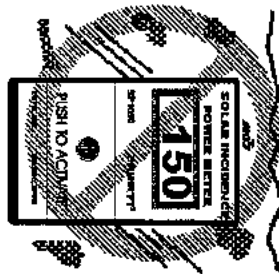
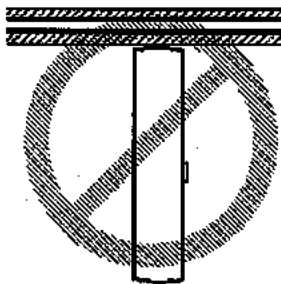


## IMPROPER OPERATING CONDITIONS

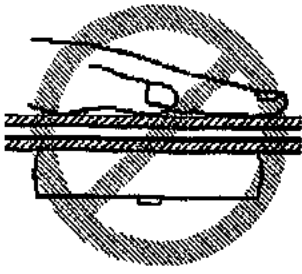


If the window assembly, glass or film area under test is excessively dirty or contaminated, the SOLAR INCIDENCE POWER METER may give improper results. The area under test must be **RELATIVELY CLEAN**. Clean the test area or move the meter to a clean location on the window or film.

The solar incidence power meter must be used with the surface opposite the "Activate" button against the window or film. Using the small end surface of the unit or tilting the unit away from the surface will give improper results.

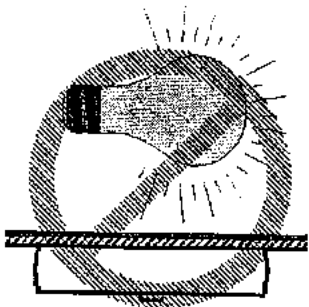


Placing your hand or any object that blocks light from the white sensing area on the back of the meter will give improper results. Remove hand or object.



### IMPORTANT:

The BTU SOLAR METER has been optimized for **TOTAL SOLAR(SUN)** light. The unit may be used with other light sources, however it must be realized the absolute value readings may vary from actual sun (solar) conditions.



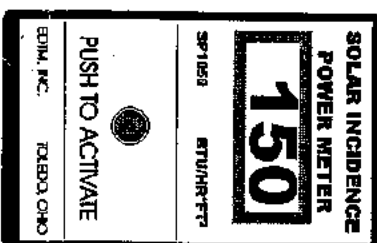
NOTE: Solar readings are dependent upon

- the angle of the meter to the SUN
- mixture of ultraviolet, visible and infrared light
- purity and consistency of the material under test

## THE DIGITAL BTU SOLAR INCIDENCE POWER METER MODEL #SP1050

### GENERAL DESCRIPTION:

The "SOLAR INCIDENCE POWER METER" measures the power per unit area of incident solar radiation reaching the meter's sensing area. The meter uses a state of the art light sensor coupled with microprocessor control to achieve an **EASY TO READ** and **USE** hand held meter. The device may be used with glass or film to measure the solar characteristics of the material under test.



This instrument has been calibrated to measure both the direct and diffuse solar irradiance of the sun. The largest incident value of solar power is obtained when the back of the meter faces the sun directly. When the meter does not face the sun, the incident solar power is reduced by the cosine curve of the angle to the sun. Make sure the material being tested is reasonably clean.

This instrument has been factory calibrated to a NIST (NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY) traceable thermopile and shield require no field adjustment. The calibration data is based upon ASTM G159-98 for Solar Spectral Irradiance at Air Mass 1.5.

### EDIM INC.

ELECTRONIC DESIGN TO MARKET, INC.  
5333 Secor Road, Suite #6  
Toledo, Ohio 43623 USA  
PHONE: (419) 480-1098 FAX: (419) 480-1099

KEEP THE COMPETITIVE EDGE

CALL US FOR INFORMATION ON OUR OTHER  
GLASS PRODUCT TEST EQUIPMENT.

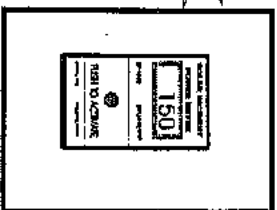
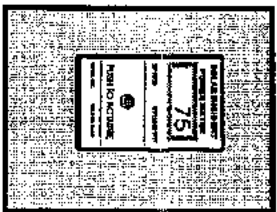
LOW-E DETECTORS, 4 POINT RESISTIVITY METER,  
GLASS AND AIR SPACE MEASUREMENT METERS

## HELPFUL OPERATING HINTS

1. At a minimum, replace the battery in this meter annually.
2. To operate the meter, push the button and hold it until you have obtained your reading. Do NOT bounce the switch or press it repeatedly as invalid results may appear on the display. Pause for one second between readings, before pushing the power button for additional readings.
3. Do not open the enclosure or adjust the screws holding the enclosure together. Opening the enclosure or adjusting the screws WILL affect the calibration of your Solar Incidence meter.
4. To replace the battery, simply remove the battery cover from the front of the enclosure. Remove the old battery and install a new battery into the clip and insert back into the battery compartment.
5. Do not alter the white filter material located on the back of the meter. Attempt to keep this location clean and free of any debris. Use compressed air to clean the filter. Do NOT push on the filter, as this may alter your calibration.

## APPLICATIONS

### ENERGY SAVINGS



SOLAR CONTROL  
FILM MOUNTED  
ON GLASS

PLAIN  
GLASS

VALUE 1 = 75 BTU/HR-FT<sup>2</sup>

VALUE 2 = 150 BTU/HR-FT<sup>2</sup>

METHOD 1 : SIMPLE TRANSMISSION PERCENT (%)

SOLAR POWER TRANSMISSION PERCENT:

VALUE 1 / VALUE 2 = 50% TRANSMISSION

METHOD 2: DIRECT ENERGY SAVINGS

CONVERSIONS : 1 BTU/HR-FT<sup>2</sup> = 3.1503 W/M<sup>2</sup>

SP1050 11/99

## APPLICATIONS

IN THE FIELD OR FACTORY:  
IDENTIFY TYPES OF GLASS

OR

INVISIBLE COATINGS (i.e. VARIOUS TYPES OF LOW-E ...)

STEP 1: Identify LOW-E coating location by use of EDTM's AE1600 LOW-E detector.

STEP 2: Use the BTU SOLAR INCIDENCE METER to take readings on coated and uncoated glass.

EXAMPLE OF I.G. TRANSMISSION CHARACTERISCS OF SOLAR LIGHT :  
CLEAR GLASS IG UNIT: ~70% SOLAR TRANSMISSION  
SINGLE COATING OF LOW-E: ~50% SOLAR TRANSMISSION  
MULTIPLE COATINGS: ~38% SOLAR TRANSMISSION

*The prior analysis may be useful when working with sunrooms, curtilhalls and large architectural buildings.*

Glaziers who are attempting to perform replacements, can implement the solar incidence meter to get a better understanding of the glass being replaced. Gaining a perspective on the solar performance will help the glazier to install a comparable product, whether it be film, tinted glass, reflective glass, etc. . . The SP1050 can help the glazier to match the replacement glass to the existing glass.

## WARRANTY

The manufacturer warrants all models of the SP1050 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 ninety (90) days 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 SP1050 product by the purchaser or others. No other obligations or liabilities are expressed or implied. Any damage or liability claim will be limited to an amount equal to the sale price of the SP1050.