

The image features a dark blue background on the left side, which transitions into a white background on the right. The dark blue area is filled with a complex pattern of thin, light yellow lines that curve and intersect, creating a sense of motion and depth. The 'bre' logo is positioned in the lower-left quadrant of the dark blue area.

bre

**TECHNOLOGY AND
MARKET REVIEW,
IN'FLECTOR SEE-
THROUGH WINDOW
INSULATOR**

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Building Research Establishment Ltd Report Overview

In'Flector See-Through Radiant Barrier Window Insulator

Executive Summary

- In'Flector is a flexible material intended for use as a window insulation and solar shading product.
- In'Flectors purpose is to insulate the window from uncontrolled heat loss or gain.
- It is used inside a window trapping air and providing additional insulation.
- In summer, the silver side is placed outermost, to reflect solar gain and act as a radiant barrier.
- The insulating panel can offer the additional benefit of improving the infiltration characteristics of the window.
- Existing test results show that installed In'Flector....can be an effective barrier to incoming radiation.
- In'Flector can have the additional benefit of reducing heat loss.
- With the black side facing outwards, more solar gain is absorbed, resulting in less heat demand in winter.
- In principle use of the In'Flector could help new building meet Building Regulation requirements for solar gain.
- The In'Flector can reduce heat loss through windows as it is non-porous, preventing warm air from the room reaching the window.
- Mounted as a fixed panel and sealed around the outside, it typically reduces heat loss by around 35-40% compared to a bare window.
- In'Flector can reduce glare from the sky.
- Fitting In'Flector to a bare window will reduce cooling energy requirements and potentially reduce heat loss.

Applications for In'Flector See-Through Window Insulators

- Solar gain reduction
- Heat loss reduction
- Glare reduction
- Privacy
- Energy saving

Summary of conclusions

- In summer In'Flector can reflect solar gain and act as a radiant heat barrier.
- In'Flector can lower incoming solar gain by up to a half.
- Mounted as a fixed panel and sealed around the outside, it typically reduces heat loss by around 35-40% compared to a bare window.
- The insulating panel has the additional benefit of improving the infiltration characteristics of windows.
- The In'Flector can reduce glare.
- Compared to a conventional fabric roller blind, an In'Flector would be expected to give more daylighting, reduce heat loss because of the non-porous nature of the product, and reduce solar gain.

IN'FLECTOR[®]

*The See Through Radiant
Barrier Window Insulator*



2011

Building Research Establishment (UK)

Innovation Park Watford



The Building Research Establishment (BRE) tested In'Flector Insulators and now it is proudly displayed at their Innovation Park Watford.