

LS110A/LS110H

Split Transmission Meter

User Manual V10.04

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

Note: IR peak wavelength of LS110A is 940nm, and IR peak wavelength of LS110H is 1400nm.

I. Product introduction

This instrument is able to simultaneously measure and display UVR (Ultra Violet Rejection), IRR (Infrared Rejection), and VLT (Visible Light Transmission) values. The meter consist of two parts: main part(PART I) for measuring and displaying functions and the auxiliary part(PART II) for light source and laser light for alignment.

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. I. Parameters

1. Dimension: 130mm * 70mm * 84mm (L * W * H)
2. Weight: 630g
3. Resolution: 0.1% for measured value<10% and 1% for other ranges
4. Accuracy: better than $\pm 2\%$ (Colorless and transparent material)
5. Test sample size: > 40mm * 40mm
6. VL wavelength: 380nm-760nm, CIE function of photopic vision
7. UV Peak wavelength: 365nm
8. IR Peak wavelength: 940nm/1400nm
9. Power supply: built-in lithium rechargeable battery
10. Supply Voltage: DC5V
11. Operating Current: 20mA
12. Operating Power Consumption: 100mW

III. Button Operation

1. Power on/off

Short press the "Power" button to power the instrument on/off, main and auxiliary part are required to perform the operation of power on/off. The meter is shut down automatically for no action within 15 minutes.

2. "HOLD" button of the main part

Under the measurement mode, short press "HOLD" to hold the data on LCD, the icon "HOLD" will display on the LCD. Short press "HOLD" again to release the hold mode and the icon "HOLD" disappears.

3. "Laser" button of the auxiliary part

Short press "Laser" button to power the laser on/off.



IV. Instrument operation

1. SELF-TEST

Attracting the main and auxiliary part together, press down "POWER" button to power them respectively and align the upper and lower laser points with the alignment bull's eyes simultaneously. Wait for the completion of "SELF-TEST" and enter the measurement interface (VLT 100%, IRR and UVR 0% displayed on the LCD). The following reasons for failed "SELF-TEST" ("Please refer to the manual" display on the LCD):

- a) Battery power is low, please charge the main and auxiliary part.

- b) No alignment the main and auxiliary part with laser point with the bull's eyes.
- c) Power on the main and auxiliary part with clamped some testing sample.
- d) Equipment damage, need to send back to the factory repair.

2. Measurement

Clamp the sample with the main part and the auxiliary part and align the laser point with the bull's eyes. The meter will display the transmission (Rejection) value of the samples.



V. Features

1. Two-parts dual mode of the main and auxiliary part facilitates the transmission measurement of the automobile front windshield glass and building glass.
2. UV rejection, IR rejection, light transmittance meter. Three function in ONE device.
3. The built-in lithium rechargeable battery is easy to use without replacing the battery.
4. The laser alignment function guarantees the accurate alignment of the main part with the auxiliary part in the process of measurement and ensures accurate measurement.

VI. Battery charging

This meter has built in lithium chargeable battery and charger. Three methods can be used for charging the meter.

1. Plug the USB line into the USB port of computer. Plug in a one-for-two plug to charge the main and auxiliary part simultaneously.
2. Use the supporting DC 5V Adapter. Plug in a one-for-two plug to charge the main and auxiliary part simultaneously.

3. Use the mobile power of the smart phone for charging.

VII. Points for attention

1. Since the main and auxiliary part has strong magnetic magnet inside for measurement, avoid pinch hands or damage the glass samples in the use.
2. The laser position and accuracy of each set of meter (main and auxiliary part) has been perfectly matched and calibrated.
3. Charge the meter promptly when the battery indicator flashes.
4. The meter may not power on due to possible low power. In such case, please charge it for a while before starting up.
5. Please use the dedicated supporting charger.
6. In order to ensure the accuracy of the measured value, please do not expose the meter to the direct sunlight during the use.
7. The meter uses standard 14500 lithium chargeable battery. In case of ineffective operation of button after charging, please open the meter with screwdriver, take out the chargeable battery and re-install it. In case of short use after charging, please replace the chargeable battery.
8. This product emits a laser beam from the back side of auxiliary part. DO NOT point the laser at anyone's eyes.



VIII. Packing List

No.	Description	Quantity	Unit
1	Split Transmission Meter	1	pcs
2	User Manual	1	pcs
3	Certificate / warranty card	1	pcs
4	Charger	1	pcs

IX. 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.

Website: www.linshangtech.com

Service hotline: 086-755-86263411

Email: sales21@linshangtech.com