

HELPFUL OPERATING TIPS

1. If taking measurements near a hot lamp, do not place the meter too close to the light source. If the end of the meter begins to feel hot to the touch, it is too close to the light source. Extended periods of heat exposure can cause deformation of the filters, resulting in a change in the accuracy of the meter.
2. When taking readings to measure transmission percentage, it is important that the meter is held in the exact same position for both readings taken (when possible). Any change in angle or proximity to your light source can adversely affect the accuracy of your measurements. **FOR BEST RESULTS**, place the meter on its box or other stationary item. To read transmission readings, slide the glass of film sample in front of the meter, without moving the position of the meter. This will guarantee the most accurate readings possible.
3. When performing transmission percentage readings, it is advised to take multiple readings to reduce the amount of error that occurs. Be aware that a changing light source (sun with moving clouds) will affect your transmission readings.
4. The light sensor is located at the top end of the enclosure. For the greatest accuracy in measurements, this sensor should be directly facing the light source. **DO NOT** alter the condition of the sensor opening by touching or pushing on the filter. Any modifications or altering of the exterior surface of the filter **WILL** affect the calibration of the meter. This area should be kept clean at all times. Compressed air or a lint-free cloth should be used to clean the filter surface if it becomes soiled.
5. Do not attempt to open the enclosure. Opening the enclosure will void the product warranty and affect the calibration of the meter.

BATTERY REPLACEMENT -- BLINKING DISPLAY

The UV1365 is powered by a 9 volt battery. When the battery voltage is getting too low to operate the meter, the display will begin blinking. Once the display begins blinking you will want to replace the battery soon. To replace the battery, turn off the power meter. Remove the battery cover near the bottom of the meter and replace with a new battery. Alkaline batteries will provide the longest service, but are not required for this product.

CALIBRATION

This instrument has been calibrated for ultraviolet irradiance measurements in the UVA region. The largest incident value of ultraviolet energy is obtained when the end of the meter faces the sun or artificial light source directly. Make sure the transparent materials being tested are reasonably clean.

This instrument is factory calibrated to a NIST (NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY) traceable GaAsP photodiode system and should require no field adjustment.

UV1365 WARRANTY

The manufacturer warrants all models of the UV1365 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 six (6) 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.

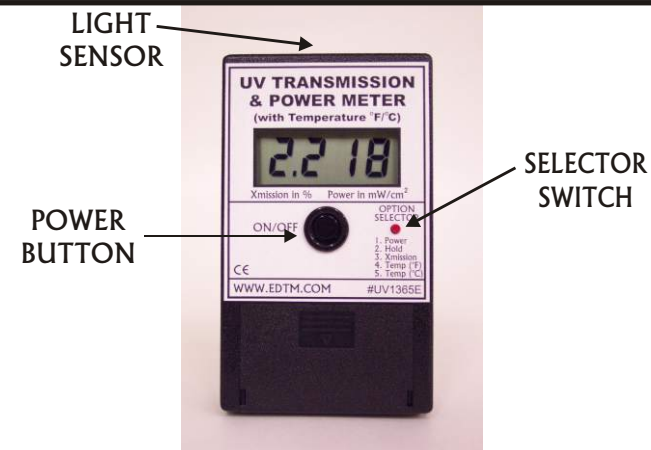
EDTM, Inc. assumes no liability for the consequential damages of any kind through the use or misuse of the uv1365 product by the purchaser or others. No other obligations or liabilities are expressed or implied. All damage or liability claims will be limited to an amount equal to the sale price of the UV1365, as established by EDTM, Inc.

DIGITAL UV TRANSMISSION & POWER METER (With Temperature Measurement)

MODEL #UV1365

GENERAL DESCRIPTION:

The digital "UV TRANSMISSION & POWER METER" incorporates several beneficial products into one meter. In Power Mode, the meter measures the power per unit area of incident UV radiation reaching the meter's sensing area (irradiance). In Transmission Mode, the UV1365 is able to calculate the UV transmission percentage associated with a given material. The design includes a "HOLD" feature that allows the user to freeze the display on a given power reading. The meter also includes temperature measurement in Fahrenheit and Celsius. The UV1365 may be used to measure the UV characteristics of glass, film or other transparent materials.



