

WINDOW ENERGY PROFILER: **ENERGY TRANSMISSION METER** **FOR TESTING OPERABLE WINDOWS IN-FRAME**

MODEL# WP4500



DESCRIPTION

Expanding our line of energy performance products, the WP4500 Window Energy Profiler allows you to test actual windows that have already had the sash or frame attached to the window. The instrument can test windows in the factory, but more importantly it can **test windows in the field that have already been installed**. Simply open the window and slide the WP4500 around the profile of the window to conduct your performance measurement. The opening of the instrument is actually large enough to fit around the entire frame of many replacement windows before they are installed.

The WP4500 measures the UV(A) (ultraviolet), Visible Light, (VLT) and Near Infrared (NEAR IR) transmission values for a given window or window film. The instrument also estimates the Solar Heat Gain Coefficient (SHGC) values for transparent Low E and clear windows. The SHGC calibration of this instrument is **NOT** intended for use with tinted, colored or reflective (mirrored) surfaces, including window film products.

Being a self-contained system, there are no additional light sources or power cords necessary, and no adjustments to make. Simply slide the instrument around the profile of the window and watch the resulting performance data appear on the display.

APPLICATIONS

There are numerous applications for this product. For the replacement window market, the WP4500 can be used as a sales tool to evaluate the poor performance of a homeowners existing windows, showing the need for replacement windows. You can test the customer's existing windows and then use the same instrument to show the excellent performance of the ENERGY EFFICIENT window product you are selling. For window film applications, you can conduct very quick and easy before-and-after demonstrations by adding a piece of film to the window to show the

results. For job-site inspections in the field, you can confirm the performance of windows when they arrive at the jobsite to ensure the correct product was received. In the field, the WP4500 can be used to differentiate different types of low E coatings. By comparing the measurement results from the WP4500 to the performance data sheet figures of various low e coatings, you can roughly identify the type of low E used in the window. This is a great aid for those troublesome customer complaints that are challenging whether they received the correct windows. In the factory, double-check windows in the production environment to make sure the correct low e was used in assembling the window. The WP4500 can be very helpful in identifying windows that are mislabeled or not marked at all.

FEATURES:

- Estimated SHGC values demonstrated, along with UV, Visible and Near IR Transmission
- Single, double or triple pane testing easily accomplished
- Test any sample width up to 4.15" thick with a sash/spacer/frame depth up to 4.15"
- No additional light sources needed
- HOLD feature to freeze the display for hard-to-reach/view measurements
- Auto-calibration at start-up: NO manual adjustments required
- Battery operated (9-volt): no power cord required
- Automatic power-off feature for extended battery life
- Replace Battery Indicator
- Continuous measurements
- Professional Image complimented by simple operation
- Convenient push-on/push-off power switch
- Protective, custom carrying case
- Convenient handle for single hand operation

BASIC OPERATION

Remove all glass and window samples from the opening of the instrument and turn it on by momentarily pressing the power button. Wait for the system to power up and perform a self-calibration. After each of the displays show 100%, you are ready to begin testing windows. If there is an obstruction in the measurement area of the instrument, or if damage has occurred to the electronics, the displays will continue in there chasing-segment routine and eventually power the unit back down. Clear away any obstructions from the testing area and turn the instrument on again.

With all the displays showing 100%, slide the instrument around the profile of the window you want to test. When you slide the glass into position, move the glass all the way into the opening, resting against the stop location in the back of the opening. Pay attention to the spacer/sash of your window. Make sure the glass is slid far enough into the opening so the spacer/sash is not blocking one of the sensors.

****ALWAYS HOLD THE GLASS PERPENDICULAR TO THE OPENING.**** Do not tilt the glass at angles.

For the most accurate transmission measurements, the glass should be held perpendicular to the sensors. If you are having troubles holding the instrument opening perpendicular to the window, slide the instrument toward one of the sides so the edge of the instrument is resting against the frame or sash. This should help stabilize your hand during measurements. Be aware that fingerprints on the glass can affect the transmission values. For the most accurate measurements, clean the area of the window you will be testing before conducting your measurements.

The instrument will continually monitor its calibration during measurements. If the instrument detects any problems with the calibration, it will reset itself in between measurements. If the instrument ever shows values other than 100 in the display when there is no glass present, pause for a few seconds and watch as the instrument recalibrates itself. If you mistakenly turn the instrument on with a piece of glass already in position, the displays will calibrate to read 100% with the glass in place. Simply remove the glass sample and wait a few moments. The displays will show the word "HI" in the display which means the measurement is over-scale. The instrument will re-calibrate itself shortly after the glass is removed. After the displays have returned to 100%, you may continue with your measurements.

If the frame of your window sample is blocking one of the sensors from receiving a signal, that corresponding display will register a "0" value. Make sure the frame of your window sample is not blocking any of the three sensor locations.

HOLD FEATURE

The WP4500 is equipped with a HOLD feature. Any time the HOLD button is pushed, the measurements that appeared on the display at that moment will be locked on the display until the HOLD button is pressed again. This feature is very helpful when the window you are testing may be in a difficult-to-reach location. This could also be helpful for testing windows on upper floors of buildings where it would be unsafe to lean out the window to read the display. To use the feature, simply position the meter around the window profile you want to measure. When you have the window sample perpendicular to the opening, press the HOLD button and then read the results on the display. This feature can also be helpful if you want to hold the values long enough to write them down or show them to your customer.

SPECTRUM SPECIFICATIONS

In addition to the SHGC value of your window, the WP4500 displays energy transmission values in three spectrums. The light sources used for each spectrum have a peak response at the following wavelengths:

UV:	365nm
VISIBLE:	Full weighted spectrum: 400 – 700 nm
INFRARED:	950nm

SHGC ESTIMATES

As mentioned above, the SHGC values estimated by the WP4500 product are only valid for clear or low e coated glass and windows. The estimated SHGC value will always assume the low e coating is placed on surface #2 of the window. Surface #2 is the inward-facing surface of the exterior piece of glass in a window. Regardless of how you place the window into the meter opening, the estimated SHGC value will always give results as though the low e coating is on surface 2.

BATTERY REPLACEMENT

The WP4500 is powered by a 9 volt alkaline battery. When the battery voltage is getting too low to operate the meter, the low battery indicator will turn on. The instrument can still be used at this point, however it is recommended that the battery be replaced soon. Alkaline batteries are recommended for this product.

POWERING OFF

To shut off the WP4500, push and hold the ON/OFF switch for a couple of seconds. The WP4500 instrument is also equipped with an automatic power-off feature to help extend the life of your battery. The instrument will automatically shut off after approximately 5 minutes of operation. This is helpful if the user forgets to turn the instrument off or if the meter is accidentally turned on.

DIMENSIONS



WARRANTY

The manufacturer warrants all models of the WP4500 to be free from defects in material and workmanship under normal use and service as specified within the operator's manual. The manufacturer shall repair or replace the unit within twelve (12) months from the original date of shipment after the unit is returned to the manufacturer's factory, prepaid by the user, and the unit is disclosed to the manufacturer's satisfaction, to be thus defective. This warranty shall not apply to any unit that has been repaired or altered other than by the manufacturer. The aforementioned provisions do not extend the original warranty period of the unit which has been repaired or replaced by the manufacturer. Batteries are not covered by warranty.

EDTM, Inc. assumes no liability for the consequential damages of any kind through the use or misuse of the WP4500 product by the purchaser or others. No other obligations or liabilities are expressed or implied. All damage or liability claims will be limited to an amount equal to the sale price of the WP4500, as established by EDTM, Inc.

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