

# Transmission Meter

Code: 86163A

User Manual V3.01

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

# I. Product introduction

This instrument is a portable solar film tester. It can measure the visible light transmittance, infrared blocking rate (infrared transmittance), ultraviolet blocking rate (ultraviolet transmittance), total solar energy blocking rate, and total solar energy transmittance of solar films, laminated glass, and similar materials. It offers multiple display parameter combinations, allowing users to select according to their needs.

## Standards for the product

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

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

*GB/T 5137.2-2020 Test methods of safety glazing materials used on road vehicles—Part 2: Optical properties tests*

*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*

*GB/T 31849-2015 Film mounted motor vehicle glass*

*GA/T 744-2013 Automotive solar control window films*

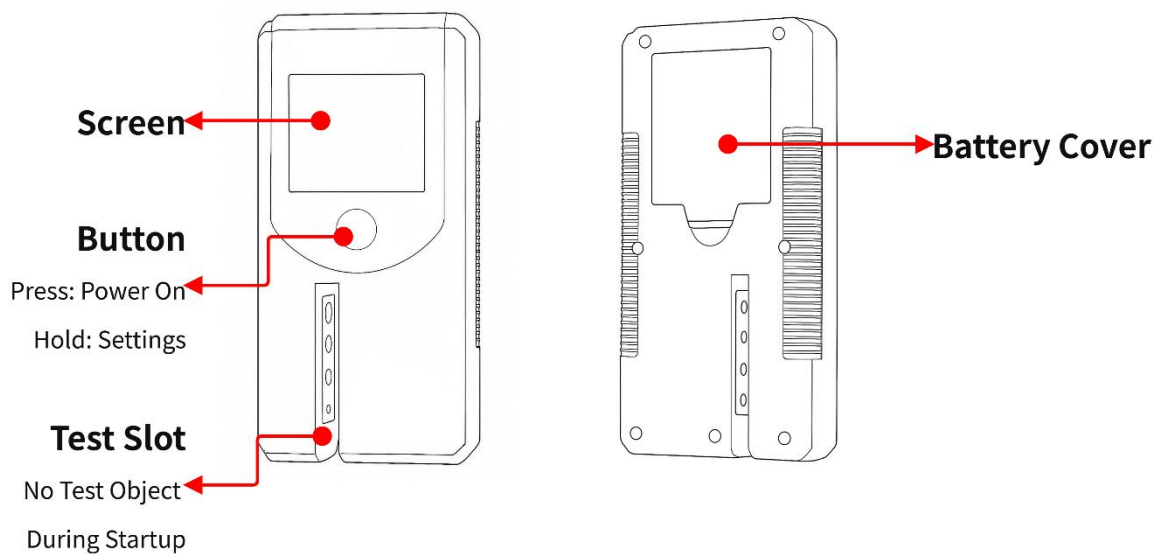
# II. Parameters

UV Peak wavelength	365nm
IR Peak wavelength	Peak wavelength 940nm, 1400nm and Full IR
Visible light wavelength	380-760nm, conform to the CIE photopic vision function standard
Accuracy	±2% (Colorless and transparent material)
Resolution	0.1%
Solar Heat Gain Coefficient	SHGC (0.000-1.000)
Total Solar Energy Rejection	TSER (0.0%-100%)
Test Slot	6mm×58mm (W×D)
Meter Size	146mm×73mm×24mm (L×W×H)
Display	128×128 Dot matrix LCD
Weight	187g (Include Batteries)
Power supply	4×AAA alkaline battery

Operating Temperature Range	0°C~50°C, 0~85%RH(no condensation)
Storage Temperature Range	-10°C~60°C, 0~85%RH(no condensation)
Supply Voltage	DC5V
Operating Current	10mA
Operating Power Consumption	50mW