FEATURES:

- UV TRANSMISSION & POWER MEASUREMENTS IN mW/cm^2
- TEMPERATURE MEASUREMENT (FAHRENHEIT & CELSIUS)
- "HOLD" FEATURE TO FREEZE DISPLAY
- SHARP-CUT FILTERS FOR ACCURATE UV MEASUREMENT
- REAL-TIME READINGS CONTINUALLY UPDATED
- DIGITAL TECHNOLOGY USING MICROPROCESSOR CONTROL
- VAST OPERATING RANGE WITH EXCELLENT RESOLUTION
- END-MOUNTED SENSOR
- PUSH-ON/PUSH-OFF POWER SWITCH
- SMALL, PORTABLE CONVENIENT SIZE

KEEP THE COMPETITIVE EDGE WITH PRODUCTS FROM EDTM, INC.

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GLASS & AIR SPACE LASER METERS, SOLAR, VISIBLE, & UV METERS
LOW-E DETECTORS, 4 POINT SHEET RESISTANCE METERS, TIN SIDE DETECTORS
MANUFACTURING INSPECTION EQUIPMENT, VARIOUS LAMPS & ACCESSORIES

BASIC OPERATION

The UV1365 includes a selector switch on the front panel that allows the user to sequentially move through the 5 possible operating modes:

1. Power readings
2. HOLD display
3. UV Transmission %
4. Temperature (Fahrenheit)
5. Temperature (Celsius)



When the meter is turned on, it will operate in Power Mode, reading in mW/cm^2 . While taking power readings you can push the selector switch a single time to freeze the current reading on the display. Pushing the selector a second time will toggle the meter into Transmission Mode (%). The third and fourth push of the selector switch toggles the meter into Temperature Measurement Mode, Fahrenheit & Celsius respectively. Pushing the selector switch a fifth time will roll the meter back to the starting operating sequence (Power Mode). At any time during your measurements you can turn the meter off and back on to reset it to Power Mode (top of the operating sequence). When pushing the selector switch, hold the button down briefly and release it, watching for the display to change into the next sequence before pushing the button again.

TABLETOP SALES PRESENTATIONS

The UV1365 can be used to perform dynamic TABLETOP PRESENTATIONS, showing the UV blocking potential of glass, film, coatings, plastics or other transparent materials. To set up your tabletop presentation or to perform readings in a bench-type QC application, place a UV light source facing the UV1365 meter. The light source should be stable and held in position so it cannot move during the measurements. We recommend using the UV1385 UV Penlight available from EDTM. It offers TRUE UV energy centered at 370 nm, in a compact and convenient penlight assembly. Position the meter flat on the table with the sensor facing the light source directly. If necessary, place the UV1365 on top of its box to position the meter in the center of the UV light beam. To obtain the most accurate results, DO NOT move the UV light source or the meter during the readings. Simply slide the samples being tested between the meter and UV light source. To take transmission measurements, follow the directions below and the illustrations on the next page.

- 1) Turn on the UV1365 by pushing the power button
- 2) Place the meter on a stationary platform (box) with the light sensor (top end of meter) facing the UV light source (Model# UV1385). Confirm that a power reading has registered on the display.
- 3) Self-calibrate the meter by pressing the RED Selector Switch 2 times (slowly).
- 4) The display should now read P100 (= 100% transmission). Your meter is now prepared to take a UV transmission measurement with the current light conditions. (If the surrounding light conditions change, repeat STEP 3).
- 5) Now slide the glass or film sample you are demonstrating between the UV1365 meter and the UV light source. The resulting UV transmission % for the sample will be displayed.
- 6) To confirm your reading, remove the glass or film sample and confirm that the meter returns to P100. If the meter does not display P100, it is possible that your light conditions have changed. You may choose to perform the measurement again.

UV BLOCKING OF EYEGLASSES & PROTECTIVE EYEWEAR

The UV1365 can be extremely effective in measuring the UV blocking capabilities of eyewear. To evaluate a pair of glasses follow the same procedure that was described on Page 2 for Tabletop Presentations. At Step #5, slide one of the lenses of the eyewear between the meter and the UV light source. The resulting UV transmission of the eyepiece will be displayed on the meter. You will need to test each lens separately, as only one lens can be placed in front of the meter at a time. It should not be necessary to recal the meter between each reading. To guarantee the meter is still normalized correctly, remove the lens and confirm that the meter returns to P100 (100% transmission).



