Spectrum Transmission Meter

Code: 86108H

User Manual V9.05

Please read this manual carefully before using and reserve it for reference.

I. Product Introduction

Spectrum transmission meter uses an ultraviolet light source, an infrared light source and a visible light source to illuminate the transparent material under test. The sensor detects the incident light intensity of the three light sources and the light intensity after passing through the transparent material under test. The ratio of the transmitted light intensity to the incident light intensity is the transmission, expressed as a percentage.

Professionally used for optical transmission testing of various materials such as lenses, glass, coating materials, organic materials, paints, etc.

Standards for the product

JJF 1225-2009 Calibration Specification for Transmittance Meter of Automobile

JJG 178-2007 Ultraviolet,Visible,Near-Infrared Spectrophotometers

GB/T 21300-2007 Plastics pipes and fittings - Determination of opacity

GB/T 2680-2021 Glass in building—Determination of light transmittance, solar direct transmittance, total solar energy transmittance, ultraviolet transmittance and related glazing factors

II. Parameters

UV Peak wavelength	365nm
Visible light	380nm-760nm full wavelength, in line with the CIE photopic luminosity function standard
IR peak wavelength	940nm
Minimum test sample size	¢ 1mm
Resolution	0.1%
Measurement accuracy	±2% (colorless and uniform transparent material, 0-90% transmission)
Dimensions	170mm×180mm×144mm (L×W×H)
Weight	About 1570g
Supply voltage	DC5V
Operating current	0.4A
Operating power consumption	2W

III. Operation

1. Power on self-test

● **Power on**

Plug in the power supply and ensure there is no test sample under testing. Short press the "⏻" button to turn on the meter. The boot interface displays the version number and serial number of the meter and then enters into the measurement interface.

● **Power off**

Short press the "⏻" button to turn off the meter in the measurement interface; Long press the "⏻" button for 3s to turn off the meter in the setting interface.

2. Setup

Long press the "⏻" button for 3s in the off state or short press the "Operation" button to set the parameters in the measurement interface.

(1) In the Setup interface, the "⏻" button is used to confirm the setting; the "Operation" button is used for selection.

(2) Short press the "Operation" button to select the setting item:

A.   Select "Language", short press "⏻" button to enter the setting item you selected

　　a)   Short press the "Operation" button to select Chinese/English:
　　b)   Select "Chinese": the measurement interface is switched to Chinese;
　　c)   Select "English": the measurement interface is switched to English;

　　d)   Press the "⏻" button to confirm the setting and return to select the setting item.

B.   Select "Exit", short press the "⏻" button to exit the setting mode and enters into the measurement mode.

3. Measurement and operation

After powering on, the meter enters into the measurement interface, all transmission data is displayed as 100%. The test sample is placed on the test hole, the LCD screen displays the visible light of 380nm-760nm, infrared light of 940nm and UV transmission of 365nm of the test sample.

4. Abnormal voltage prompt

Voltage> 5.7V or <4.7V, the meter enters into the abnormal voltage interface. The meter automatically turns off after 2s; when the interface prompt appears, please follow the prompts to replace the appropriate power supply.

IV. Features

1. UV transmission meter, infrared transmission meter, visible light transmittance meter, three functions in one device.

2. Obtain the visible light transmittance of 380nm-760nm, 940nm infrared and 365nm UV transmission by aligning the test hole just once.

3. Suitable for transmission test of lens, paint, glass, mobile phone lens, organic material, etc.

4. The meter has a real-time dynamic self-calibration function, which automatically calibrates to 100% transmittance after powering on.

5. The minimum test sample size is ⌀1mm.

6. Large LCD display, Chinese and English display interfaces can be selected.

V. Notes

1. The meter is self-testing and self-calibrating when it is turned on, please don't place any test sample in the test position, otherwise the self-calibration cannot be completed.

2. Avoid contact with corrosive materials and keep away from high temperature and high humidity environment.

3. When there is no test sample, the display data occasionally cannot return to "100%". Just shut down and restart the meter immediately for normal use，it does not affect the measurement accuracy.

4. When the meter is not in use, please turn it off.

5. When the interface displays abnormal voltage, please replace the power supply.

VI. Standard packing list

No.	Description	Quantity	Unit
1	Spectrum Transmission Meter	1	set
2	User manual	1	pcs
3	DC5V adapter	1	pcs
4	USB extension cable	1	pcs

VII. Service

1. The meter has one-year warranty. If the meter works abnormally, please send the whole meter to the company for maintenance.

2. Provide users with spare parts and lifelong maintenance services.

3. Provide the users with the meter inspection service for free.

4. Free technical support for long term.