

## Color Measurement For Coated Glass

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}Multiple silver layers on glass panes add functionality to architectural fronts. Low-E glass or solar protection is used all over the world to save costs for heating or cooling the house. Glass is a non-scattering product. So far in the laboratory a  $d:8^\circ$  instrument with specular component included has been used to measure glass panes. Because of the non-scattering surface of the glass pane, just the small illumination which came from the gloss angle at  $-8^\circ$  was a useful illumination for the measurement, all the other directions of illumination where not effective. GretagMacbeth developed a measurement geometry where the pane is illuminated with a specific angle and the measurement will be taken right on the other side, directly in specular. This ensures a non-contact measurement with a high distance variation to measure different thicknesses of panes without mechanical adjustments.

Two different geometries are available:

ERX54 (new model!) The glass will be illuminated under  $15^\circ$  and measured with  $-15^\circ$ . This measurement gives the same readings like in the laboratory with a sphere geometry measurement ( $d:8^\circ$ , SPCI).

ER56 PA This instrument has 2 geometries  $+15^\circ/-15^\circ$  and  $+60^\circ/-60^\circ$ . The  $15^\circ$  measurement gives the same readings as in the laboratory with a sphere geometry measurement ( $d:8^\circ$ , SPCI). To see the color change in different observer angles the  $60^\circ$  measurement gives useful information.