is insufficient to provide normal work, the power indicator flashes once every second, and it will automatically shut down after 10 seconds. Do not turn it on again at that time. Use the supplied power adapter to charge and then turn it on.

Daily care and maintenance

- ◆ Please always keep the sensor end face clean to be grease-free and pollution-free. Do not use unclean and non-standard adapter connectors, and do not insert end faces with poorly polished surfaces, otherwise it will damage the sensor end face and cause errors in the test.
- ◆ Stick to one adapter as much as possible.
- ◆ Once not in use, immediately put on the dust cover to protect the end surface clean and prevent long-term exposure to the air and attaching dust to cause measurement errors.
- ◆ Please plug and unplug the optical adapter connector carefully to avoid scratches on the port.
- ◆ Clean the surface of the sensor regularly. When cleaning the surface of the sensor, please use a special cleaning cotton swab to wipe gently in the circumferential direction.

7

Common fault solutions

Fault prompt	Possible Causes	Solution
LCD display is weak	Insufficient power	Recharge
Unable to display at boot	Insufficient power supply or other	Restart or charge
LCD display data is abnormal	The connector is faulty, dirty or locked	Reconnect the connector and clean the sensor

Standard configuration

Host, product warranty card, certificate, instructions for use, USB charging cable.

8

Quality assurance

- ◆ Within twelve natural months after the user receives the goods, our company will promise the quality and workmanship of its products. The warranty period is within twelve months from the date of receipt. When the purchased product is found to have quality problems, our company will deal with or replace them accordingly, but under any circumstances, our responsibility will not exceed the purchase value of the product.
- ◆ If there is a problem during the use of the instrument, it cannot be solved according to the common fault prompt scheme. The user is not allowed to open the case without authorization, please contact our company.
- ◆ For product defects caused by faults, our company is responsible for free maintenance or replacement of products.
- Note: This guarantee is only applicable to the normal use of the instrument, and there is no damage or normal use, due to product quality or material defects caused by failure, our company is responsible for free repair or replacement. Our company has the right to refuse the warranty for accidents, improper use, and unauthorized start-up maintenance.

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