TEMPERATURE MEASUREMENT

As a bonus feature, the UV1365 meter is able to measure temperature in Fahrenheit and Celsius. Use the Selector Switch to toggle through the various operating modes (as described on Page 2). After turning the meter on, push the Selector Switch 3 times to put the meter in TEMPERATURE-FAHRENHEIT Mode. You will know you are in Fahrenheit Mode by the letter "F" printed on the left side of the display. Pushing the Selector Switch a fourth time will toggle the meter into TEMPERATURE-CELSIUS Mode. This will be designated by the letter "C" printed on the left side of the display. The UV1365 meter is able to measure temperature between 32 degrees and 212 degrees Fahrenheit.



TESTING UVA CURING LAMP INTENSITIES

In the UVA curing process of adhesives and inks, it is very important to understand how your UVA lamp is performing. When the lamp is new, it produces its highest levels of UVA energy, resulting in shorter drying times for adhesives and inks. As the bulb ages, the output of the UVA lamp will decrease, and the resulting drying times should increase. The problem with the degradation of the UVA bulb, is that you cannot detect when the lamp has decreased in energy, because the majority of the lamps output is not visible to the human eye. Therefore the performance of your UVA adhesives can be jeopardized.

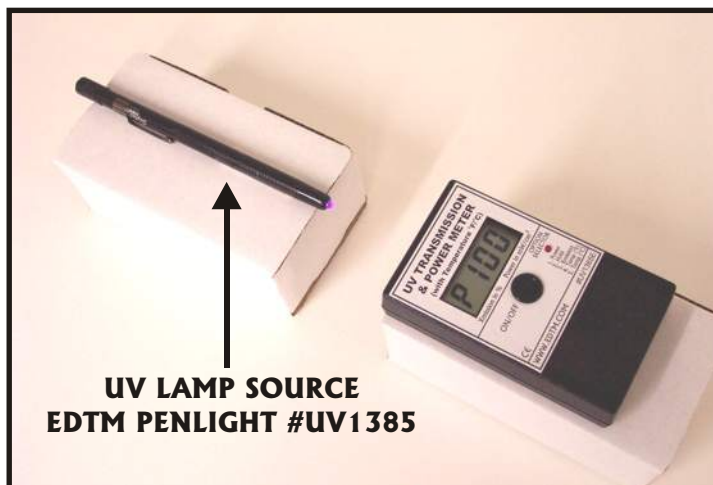
Implementing a routine power measurement of your UVA curing lamps can reduce your risk and guarantee a routine output from your UVA curing lamp. Simply place the UV1365 meter near the lamp at a specified distance. Take several power readings and document the average value obtained. Keep this information on file. At routine intervals (determined by the frequency of use of your UVA lamp), inspect your lamps intensity and monitor its degradation. If your UVA lamp intensity has dropped in half, your drying times should be increased by a factor of 2.

This procedure also provides you with a great opportunity to evaluate the quality of products produced by various UVA lamp manufacturers. You can analytically document the degradation of the bulbs over time, and know which manufacturer provides the highest quality lamps.



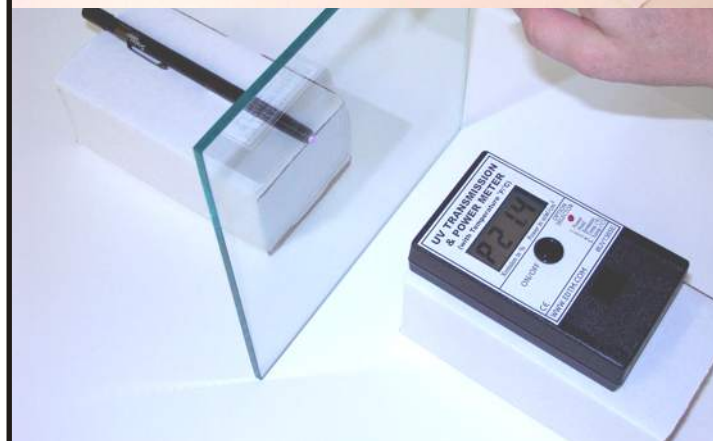
MEASURING INSTALLED WINDOWS

The best results are obtained when the meter is operated on windows inside of a building that are directly facing the sun. The position of the meter is EXTREMELY important in obtaining an accurate reading. The meter should be placed on the window sill on top of it's box or other stationary item that will hold the meter in the same position. To take a transmission reading, the meter should be self-calibrated with the window open (SEE Steps 1 - 4 on Page 2). The sensing area of the meter should NOT be looking through any glass or film at this time. In step #5 of the instructions, you should close the window without moving the position of the meter. Once the window is closed, the meter will measure the UV Transmittance of the window. Several readings should be taken to guarantee the most accurate information is obtained. Please note if there are clouds passing in front of the sun, this will affect your UV reading. If possible perform the self-calibration of the meter (Step #3) while no clouds are passing in front of the sun. This will provide the most stable UV source and allow for the most accurate readings.



