# Lens Transmission Meter

Code: 86108A

User Manual V9.05

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

# I. Product Introduction

Lens transmission meter use infrared light sources of 850nm and 940nm and a visible light source of 550nm 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.

**Standards for the product**

*JJF 1225-2009 Calibration Specification for Transmittance Meter of Automobile*

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

*GBT 21300-2007 Plastics pipes and fittings - Determination of opacity*

# II. Parameters

| IR peak wavelength | 850nm and 940nm |
|---|---|
| VL peak wavelength | 550nm |
| Test hole diameter | ⌀1mm |
| Resolution | 0.1% |
| Measurement accuracy | ±2% (colorless and uniform transparent material, 0-90% transmission) |
| Display | 480×270 dot matrix color screen |
| 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 to enter into the Setup 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 will switch to Chinese;
  Select "English": the measurement interface will switch to English;

  Short press " ⏻ " button to confirm the setting and return to the Setup interface.

 **B.** Select "Display Item"(Take the English as an example), short press " ⏻ " button to enter the

  setting item you selected. Short press the "Operation" button to select "850nm/550nm/940nm", "550nm/850nm", "550nm/940nm".

  Select "850nm/550nm/940nm", the measurement interface displays the 850nm infrared transmission, 550nm visible light transmittance, 940nm infrared transmission;
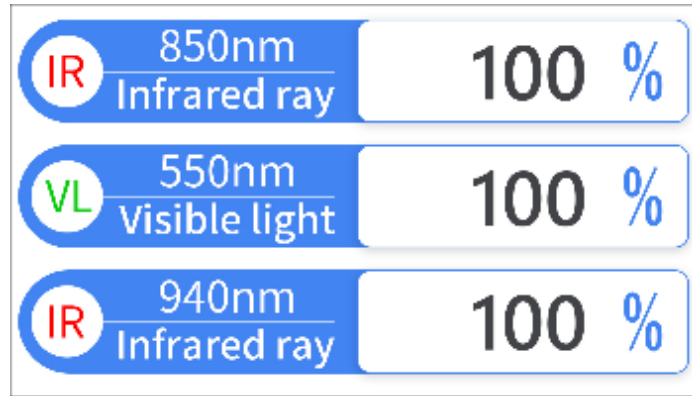
Select "550nm/850nm", the measurement interface display 550nm visible light transmittance, the 850nm infrared transmission;
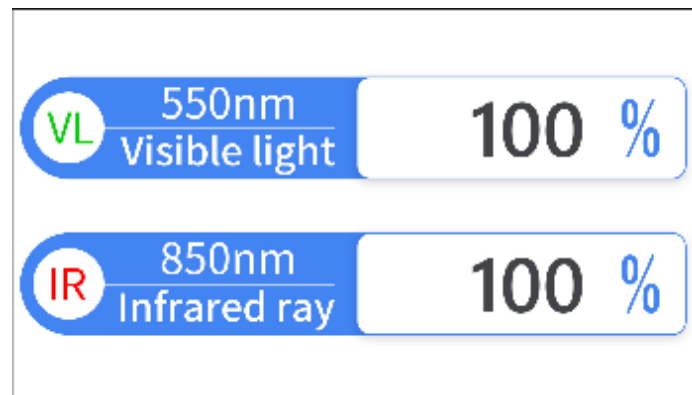


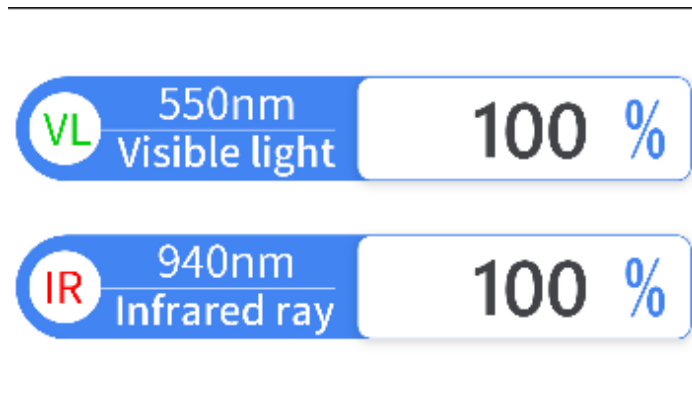Select "550nm/940nm", the measurement interface display 550nm visible light transmittance, the 940nm infrared transmission;



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, all transmission data is displayed as 100%. The test sample is placed on the test hole, the LCD screen displays the visible light of 550nm, infrared light of 940nm and 850nm of the test sample;

### 4. PC software counting statistics function

The meter has a USB interface and provide PC software to complete the functions such as the inspection quantity counting, pass rate, pass and fail judgment during the production testing process. For details, please refer to the PC software and software user manual.

### 5. Abnormal voltage prompt

Voltage> 5.7V or <4.7V, the meter enters into the abnormal voltage interface. The meter automatically turn 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 transmission of 550nm, infrared light transmission of 850nm and 940nm at the same time by aligning the test hole just once, which greatly improves the test efficiency.

3. The test hole has an alignment indicator LED, which is used to help the alignment of the tested lens hole during the testing process.

4. Suitable for testing infrared transmission and visible light transmittance of mobile phone lens.

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

6. Large LCD display. Three Chinese display interfaces or three 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 | Lens Transmission Meter (2nd) | 1 | set |
| 2 | User manual | 1 | pcs |
| 3 | DC5V adapter | 1 | pcs |
| 4 | L-type locating plate | 1 | pcs |
| 5 | 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.