

Specification & User Manual

Optical Power Meter

Bluetooth Version

850nm/1310nm/1550nm

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Part Number
AFT-G-FM-3DG-BT-SM-MM

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Table of Contents

1. Disclaimer	3
2. Range of Limitations	3
3. Description	3
4. Dimension and Materials.....	3-4
5. Specifications	4-5
6. Features	5
7. Guide	6-7
8. Operating Instructions.....	7
9. Maintenance.....	8
10. Software Interface.....	8-9
11. Shipping Information.....	9
12. Warranty.....	9-10
13. Ordering Information.....	10
14. Contact Information.....	10

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Range of Limitations

The Product Information found herein pertain to the Fiber Meter, Part Number **AFT-G-FM-3DG-BT-SM-MM**.

Description

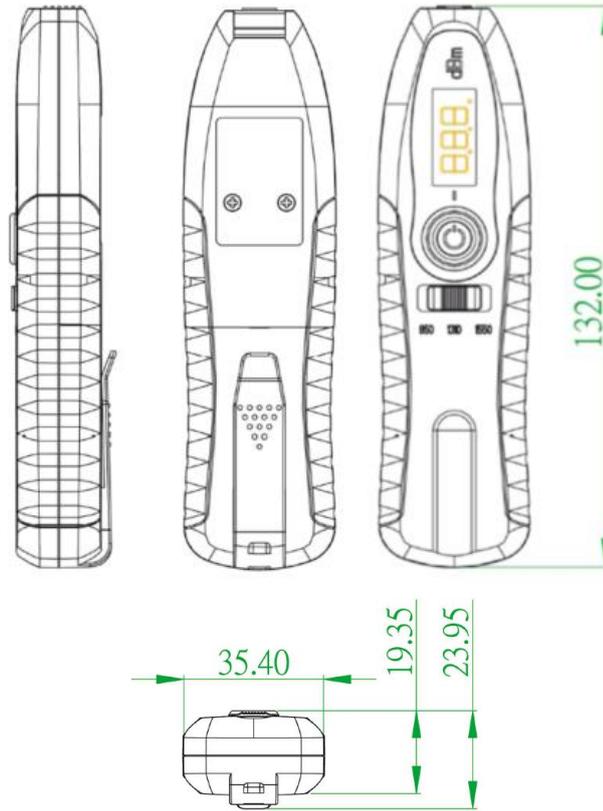
SENKO Bluetooth Power Meter is mainly used for checking the signal output power of the optical communication equipment in the fiber optic networks. The device measures the average power of a continuous light beam emitted from the source. Operating wavelengths 850nm/1310nm/1550nm.

The Fiber Meter consists of a solid state InGaAs photo diode, signal power measurement circuitry, and a 3 Digits LED display. The DUT connects between the transmission port and the universal interface on the Fiber Meter. The product displays accurate loss of transmission power (in dBm/dB).

The universal connector works with most common fiber interfaces such as ST / SC / FC and it is suitable to test both Single mode and Multimode cables. With an optical 2.5 mm to 1.25 mm adapter.

Dimensions and Materials

All materials comply with RoHS Restricted Hazardous Substances as detailed in '**DIRECTIVE 2002/95/EC OF THE EUROPEAN PARLAMENT AND OF THE COUNCIL** of 27 January 2003 on the Restriction of the use of Certain Hazardous Substances in Electrical and Electronic Equipment (RoHS)'



Specifications

Wavelength (Multimode)	850nm
Optical Power Range (Multimode)	-40 dBm - +5 dBm
Wavelength (Singlemode)	1310 nm / 1550 nm
Optical Power Range (Singlemode)	-40 dBm - +5 dBm
Batteries	2 x AAA (1.5V)
Resolution	0.1 dB
Accuracy	<+/- 0.3 dBm
Fiber Connector	Universal Type (Diameter 2.5mm)
Display	3 digit LED
Operating Temperature	0°C~ 50°C

Storage Temperature	0°C~ 70°C
Weight	0.06 kg
Dimension	132mm x 32mm x 19mm

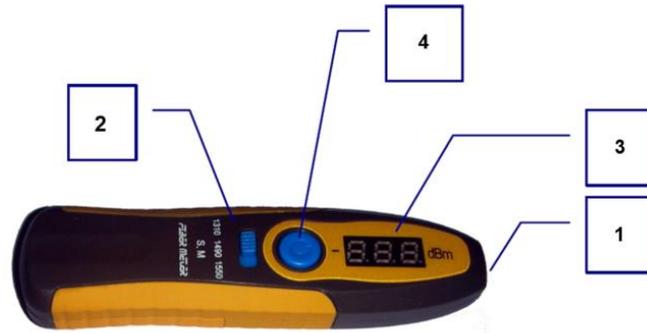
Features

- LED digital display.
- Universal 2.5mm/1.25mm adaptor for SC / ST / FC to LC/MU.
- Mobile App for Android / iOS / Windows Platforms.
- Consolidated Reporting.

Conversion Chart (dBm – μW)

dBm	μW	dBm	μW	dBm	μW	dBm	μW
		-30	1	-18	15.8	-6	251
		-29	1.3	-17	19.9	-5	316
-40	0.1	-28	1.6	-16	25.1	-4	398
-39	0.126	-27	2.0	-15	31.6	-3	501
-38	0.158	-26	2.5	-14	39.8	-2	631
-37	0.199	-25	3.2	-13	50.1	-1	794
-36	0.251	-24	4.0	-12	63	0	1000
-35	0.316	-23	5.0	-11	79.4	+1	1259
-34	0.398	-22	6.3	-10	100	+2	1585
-33	0.501	-21	7.9	-9	125	+3	1995
-32	0.631	-20	10	-8	158	+4	2512
-31	0.794	-19	12.5	-7	199	+5	3162

Guide



Lift the Dust Cap for access to the connector



Slide Battery Lid Backward

Remove Battery Lid to Change Batteries.

