## Heat Mirror

## The latest in insulating glazing in 2007



Recommended for all types of roof glasses

## INTERM TF

....roof glazing can bring a pleasant feeling of light passing through



Tuesda nama	Tvis (%)	g (%)	Noise reduct. (Db)	Tvis/g	RHG W/m <sup>2</sup>	t <sub>1</sub>	t <sub>2</sub>	fill	coefficient U acc. EN (W-m²k / width of glazing							
Trade name									frame 2x10mm frame 2x12mm		frame 2x14mm		frame 2x16mm			
INTERM TF	24	20	24	1.7	1 / 1	140	16.2	argon					0,7	37	0,6	41
TOP	34	20	34	1,/	141	-14,0	16,3	krypton	0,5	29	0,5	33				

important recommended value

(calculated according to Window 5 software)



There are many types of spaces, for which the lighting by light coming from roof structure is the most suitable, because such lighting is uniform and almost excludes unwanted shading. However, negative consequence is represented by the exposition of spaces to the effects of solar energy coming from direct sun. So the glazing is designed in such way, that this unpleasant effect is eliminated so that the people moving inside are not exposed to direct effects of radiation. Normal incidence of sunrays also makes the lighting of spaces more intensive, so it is often reduced to the values around 30%. At first sight, such a low lighting rate may seem to be unsound, but the effect of not shaded light incidence perpendicularly from above into interior without any losses as a result of absorption and shading prevails in the upshot and satisfactory light conditions may be obtained in practice. Just the insulating glass units with thermal foils are able to meet all such defined requirements in the best way.

## **DETERIORATION OF INSULATING ABILITY IN THE CASE OF SLANT AND HORIZONTAL GLAZING**

In the case of slant or horizontal glazing, insulating ability represents an important factor. The insulation principle in the glazing lies in a favourable way of circulation of gas inside the insulating glass unit that circulates from the lower edge towards the upper one and vice versa because of different temperatures of gases in different parts of double-glazed unit, so the heat is not passed directly by the gas between the glass panes.



important recommended value

GLASS TYPE	<b>U<sub>g</sub> 90</b> ° (W/m <sup>2</sup> K)	U <sub>g</sub> 45 ° (W/m <sup>2</sup> K)	Deterioration %
usual IG U=1.1	1.12	1.48	32
INTERM TF TOP	0.66	0.67	1

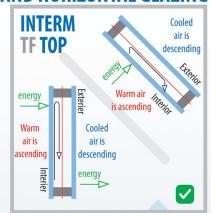
energy
Warm
air is
ascending

Cooled
air is
descending

Warm
is ascending
energy
energy
energy

Extra is ascending
energy
energy

Extra is ascending
energy
energy



In the case of common insulating glass unit, the coefficient of heat transmission deteriorates up to by 32% when titled from vertical to slant 45° position. Insulating glass units with internal foils show deterioration of thermal insulating ability only by negligible 1-3 % when titled do slant 45° position. The reason is that the internal thermal foil always separates the space between window panes reliably and so forms two independent chambers and so it prevents direct transfer of thermal energy between the glass panes in slanted or horizontal position.





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