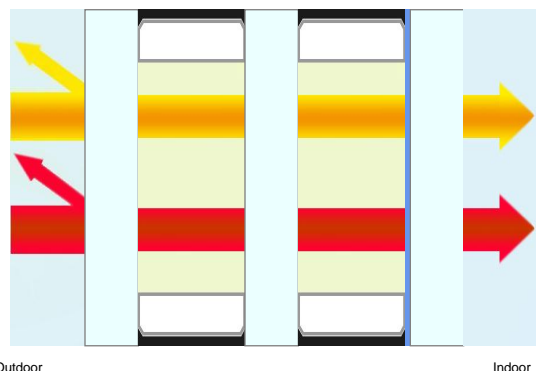


## Glazing design



Outdoor

Indoor

Excel ref: Hettich

	First glazing	Second glazing	Third glazing
Gas		Argon 90% 8.00mm	Argon 90% 8.00mm
Coating			PLANITHERM TOTAL+
First glass	PLANICLEAR 4.00mm	PLANICLEAR 4.00mm	PLANICLEAR 4.00mm
Coating			
Layer			
Coating			
Second glass			
Coating			

## Sound transmission loss

Acoustics simulated values : **Rw(C;Ctr) = 27(-1;-3) dB**

## Manufacturing sizes

Nominal thickness : **28.0 mm**  
Weight : **30.0 kg/m²**

## Luminous factors (EN410-2011) : (D65 2°)

Transmittance : **74 %**  
Outdoor reflectance : **18 %**  
Indoor reflectance : **18 %**

## Energy factors (EN410-2011) :

Transmittance : **57 %**  
Outdoor reflectance : **23 %**  
Indoor reflectance : **24 %**  
Absorptance A1 : **6 %**  
Absorptance A2 : **5 %**  
Absorptance A3 : **8 %**

## Solar factors (EN410-2011) :

g : **0.66**  
Shading coefficient : **0.76**

## Thermal transmission (EN673-2011) - 0° related to vertical position

Ug : **1.3 W/(m².K)**



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CALUMEN® II is a simulation software to calculate key performance of glass such as light transmission, solar factor or thermal insulation coefficient. Computed values are indicative and subject to change. They can not be used to guarantee performance of the products.

These values are calculated according to EN410-2011 and EN673-2011 standards. Tolerances are defined according to EN 1096-4 or ISO9050-2003 standards. Nevertheless, user must check the feasibility of the associated products, in particular in terms of thickness and colour. Furthermore, it is his responsibility to check that the resulting combination of glazing meets regulatory requirements at national, local or regional level. Computed values with NFRC-2010 standards are indicative. Please use NFRC certified software for certified values.

Calculation rules and functional output of Calumen II have been validated by TÜV Rheinland Quality Report 11923R-11-33705



• Calculation software  
verified  
• EN 410 and EN 673