



SunSmart

Thermochromic Solar Control Coating

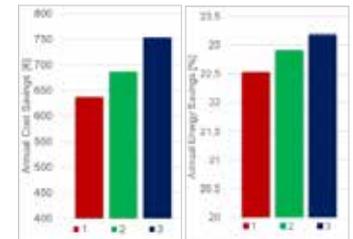
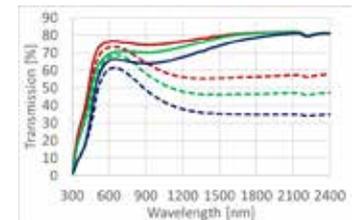
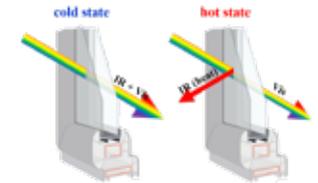
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SunSmart is BMCs thermochromic solar control coating for architectural glazing. The coating can change its properties from infrared transparent to IR blocking depending on the glass temperature.

- BMCs SunSmart coating can regulate the solar heat gain of architectural glazing systems. The thermochromic material in the coating can switch between an infrared (IR) transparent and an IR blocking state depending on the glass temperature. This way the solar heat transmitted through the window into the building can be regulated, which leads to a reduction in necessary cooling in summer and heating in winter.
- The SunSmart coating is color neutral with a high visible transmission of up to 75%. The switch in optical properties occurs solely in the IR region and without being visible. Upon switch the light transmittance of the window is reduced by up to 15%. The visible transmission and solar modulation can be tuned for increased switching performance and lower total energy transmission.
- The switching temperature of the SunSmart coating can be adjusted during production to the systems needs and is infinitely variable between 0 - 68°C.
- The SunSmart coating is a single layer system prepared by wet-chemical deposition. The coating material and the deposition method are low in cost. The coating is robust and durable with a pencil hardness of 4H and a shelf life of >4 months.
- The SunSmart coating withstands exposure to solar radiation according to NEN-EN 1096-3. The coating shows no switching fatigue after more than 4000 cycles (>10 years lifetime).
- A smart window combining our SunSmart with a conventional low-e coating can have cold state G values between 0.52 and 0.46, with hot state G values between 0.49 and 0.41. Furthermore U values of 1.0 W/m²K are reached.
- Smart windows with our SunSmart coating are perfectly optimized for intermediate climates. Here energy savings of over 23% and cost savings of up to 750 € per year for a single household are possible.



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