

ECLAZ[®]

365 days of Living comfort
– the right glass for every
glazing application



ECLAZ® - 365 DAYS OF LIVING COMFORT

On average, people today spend 90% of their time indoors – more than any previous generation. Therefore, today's residential buildings have to provide more: pleasant room temperatures during the day, at night, in summer and in winter; bright and open designs for plenty of natural light; along with as much energy efficiency as possible, helping to ease the impact on the environment and save money.

With glazing from the ECLAZ® family, you're equipped for every season: with the **winter comfort glass ECLAZ® LUMI** and **ECLAZ® ZEN**, you allow plenty of daylight and free solar heat to enter your home and reduce your energy requirements for heating and lighting during the cold, dark season. With the **summer comfort glass ECLAZ® SUN PLUS**, you can let sunlight in even on hot days but keep out a large proportion of the infrared heat radiation. This saves air conditioning electricity and ensures a pleasant indoor climate.

Whether you are building a new home or renovating an existing one, ECLAZ® LUMI residential comfort glazing lets you enjoy pleasant temperatures and lower energy bills throughout your home, 24 hours a day, 365 days a year.

ECLAZ® LUMI

WINTER COMFORT



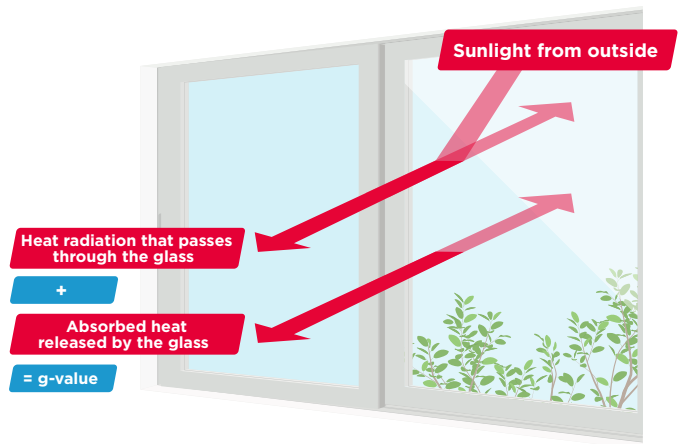
ECLAZ® SUN PLUS

SUMMER COMFORT

What happens when sunlight hits the window?

When solar radiation hits glass, some of the energy enters the room directly. Another part is reflected outside by the glass surface. A small part is also absorbed by the glass and released inside and outside.

The amount of energy that enters the building is described by the g-value. Whether high or low, the **g-value** influences indoor comfort – in both summer and winter.



g-value: the energy transmittance



A low g-value reduces solar radiation and over-heating in the interior. A high g-value utilizes free solar heat and can reduce the load on the heating system in winter.



A g-value of 35% or 0.35 means, for example, that up to 65% of solar heat does not enter the building, which can reduce the use of air conditioning in summer.



If the g-value is 58% or 0.58, on the one hand, up to 42% of the heating heat can be reflected into the room by the glazing, on the other hand, up to 58% of the solar heat can be allowed into the house. This can reduce the load on the heating system.

Additional parameters for window selection

T_L-value: The light transmission value represents the permeability of light in the range visible to humans. The higher the value, the more light enters – the room becomes brighter.

U_w-value (W/(m²·K)): The heat transfer coefficient or insulation value of the window reveals how much heat loss occurs through the window. The lower the value, the less heat is lost. An important parameter in heating-intensive winter.

Verglasungen, deren bauphysikalische Werte exakt auf das lokale Klima und die Ausrichtung der Gebäudeseiten zugeschnitten sind, helfen Ihnen, ab dem ersten Tag Energiekosten einzusparen, die Umwelt zu entlasten und Ihren Wohnkomfort zu verbessern. Fragen Sie Ihren Architekten oder Fensterbauer daher nicht nach den günstigsten Fenstern, sondern nach Fenstern, mit denen Sie unterm Strich am langfristigen sparen können!

HOW TO CHOOSE THE RIGHT GLAZING

It is all about perspective: Consider your home's glazing, including window size and compass direction.

ECLAZ® LUMI

Winter comfort with lower heating costs

- 36 %

Heating energy-costs¹

When replacing your old 1970s double glazing with ECLAZ® LUMI triple glazing, **you can save up to 1,800 kWh or € 270 (gas)² per year.**

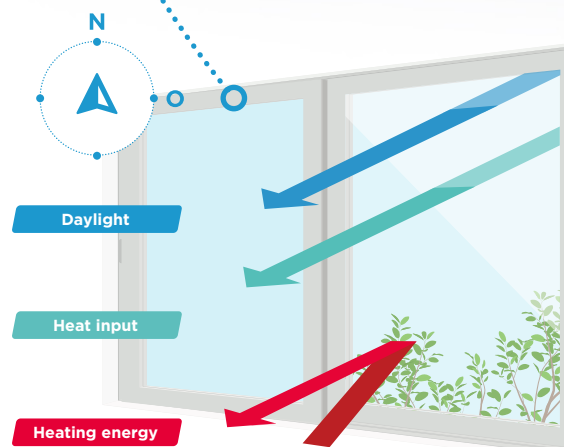
- 28 %

Heating energy-costs¹

By replacing your old 1970s double glazing with ECLAZ® LUMI double glazing, **you can save up to 1,800 kWh or € 270 (gas)² per year.**

More light and warmth

North-east facing windows often receive limited daylight during the darker months, meaning that electric lighting and heating have to be switched on. The solution: ECLAZ® LUMI and ECLAZ® ZEN. With their high g- and T_L-values, they make optimum use of daylight and free solar energy.





