

Mirror Reflectance Meter

1. Overview of instruments

Reflectance tester is developed by our company for the coating industry to implement international standards. The technical reference has met the requirements of the international standard ISO3906-1980 (E) for reflectivity, the technical reference has met the requirements of the international standard ISO3906-1980 (E) for reflectivity, It can be measured according to international standards ISO3906-1980 (E), ISO3905, ISO2814 color paint, varnish - light color paint and color paste, pigment, various colorants on the substrate covering power (that is, ratio or opacity), It can measure the degree of transparency of various coatings, oils, film, plastic products, organic products; It is also possible to measure the reflectivity of solid surfaces (such as the vertical motion picture silver screen). The instrument fully complies with the requirements of the national standard GB/T13452.3-92, GB9270-88, GB5211.17-88 for the instrument, Widely used in coating material, pigment, ink, plastic, printing and dyeing, leather, film screening and other industries of product quality or standardized inspection and management composition. When the reflected light of the sample acts on the surface of the photocell, the signal is generated and input to the DC amplifier for amplification and the reading is displayed.

2. Technical parameters

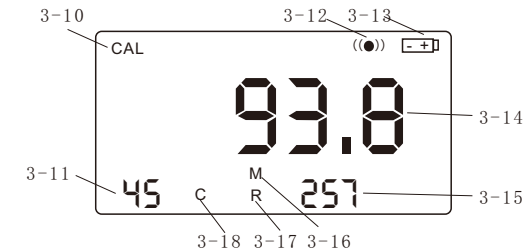
Measuring range: 0~100
Resolution: 0.1
Indication error: ±1
Repetition accuracy: 0.3
Measuring area: 7x14mm (oval)
The display data is proportional to the reflected light;
The spectral sensitivity of the instrument is approximately equal to the product of $Sc(\lambda)$ and $y(\lambda)$.
Ambient temperature: 0 to 40°C
Relative humidity: not more than 85%
Power supply: 3.7V lithium battery
Size: 141x45x79mm
Weight: Approx. 310g(including battery)
Standard accessories:

Host..... 1
Optical cleaning cloth..... 1
Calibration standard film..... 1
Carry-on case..... 1
Instruction manual..... 1

Optional accessories:

USB connection cable and software
Bluetooth data output

3. Structure & Display description



The instrument is small in size, light in weight and easy to carry, and can be used and operated. In order to ensure correct use, please read the information in this manual carefully, and operate according to the information provided in the manual.

- 3-1 LED
- 3-2 Power button
- 3-3 (MEAS) Key
- 3-4 Cal Key /Minus key(CAL/▼)
- 3-5 Delete key (DEL)
- 3-6 Read/Add key (RD/▲)
- 3-7 USB cable ports
- 3-8 Power adapter ports
- 3-9 Calibration box
- 3-10 Calibration symbol
- 3-11 Mirror direction measurement Angle value
- 3-12 coupling symbol
- 3-13 Battery symbol
- 3-14 Read value
- 3-15 Storage quantity indicator
- 3-16 Measurement mode symbol
- 3-17 Read mode symbol

4. Turn on and off

4-1 Press the power button to power on.
4-2 In the startup state, press and hold the power button for about 3 seconds, and release the button when the display appears "OFF", and the instrument will shut down.
4-3 instrument with 10 minutes automatic shutdown and 1 hour automatic shutdown function. In single measurement mode, the instrument will automatically shut down if there is no key operation within 10 minutes. In continuous measurement mode, the instrument will automatically shut down if there is no key operation within 1 hour. For the conversion of single measurement mode and continuous measurement mode of the instrument, see (6. Instrument Measurement.)

5. Instrument calibration

5-1 First set the calibration value. Hold down the

power button for about 9 seconds, release the button when "CAL" appears on the display, and then the calibration symbol "CAL" appears on the display, press the read/add key (RD/▲) or the calibration/subtract key (CAL/▼) to adjust the reading value to the value shown on the calibration box, press the measurement key (MEAS) to confirm; The calibration value is set. 5-2 Then calibrate. Place the instrument in the calibration box, then press the measurement key (MEAS) and the instrument displays the measurement reading. Compare the measured reading with the set calibration value. If they are equal, the instrument has been correctly calibrated. If the measured reading is not equal to the set calibration value, press the calibration/minus key (CAL/▼), the display will appear "CAL" and the coupling symbol "☉", and then the set calibration value will be displayed, and the instrument calibration is completed.