1. **Dust Cap:** to prevent dirt contaminating the PD.
2. **Switch:** Modify wavelength by sliding the switch.
3. **LED:** Figures show various readings you may encounter.



0 1 2 3 4 5 6 7 8 9



CA Cb Low -4.0 dBm +3.0 dBm High

4. **On/Off Button:** press to Turn On / Turn Off the Meter.

5. **Pen Clip**: to fasten the tool.
6. **Battery Lid**: open to change batteries.
7. **Linchpin**: lock the battery lid.

Operating Instructions

- The Fiber Meter is powered by two 1.5v AAA batteries.
- INITIAL CALIBRATION: Keep the Dust Cap closed and then turn on the Fiber Meter by pressing the Button. The LED will show "CA" which means the Initial Calibration is proceeding. After 3 seconds the LED display will show "Lo" which means the Fiber Meter has completed the Initial Calibration successfully and can now be operated.
- Lift the front Dust Cap up and insert one end of the fiber cable into the universal connector or directly insert it into an output connector of a fiber device or Power Source.
- Switch the slide switch to 850 nm position (for measuring Multimode fiber) or to 1310nm / 1550 nm position (for measuring Single mode fiber). The LED figure shows the actual receiving input power values.
- "Lo" will be displayed when the actual power received is under measuring range.
- When the input power is higher than the measuring range, "Hi" is displayed on the LED indicator.
- To measure the power loss of a fiber cable, you need a steady power source. For example, the light source output power is -20 dBm after a fiber cable transmission and the -10 dBm is read directly from the LD power source. This means there is at least a 10 dB power loss after the fiber transmission.
- When the LED shows "Cb"(Check Battery), it means that the batteries are almost drained and in a low voltage state. You need to replace the batteries right away.
- Do not touch the fiber's interface in order to avoid dirt contaminating the connector.
- Keep the fiber connector capped at all times when the device is not in use.
- If you use proper tools to clean the fiber before testing, you will obtain accurate test results and ensure longer device service.

Maintenance

This tool requires no maintenance other than periodic battery charges. Like any other electronic equipment, this tool should be kept away from water, high damp, dust, electricity, and environments of extreme temperature. Do not drop this tool on hard surface. Modifying internally any of this tool components can cause a malfunction and will invalidate the manufacturer’s warranty.



“CA” means the Initial Calibration is proceeding,



“Cb” means to Check Battery. It is suggested to replace the batteries at that time.



“Hi” means the input power is higher than the measurement range.

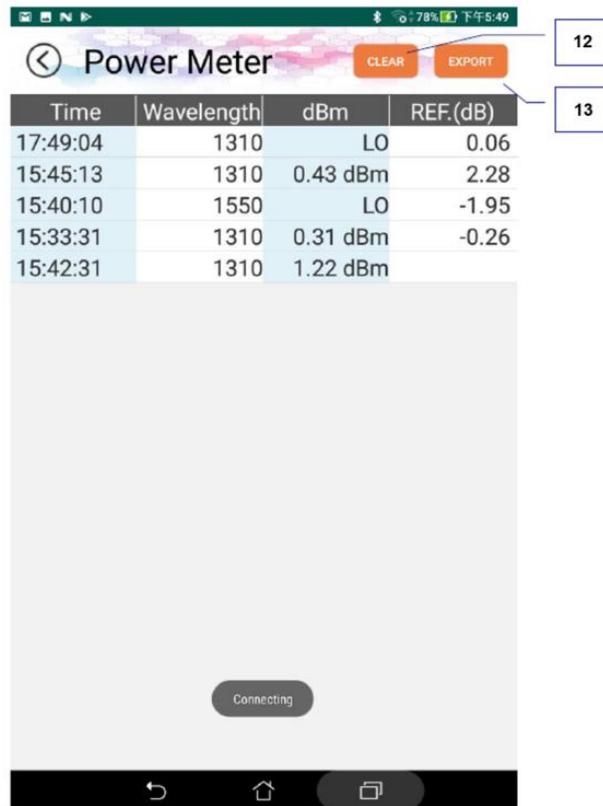


“Lo” means the received power is lower than the measurement range.

Software Interface



1. Battery of Power Meter.
2. Current optical power testing data result.
3. Refresh the current maximum and minimum optical power.
4. Maximum of optical power.
5. Minimum of optical power.ing
6. Show the saving testing data result.
7. Save data.
8. Switch the units with dBm or mW.
9. Reference function (For Insertion Loss testing data).
10. Search Bluetooth device of the Power Meter.
11. The wavelength of the current Power Meter.



12. Remove data.
13. Output data to the cloud.

Shipping Information

All items are packed in a secure fashion so as to prevent any damage during transit.

Warranty

SENKO warrants this product to be free of defects in workmanship and materials for a period of 1 year after purchase. This warranty (excluding batteries) is solely limited to the repair and replacement of original parts, which are defective in workmanship of materials. All other costs should be the sole responsibility of the owner. This warranty

does not cover any defects, damage, and deterioration due to misuse, alteration, or negligence.

Ordering Information

Part Number	Product Type	Wavelength (nm)	Range (dBm)
AFT-G-FM-3DG-BT-SM-MM	3 Digits SM/MM	850/1310//1550	+5dBm – 40dBm
AFT-G-CAM	2.5mm to 1.25mm adapter		

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