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ECLAZ® SUN PLUS

Summer comfort without air conditioning

House without air conditioning

- 26 %

Heating energy¹

By replacing your old double glazing with triple glazing ECLAZ® SUN PLUS.

You save up to 1,700 kWh or € 250/ year (gas)²

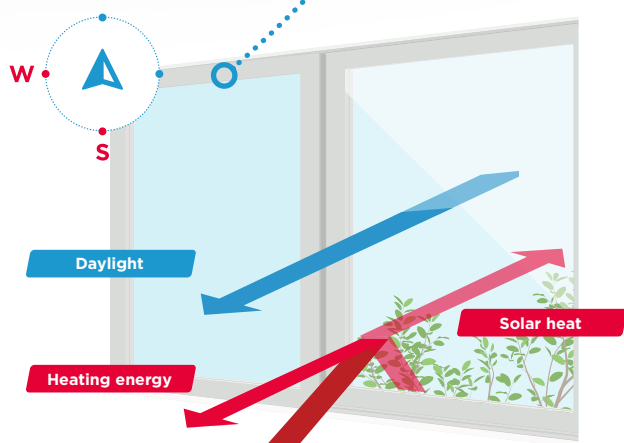
- 6 Wochen

Interior overheating

By replacing your old double glazing with triple glazing ECLAZ® SUN PLUS, only 7 weeks instead of 13 weeks above 25 °C.

More light, less heat

Windows facing south-west are exposed to high temperatures in summer. Rooms can become so hot that only blinds or air conditioning provide relief. The solution: ECLAZ® SUN PLUS. Thanks to its low g-value and high T_L-value, light comes in, but heat remains outside.



¹ Source: Passive House Study 2023, solid construction residential building with 156 m² of living space, good insulation and 16 % window area in Potsdam
² Assumption: 1 kWh = € 0.34.



GOOD FOR THE PLANET

Our ECLAZ® LUMI is also available on **ORAÉ** our CO₂-reduced glass. The top tip for climate-friendly living comfort! The benefits are obvious:

- **Consistent aesthetics**
- **42% lower CO₂ emissions** during production compared to our standard European standard product
- **CO₂ footprint of just 6.64 kg CO₂-eq./m²** (from production to disposal for a 4 mm thick substrate)
- **High proportion of recycled glass**
- The ECLAZ® LUMI ORAÉ® combination not only reduces CO₂ during production, but also during building operation. This can lower a home's **climate footprint by up to 5%.**



Did you know?

According to the German Environment Agency, 2023 was the warmest year in Germany since systematic weather records began in 1881 – for the thirteenth time in a row. The average temperature was 10.6 °C, which is 2.4 °C above the average for the reference period 1961–1990.

Sand

64%

Recycling shards

Soda, dolomite, calcium carbonate



GLASSING EXAMPLES

Common insulating glass structures with 14 mm spacers and 4 mm thick glass panes for windows of average sizes.

Winter comfort

LOWER HEATING COSTS THANKS TO LOW U_g -VALUE AND HIGH G-VALUE



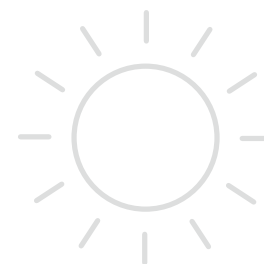
Type/colour	U_g -value* [W/m ² K]	Light transmission T_L ** [%]	g-value** [%]	External reflection** [%]	Internal reflection** [%]
STANDARD STRUCTURE CLIMAPLUS® 6 16 4 - COATING IN POSITION 3 ON PLANICLEAR®, 90% ARGON					
ECLAZ® LUMI and ECLAZ® LUMI II	1,1	83	69	12	11***
ECLAZ® ZEN and ECLAZ® ZEN II	1,0	79/77***	57	15	16/17***
STANDARD STRUCTURE CLIMATOP® 4 14 4 14 4 - COATING ON POSITION 2 AND 5 ON PLANICLEAR®, 90% ARGON					
ECLAZ® LUMI and ECLAZ® LUMI II	0,6	77/76***	60/59***	14	14
ECLAZ® ZEN and ECLAZ® ZEN II	0,6	71/68***	45/44***	21/23***	21/23***

*According to EN 673. **according to EN 410.

***Values may vary between tempered (II) and non-tempered layers, even with identical glass configurations.

Summer comfort

LOWER HEAT INPUTS THANKS TO LOW U_g -VALUE AND LOW G VALUE



Typ/Farbe	U_g -value* [W/m ² K]	Light transmission T_L ** [%]	g-value** [%]	External reflection** [%]	Internal reflection** [%]
STANDARD CONSTRUCTION 6 16 4 - COATING IN POSITION 2 ON PLANICLEAR®, 90% ARGON					
ECLAZ® SUN PLUS und ECLAZ® SUN PLUS II	1,0	70	38	13	15
STANDARD CONSTRUCTION 4 14 4 14 4 - COATING IN POSITION 2 AND 5 (PLANITHERM® XN, PLANICLEAR®, 90% ARGON					
ECLAZ® SUN PLUS*** und ECLAZ® SUN PLUS II	0,6	64	36	15	17

***Available in 4 mm, 6 mm, and STADIP 44.2. Values may vary between tempered (II) and non-tempered layers with the same glass configurations.



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