

Intelligent glass – ultimate comfort

ClimaGuard® 1.0/1.0T

Thermal Insulating Glass

The increasing cost of energy, sustainability of natural resources and the reduction of harmful CO₂ emissions are at the forefront of political and environmental concerns today. The construction industry is constantly being challenged to significantly reduce the future energy requirement in buildings, the greatest energy loss being that of heat through the external envelope of a building.

In comparison with other construction materials, state-of-the-art insulating glass units provide excellent thermal insulation together with high transparency. This architectural benefit provides almost unlimited creative options in building design.

*„Advanced thermal performance –
with high transparency!“*



Exceptional thermal insulation: $U = 1.0 \text{ W}/(\text{m}^2\text{K})$

Superior transparency: $T_L = 70\%$

Neutral appearance: Colour Rendering Index = 97

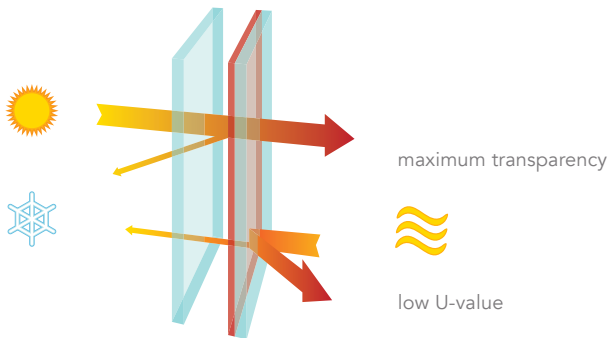
Active climate protection: $S_f = 53\%$



Outstanding Transparency

GUARDIAN ClimaGuard® 1.0 provides the highest level of thermal insulation possible in standard double glazed insulating glass units. A U-value of 1.0 W/m²K borders on the limit of thermal insulation that is physically possible in a double glazing unit. The neutral colour and the high light transmission provide a pleasant indoor environment and actively promote well-being. ClimaGuard® 1.0 is ideally suited to both new build and restoration projects.

Impressive Performance



GUARDIAN ClimaGuard® 1.0 is the preferred choice if requirements such as thermal insulation, energy management and comfort are desirable:

- provides optimum thermal insulation: a double glazed insulating glass unit with a U-value of 1.0 W/m²K - uniquely combined with high light transmission and a neutral appearance.
- has intelligent energy management and environmental protection: a solar factor (g-value) of 53% ensures efficient utilisation of free solar energy, corresponding in a reduction in heating costs and a direct contribution to climate protection by a reduction in CO₂ emissions.
- promotes well-being: the increased insulation results in a higher internal glass surface temperature, reducing the occurrence of condensation and uncomfortable down-draughts close to the window.

In order to ensure a high flexibility and short lead times, ClimaGuard® 1.0 T, a heat treatable version offering a good visual match with the annealed version is available.

Technical Data / Performance Table

Insulating glass unit	Coating on glazing surface	Gas filling *	Light Transmission [%]	Light Reflection [%]	Colour rendering index R _a	Solar Factor (g) EN 410 [%]	U-Value EN 673 (15K) W/(m ² K)
4-16-4	3	argon	70	20	97	53	1.0
4-16-4-16-4	2 + 5	argon	55	30	96	37	0.5
4-12-4-12-4	2 + 5	krypton	55	30	96	37	0.4

* Gas filling rate 90%

The performance values shown are nominal and subject to variations due to manufacturing tolerances.

The products in this publication are sold subject to GUARDIAN's standard terms and conditions of sale and any applicable written warranties. It is the responsibility of the purchaser to confirm that the products are suitable for their intended application. Please contact your local GUARDIAN representative to obtain any applicable handling and fabrication guides and for the most current product information.