**UV LAMP SOURCE
EDTM PENLIGHT #UV1385**

**STEPS 1 - 4
SET UP**



**STEP 5
DEMONSTRATE
UV BLOCKING
OF GLASS
& COATINGS**

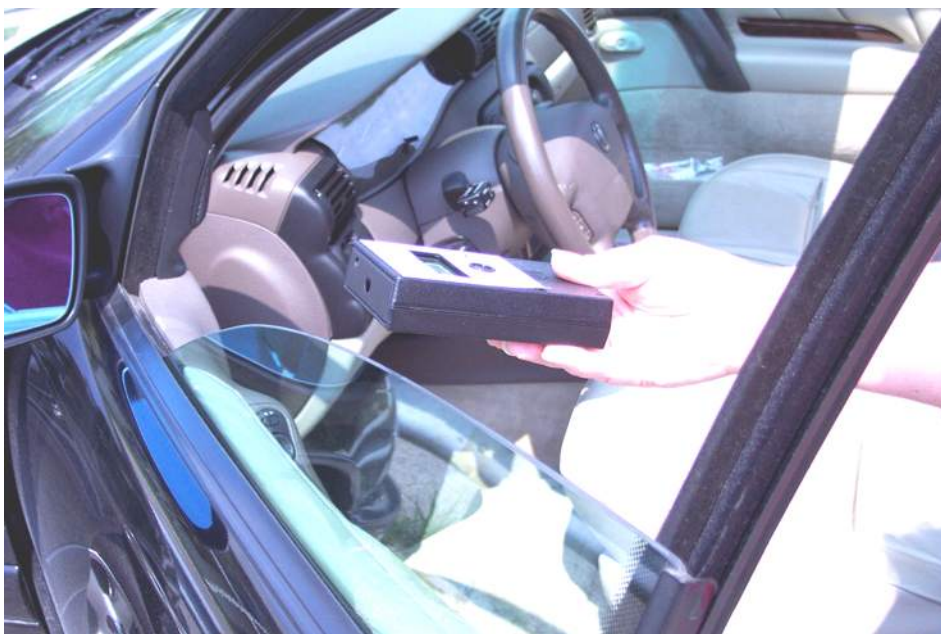


**STEP 5
SHOW
PERFORMANCE
OF FILM
SAMPLES**

MEASURING AUTOMOTIVE GLASS (installed)

For the best results, position the vehicle in a location that is in the direct sun if possible. To complete your UV Transmission measurements, follow the steps below:

- 1) Turn on the UV1 365 by pushing the power button
- 2) Open the automobile window half way and place the meter directly above the window in the opening. The light sensor (top end of meter) should be facing directly outward. Confirm that a power reading has registered on the display.
- 3) Self-calibrate the meter by pressing the RED Selector Switch 2 times (slowly), to switch the meter into transmission mode.
- 4) The display should read P100 (= 100% transmission). Your meter is now prepared to take a UV Transmission measurement with the current light conditions. (If the surrounding light conditions change, repeat STEP 3).
- 5) Now slide the UV1 365 meter downward so the end of the meter is placed directly behind the window OR close the window while holding the meter in the exact same position. Hold the meter at the exact same angle as it was held in Step #3. The resulting UV Transmission percentage for the window will be displayed.
- 6) To confirm your reading, slide the UV1 365 meter back to its original location above the open window (Step 3). The display should return to P100. If the meter does not display P100, it is possible that your light conditions have changed. You may choose to perform the measurement again. We recommend taking a couple readings to confirm your measured value.



STEPS 1 - 4: Meter looking through open window.



STEP 5: Meter measuring UV Transmission through car window.

STEP 5: Meter shows a measurement of 21.4% UV Transmission through the car window.

