Fiber Meter

Specification
&
User Manual

RvA
The Dutch Council for
Accreditation
ISO 9001:2000

For more information on this product,
please email sales@senko.com, or go to www.senko.com

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Range Of Limitations

The Product Information found herein pertain to the Fiber Checker, Part Number

Dimensions and Materials

All the materials comply with RoHS Restricted Hazardous Substances as detailed in **"DIRECTIVE 2002/95/EC OF THE EUROPEAN PARLIAMENT 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)	**850 nm / 1300 nm**
Optical Power Range (Multimode) 2 Digits	**-30 dBm ~ -15 dBm**
Wavelength (Singlemode)	**1310 nm / 1490 nm / 1550 nm**
Optical Power Range (Singlemode) 2 Digits	**-30 dBm ~ -6 dBm**
Optical Power Range (Singlemode) 3 Digits	**-40 dBm ~ +5 dBm**
Battery	**AAA 1.5V X 2**
Resolution	**1 dB / 0.1 dB**
Fiber Connector	**Universal Type (Diameter:2.5mm)**
Display (2 digits / 3 digits)	**2 digits / 3 digits LED**
Operating Temp.	**0°C ~ 50°C**
Storage Temp.	**0°C ~ 70°C**

Features

- Robust and portable design with LED display reading.
- Easy Multimode 850 nm / 1300 nm output power check.
- Easy Singlemode 1310 nm / 1490 nm / 1550 nm output power check.
- Universal 2.5 mm to 1.25 mm adaptor for SC / ST / FC / LC / MU Connector.
- 2 Digits / 3 Digits resolution LED display with Low Voltage Battery warning.
- Multimode 850 nm / 1300 nm power measurement within -30 dBm ~ -15 dBm ranges.
- 2 Digits Singlemode 1310 nm / 1490 nm / 1550 nm power measurement within -30 dBm ~ -6 dBm range.
- 3 Digits Singlemode 1310 nm / 1490 nm / 1550 nm power measurement within -40 dBm ~ +5 dBm range.

Correspondence of power in dBm and µW can be consulted by the following table:

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	-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	-12	63	0	1000
-35	0.316	-23	5	-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

1. **Dust Cap**
2. **Wavelength Selector Switch**
3. **LED Display: Displays input power in dBm and Battery Power.**

0 1 2 3 4 5 6 7 8 9

CA   Cb   Low   -4.0 dBm   +3.0 dBm   High

4. **On/Off Button**

Operating Instructions

1. **<u>INITIAL CBLIBRATION</u>: Keep the Dust Cap closed, then turn on the Fiber Checker by pressing the On/Off Button, the LED will then show "CA" for Initial Calibration in process. After about 3 seconds LED will show "Lo" which means the Fiber Checker completed the Initial Calibration successfully and can be used.**
2. **Lift the Dust Cap up and insert one end of the fiber cable to the universal connector or directly insert to an output connector of fiber device or Power Source.**
3. **Slide the selector switch to 850 nm / 1300 nm position (for measuring Multimode fiber) or to 1310 nm / 1490 nm / 1550 nm position (for measuring Singlemode fiber). The LED figure shows the actual receiving input power values.**
4. **"Lo" will be displayed when the actual receiving power is lower than the lower limit of the Meter e.g. loss of greater than -30dBm. When the input power is higher than upper limit of the Meter "Hi" is displayed e.g. loss of less than -15dBm in the case of MM Meters.**
5. **To measure the power loss of a fiber cable:**
    5i. Connect the one end of the test jumper provided to a Light Source and the other end to the Fiber Meter.
    5ii. Make a note of the loss of the test jumper.
    5iii. Disconnect the end connected to the Fiber Meter and connect it to the appropriate adapter.
    5iv. Connect either end of the jumper to be tested to the Light Source and Fiber Meter. Take a note of the new reading. If the for example the output power measured is -20dBm, and the output power measured with only the test jumper connected is -10dBm, then there is at least a 10 dB power loss in the jumper under test.

Important Notes:
*   **Do not touch the ferrule to avoid contaminating the connector.**
*   **Keep the fiber connector dust cap on at all times when the device is not in use.**
*   **Use suitable cleaning tools to clean the fiber before testing to obtain the desired test results and extend the service life of the device.**
*   **When the LED shows "CB" (Check Battery), this means that the batteries are almost drained and in low voltage status. Immediate replacement of the batteries is recommended.**

Maintenance

This tool requires no maintenance in stead of 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 invalid the manufacturer's warranty.

Product Guarantee

The buyer of this product should inspect the goods upon arrival, and within five (5) business days should notify SENKO of any conditions which may prevent the acceptance of this product. In the event of a claim, appropriate measures will be taken to investigate the cause. Claims must be made in accordance to the conditions stated in the Standard Terms and Conditions of Sale.

Shipping Information

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

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Warranty

The manufacturer 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-2DG-M	2 Digits MM Fiber Meter	850 nm / 1300 nm	-15 dBm ~ -30 dBm
AFT-G-FM-2DG-S	2 Digits SM Fiber Meter	1310 nm / 1490 nm / 1550 nm	-6 dBm ~ -30 dBm
AFT-G-FM-3DG-S	3 Digits SM Fiber Meter	1310 nm / 1490 nm / 1550 nm	-3 dBm ~ -30 dBm
AFT-G-FM-3DG+5	3 Digits SM Fiber Meter	1310 nm / 1490 nm / 1550 nm	+5 dBm ~ -40 dBm
AFT-G-FM-3DG-C	3 Digits SM Customized Wavelength Fiber Meter		
AFT-G-CAM	2.5 mm to 1.25 mm adapter for Fiber Meter		

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