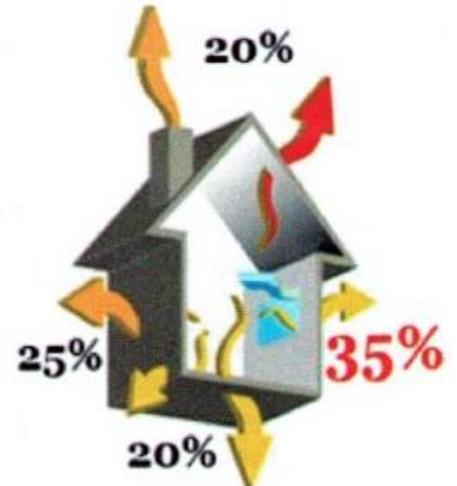


Let's save energy and enjoy the light!

Why should we pay special attention to the IGU when we choose glazing?

1. Because the IGU takes up 80% of the whole window
2. Because the highest percentage of heat loss in a home (roughly 35%) occurs through the glazing
3. Because the properly chosen glass for our windows will reduce these losses by 25%.

If we choose energy-efficient windows, the temperature in our home will go up by 4-5°C and the noise level will go down by 30 dB.



The U_g (thermal transmittance factor) describes the heat transfer through a square metre for one hour at a difference of one degree between the external and internal room temperature. It is measured in W/m^2K .

The use of a single-chamber energy-efficient IGU with a U_g of $1.3 W/m^2K$ instead of the standard $U_g=2.7 W/m^2K$ saves approximately 100 kWh per one square meter of glazing per heating season. If the windows of your home are ten square meters, then your savings for the heating season will reach 1000 kWh. If you use electricity for heating, the amount is approximately 170 BGN ($1000 \times 17 BGN/kWh$), if you use gas or central heating - 120 BGN ($1000 \times 0.12 BGN/kWh$) and if you use wood - 90 BGN.

The difference in the price of a standard IGU and an energy-efficient one ranges between 50 and 100 BGN per 10 square meters, i.e. the savings for a heating season will cover completely the higher initial cost of your glazing. If you live in a two-room flat, with an area of 60 square meters, you will have saved 1500 to 900 BGN for 10 years provided that there is no increase in the energy cost in the meantime.

If you choose an IGU with the so-called low-E multifunctional or "4 seasons" glass, you

will reduce the air-conditioning costs in summer. You can reduce the power consumption in your home by 30% more if you choose a two-chamber high-energy



IGU.

The energy efficiency increases depending on the number of glass panes in the IGU, their type as well as the filling, which provides the insulation in the space between the glass panes (air or gas). The replacement of the dry air inside the IGU with gas, mostly argon, reduces the U_g by $0.2-0.3 W/m^2K$, which improves the IGU energy efficiency.

This is a gas which reduces the air streams in the space between the glass panes, provides insulation, reduces the heat losses through the glass panes, which improves the energy efficiency of the window. The filling of the IGU occurs if at least one of the glass panes is low-E or all-season.

In addition to providing energy savings, the energy-efficient IGUs improve the comfort inside your home.

If you would like to know more about low-E glass

What is low-E glass?

The low-E glass is a high-quality float glass with a coating of silver ions, deposited by means of magnetron sputtering on one of the glass pane sides. In order to be efficient it must be placed on the internal side of the IGU, the protective coating faces the air layer formed by the two glass panes.

The coating allows the short-wave solar energy to enter inside the room but due to its high reflective ability in the infrared spectrum it acts as a barrier to the loss of the expensive long-wave energy (created by the heating devices, light, etc.) as it reflects it back into the room. Thus the heat losses are inhibited, the heating bills are reduced and there is a quick return on the investment in high-quality window profiles with high-quality glazing. The IGUs made with low-E glasses contribute to a significant reduction of the heat loss through the windows, improve the heat insulation and reduce the condensation to a minimum.

Low-E glasses can be with one, two or more silver coating. The single-coating low-E glasses are suitable for north-facing rooms. Those with two or three coatings have a better reflecting effect and protect the room from overheating and the harmful impact of UV rays in summer. The experts recommend them as the better option for rooms facing south and west.



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