Spectrum Transmission Meter

Model: LS108

User Manual V9.05

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

I. Product Introduction

Spectrum transmission meter uses a purple light source, a blue 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 spectacle lenses, anti-blue light materials, coating materials, organic materials, etc.

Standards for the product

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

BS EN 1836:2005+A1:2007(E) Personal eye-equipment - Sunglasses and sunglare filters for general use and filters for direct observation of the sun

ANSI Z80.3-2018 Ophthalmics - Nonprescription Sunglass and Fashion Eyewear Requirements

II. Parameters

Purple light peak wavelength	395nm
Blue light peak wavelength	430nm
Visible light	380nm-760nm full wavelength, in line with the CIE photopic luminosity function standard
Minimum test sample size	¢ 1mm
Resolution	0.1%
Measurement accuracy	±2% (colorless and uniform transparent material, 0-90% transmission)
Power input	DC5V/1A
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

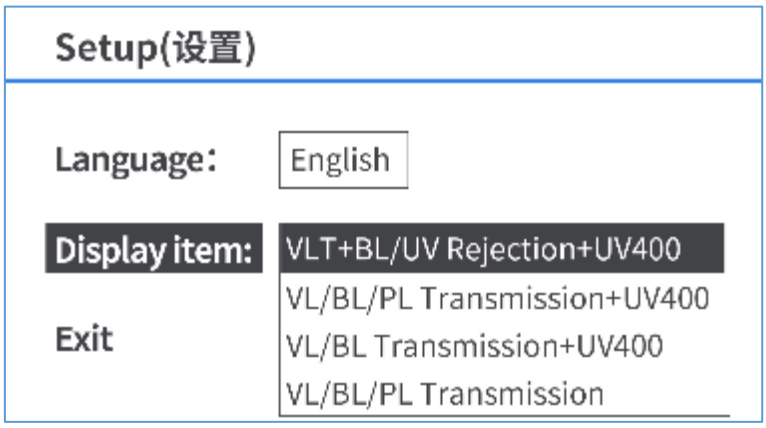
Power on: Plug in the power supply and ensure there is no test sample under testing. Short press the "⏻" button to turn on the meter. The boot interface displays the version number and serial number of the meter and then enters into the measurement interface.

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

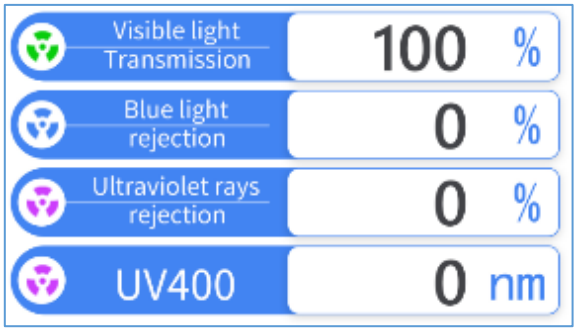
Short press the "Operation" button to select Chinese/English:
Select "Chinese": the measurement interface is switched to Chinese;
Select "English": the measurement interface is switched to English;

Short press the "⏻" button to confirm the setting and return to select the setting item.

B. Select "Display Item", short press "⏻" button to enter the selected setting item:

Short press the "Operation" button to select "VLT+BL/UV Rejection+UV400", "VL/BL/PL Transmission+UV400", "VL/BL Transmission+UV400", "VL/BL/PL Transmission". (UV400 means

that the lenses will block 100% UV waves shorter than or equal to 400nm)



VLT+ Blue light/UV rejection +UV400

VLT /blue light/purple light transmission+UV400

Visible light /blue light transmission+UV400

Visible light /blue light /purple light transmission

Select "VLT+BL/UV Rejection+UV400", the measurement interface displays: visible light transmission, blue light rejection, ultraviolet rays rejection, UV400. (Default)

Select "VL/BL/PL Transmission+UV400", the measurement interface displays: visible light transmission, blue light transmission, purple light transmission, UV400.

Select "VL/BL Transmission+UV400", the measurement interface displays: visible light transmission, blue light transmission, UV400.

Select "VL/BL/PL Transmission", the measurement interface displays: visible light transmission, blue light transmission, purple light transmission.

Short press the "⏻" button to confirm the setting and return to select the setting item.

C. 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, the visible light transmission is displayed as 100%, blue light rejection and ultraviolet rays rejection is 0%, UV400 is 0nm. Place the test sample on the test hole, the LCD screen displays the visible light transmission, blue light and ultraviolet rays rejection of the tested sample, UV400.

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. Brand new wavelength synthesis technology, measure transmission data of 3 wavelength simultaneously.
2. Obtain the visible light, blue light, violet light transmission and UV400 data at the same time by aligning the test hole just once, which greatly improves the test efficiency.
3. Suitable for transmission and rejection rate testing of spectacle lenses, anti-blue light materials, glass, mobile phone lenses, organic materials, etc.
4. The meter has real-time dynamic self-calibration function, which automatically calibrates to 100% transmission after powering on.
5. The minimum test sample size is ∅1mm.
6. Large LCD display, there are 4 display interfaces optional in Chinese and English.

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 visible light transmission rate occasionally can't return to "100%" or the rejection rate can't return to 0%. 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 shut down.
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 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.

Manufacturer: Shenzhen Linshang Technology Co., Ltd.
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