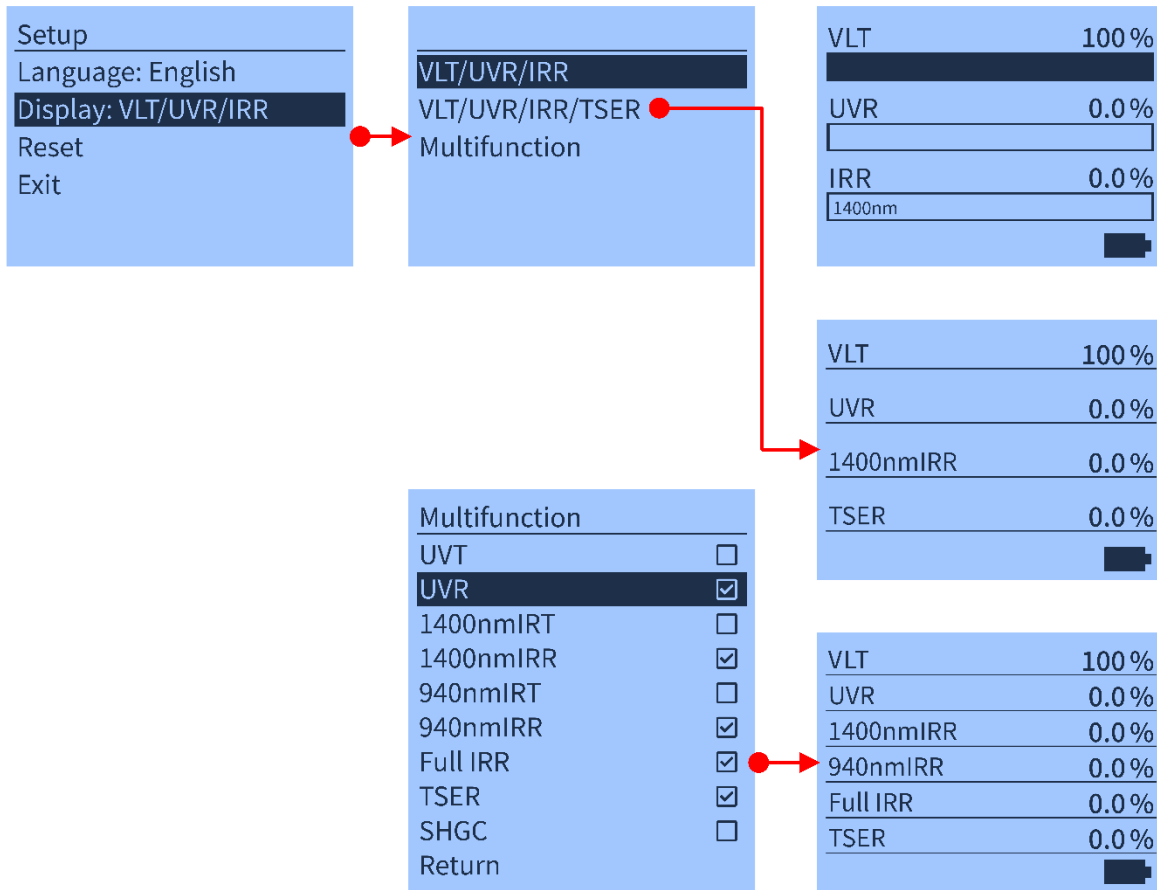
### III. Operation

#### 1. Power On/Off



#### 2. Measurement

When there is no test object, short press the button to switch the display interface. When there is a test object, short press the button to lock the data; long press the button to shut down.




### 3. Setup

Short press the button to select the option and long press the button to confirm the current option.

### 4. Display interface autorotation

The meter display interface will rotate adaptively, which is convenient for reading measurement data.

### 5. Low power alarm

When the battery power is low, the empty battery symbol will display as "  " on the right bottom of the screen and flash, indicating that the battery needs to be replaced.

## IV. Precaution

1. When the meter can't complete power on self-calibration, the interface will prompt "E30". Possible causes:

- The ambient light is too strong.
- Test sample is placed in the test slot, just take away the test sample and turn on the meter again.
- Dust enters the test hole and blown off the dust with a dust blower.

- The meter has hardware failures and needs to be returned to the factory for maintenance.
2. When the meter is not in use, turn off the power.
  3. Avoid to contact with corrosive materials and be away from high temperature and high humidity environment.
  4. After using for a long time, due to the luminous efficiency of the LED light source (the temperature of the LED light source increases, the efficiency decreases), the data of UVR, IRR and VLT may not be displayed as "0.0, 0.0, 100" when there is no test sample or VLT, UVT ,IRT may not be displayed as "100, 100, 100" . At this time, turn off the meter and then restart it , the meter will self-test and self-calibrate, the measurement accuracy and normal use of the meter will not be affected.

## V. Packing List

No.	Description	Quantity	Unit
1	Transmission Meter	1	set
2	User Manual	1	pcs
3	Storage Bag	1	pcs

## VI. 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.