6. Instrument measurement

6-1 Single measurement

In the startup state, the measurement window of the sensor is attached to the measured plane, and the instrument is pressed tightly to make the sensor and the measured object closely contact together. Press the Measurement key (MEAS) and a coupling symbol appears in the upper right corner of the display "☉". Similarly, the

measurement window of the sensor is attached to the measured plane, and the instrument is pressed so that the sensor and the measured object are in close contact with each other. The instrument will make multiple measurements of the measured plane, and the measurement data will be automatically stored in the instrument. If you need to exit the continuous measurement mode, hold down the power button for about 9 seconds, release the button when the display displays "SC", the continuous symbol "C" disappears, and the instrument enters the single measurement mode.

7. Data storage, reading and deletion

7-1 This instrument has two modes. One is the measurement mode, with the measurement symbol "M" indication; The other is read mode, which is indicated by the read symbol "R".
7-2 Measurement is performed in the measurement mode, including single and continuous measurement, and the measurement data is automatically saved in the instrument. Each time the coupling symbol "☉" appears, a set of data is stored, and the amount of storage is indicated by adding one, for example, "033" becomes "034". Up to 254 sets of data can be stored. When the data is full, the later data will automatically replace the earliest stored data.
7-3 To enter the read mode, just press the Read/Add key (RD/▲) in the power-on state. The measuring symbol "M" disappears, and the

The measuring symbol "M" disappears, and the reading symbol "R" appears; The storage quantity indicator changes from "number of stored data" to "current data Ordinal".

7-4 In Read mode, press Read/Add (RD/▲) or Calibrate/subtract (CAL/▼) to view the stored data. At this point, you can press the Delete key (DEL) to delete the stored data. To exit the read mode, just press the Measurement key (MEAS), the read symbol "R" disappears, and the measurement symbol "M" appears, indicating a return to the measurement mode.

7-5 To delete all the data that has been stored, just hold down the Delete key (DEL) in the measurement state for about 3 seconds.
7-6 When the number of stored data is 0, press the Read/add key (RD/▲) to try to enter the read mode, or press the delete key (DEL) to try to delete the data. Will not be able to achieve the display "Err!".

8. Installation of online software

The instrument can be equipped with the installation CD of the online software. The installation steps of the software are as follows. For details, please refer to the demonstration video and documentation in the CD.
→ First, run the randomly configured CD. In the obtained folder, open the compressed package in the file and double-click the TestSetup.Cn file.
→ Click "Next (N)";

→ Click "Browse @..." , select the installation location of the software and click "OK";
→ Click "Next (N)" and click "Yes (Y)";
→ Click "Next (N)";
→ Click "Install (I)";
→ Click "Finish".

9. Data transmission function


After installing the online software, insert the optional USB cable or Bluetooth adapter, and install the device to the computer. For installation procedures, refer to the demonstration video and documentation in the CD. Open the software "TestRS232(Cn)" on the computer desktop. Click "System Settings" and select the correct port, usually "COM1", "COM3", "COM5"; Select Glossometer. Click "Save" and then click "Exit". Click "Data collection", click "Start/continue", press the read/add key (RD/▲), and all the data stored in the instrument can be transmitted to the software. Relevant data can be processed.

10. Simultaneous test functions

After installing the online software, insert the USB cable or Bluetooth adapter, and install the device to the computer. For installation steps, refer to the demonstration video and documentation in the CD. Open the software "TestRS232(Cn)" on the

computer desktop. Click "System Settings" and select the correct port, usually "COM1", "COM3", "COM5"; Select Glossometer. Click "Save" and then click "Exit". Click "Data Collection", click "Start/Continue", press the Measurement key (MEAS) or enter the continuous measurement mode, and the current measurement data can be transferred to the software. Related data can be processed.

11. Instrument charging

11-1 When the battery voltage is too low, the battery symbol "  " appears on the display and needs to be charged.

11-2 Connect the instrument to the AC power supply using the power adapter.

11-3 Charge about 4 hours, battery full.

11-4 Remove the power adapter and the instrument can be used again.

12. Instrument maintenance

* The instrument should be placed in a safe and clean place after use to prevent damage or contamination.

* When measuring, avoid direct exposure of ambient light to the measuring hole. Especially in bright light, it is necessary to shade the sun with a cloth.

* When the temperature difference between the measuring environment is large, it will seriously affect the measured value. In this case, wait for some time until the temperature equalizes and then calibrate the meter.

* If the measurement operation lasts for a long period of time, such as one hour or more, then the instrument needs to be recalibrated.

* When the instrument is not used for a long time, it is recommended to charge once every 3 months.

* Check the gloss of the calibration sheet and sensor before each calibration; Make sure the surface is clean and free of dirt such as oil and ash.