

SEPTEMBER 2020

# ETEKT+

## Dual Pane Low-E Coating Detector



Cat. No. AE1601

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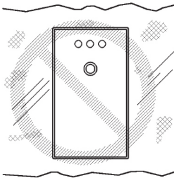
## GENERAL DESCRIPTION

The "ETEKT+" is a portable instrument using a patented method to detecting the presence and location of Low-E coatings or any other conductive coating on or within a window assembly. The ETEKT+ is designed to test single or double pane windows from a single side. The instrument is optimized for windows containing 3/32" and 1/8" glass with air spaces up through 1/2". However, the AE1601 can test many other window sizes as explained in this operating manual.

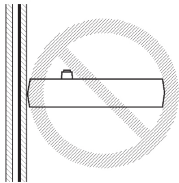
This instrument detects the presence of all electrically conductive coatings in/on a window, including Low-E coatings. Make sure the window is reasonably clean before testing. The "FAR" and "CLEAR" indicators are dependent on the window being within the thickness specification listed above. If in doubt about thickness of the window being tested, always test both sides of the window and look for the side that yields the "NEAR" indication. The "NEAR" indication works for any glass thickness.

## ETEKT+ IMPROPER OPERATING CONDITIONS

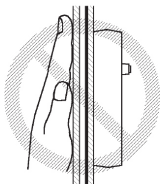
The ETEKT+ is the only thing that should be in contact with the glass while the reading is being taken. The operator may have their hand on the meter itself, but should [not allow any part of their hand to overlap the meter and come into contact with the glass during testing.](#)



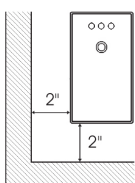
If the window area under test is excessively dirty or contaminated, the ETEKT+ may give improper results. The window area under test must be **RELATIVELY CLEAN**. Clean the rest area or move the ETEKT+ to a clean location on the window.



The ETEKT+ must be used with the surface opposite the POWER button pushed flat against the window. Using the small end surface of the unit or tilting the unit away from the window surface will give improper results.



Placing your hand or an object on the opposite side of the window may cause improper results. Remove hand or object.



**IMPORTANT:** Do not operate the ETEKT+ within two (2) inches of a window frame or any other metallic window component. Extraneous conductive materials may impact the accuracy of your test results.

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## WARRANTY

The manufacturer warrants all models of the AE1601 to be free from defects in material and workmanship under normal use and service as specified within the operators 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 manufacturers factory, prepaid by the user, and the units is disclosed to the manufacturers 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 afore mentioned 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.

CRL, assumes no liability for the consequential damages of any kind through the use or misuse of the AE1601 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 AE1601, as established by CRL.

## WHAT IF I DON'T KNOW THE THICKNESS OF GLASS I AM TESTING?

### "SINGLE PANE MODE"

The ETEKT+ RED/FAR and GREEN/CLEAR lights are optimized for single pane or IG window assemblies manufactured with 3/32" (2.5 mm) or 1/8" (3 mm) glass with an air space between 1/4" and 1/2". Whenever you are operating on glass or air spaces BEYOND this range, DISREGARD the RED and GREEN indicators - the have NO meaning.

Therefore to fully test an IG unit when the thickness is not known, you must take a reading from both sides of the window, measuring each piece of glass individually. Watch ONLY for the NEAR/YELLOW indicator. If you do not obtain a NEAR indication on either side of the IG unit, it is a CLEAR IG assembly. If you do obtain a NEAR indication on one side of the window, that piece of glass contains the low e, and it is on the second surface of the glass as explained on the previous page.

### SUMMARIZING:

1. Test both sides of the window looking for the NEAR indication ONLY.
2. If you do not get a NEAR indication on either side of the window, the window does not contain any LOW-E coating (it is a clear window).
3. If the YELLOW/NEAR indicator lights on one of the sides of the window, then that pane of glass contains the LOW-E coating.
4. Totally disregard the FAR and CLEAR indicators, as they are not valid in this application
5. The "CONTACTING" coating indication is valid for ALL applications, regardless of thickness or air space.

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## OTHER APPLICATION

The AE1601 instrument can be used to identify ANY conductive coatings, even if they are not low LOW-E Coatings. Other known applications for the AE1601 include identifying non-ceramic window films and also Pilkington's "Optiview" anti-reflective coating. In most cases the ETEKT+ is able to identify other coatings even if they are protected by an insulating coating over the top of the conductive surface.

## MULTIPLE LOW E SURFACES or TRIPLE PANE

The AE1601 instrument will only detect the nearest LOW- E Coating it encounters. Therefore if you have a window with more than one LOW-E Coating, the AE1601 will only show the presence of the coating that is closest to the meter. If you believe there is more than one coating, you will need to test other side of the window to confirm this. Remember, the instrument will only identify the nearest coating it encounters. For triple pane applications, it is necessary to test both sides of the window.

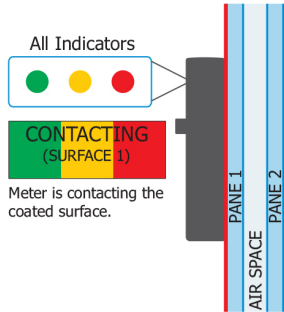
## LOW BATTERY INDICATION

The AE1601 is equipped with a low battery indicator that will indicate when it is necessary to replace the battery. The low battery condition is indicated by blinking the LED that gives the results of the test. Typically the LED result is shown in a "constant on" style. However when the battery needs replaced, the LED result will be blinked. This is the warning indication that a new battery should be installed sometime soon. The instrument will continue to operate correctly for a given time after the warning is indicated. It is recommended that you replace the battery soon. Once the battery voltage drops to dangerously low level, the instrument will NOT operate and the LED indicators will go into a continuous blinking pattern, NOT allowing you to use the meter.

The AE1601 is powered by a 9 volt alkaline battery. Please replace the battery with an alkaline battery when necessary.

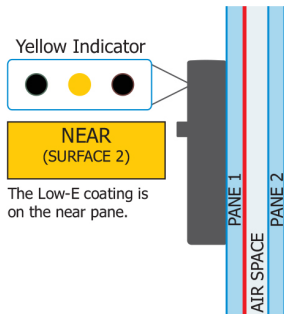
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## CONTACTING LOW-E = SURFACE 1 DETECTION



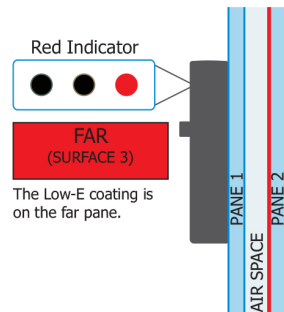
When the ETEKT+ is in direct contact with a LOW-E coating the GREEN, YELLOW and RED indicators will all be lighted.

## NEAR INDICATION = SURFACE 2 DETECTION



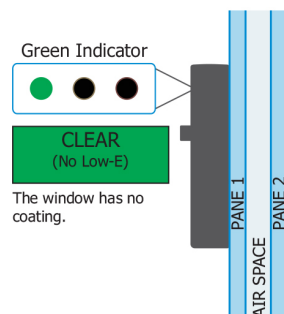
The YELLOW light indicates that a LOW-E coating exists on the NEAR surface of the window is surface #2 as you look at the window.

## FAR INDICATION = SURFACE 3/4 DETECTION



The RED light indicates that a LOW-E coating exists on a FAR surface of the window. The far surfaces of the window are surface #3 or #4 as you look at the window.

## CLEAR INDICATION



The GREEN light indicates that the window is CLEAR of any LOW-E COATING. NO LOW-E coating exist on any of the surfaces.