

## Comparative performance table for the range

	G & G fasT	TOP <sup>N+</sup> & TOP <sup>N+</sup> ∠	TOP I.0	ENERGY <sup>N</sup> & ENERGY <sup>N</sup> ∠	PLANIBEL TRI
Made for	DGU	DGU	DGU	DGU	TGU
Cooling dominant conditions	●	●●	●●●	●●●●	●●
Heating dominant conditions					
> Residential	●●	●●●	●●	●●	●●●●
> Commercial / conservatories	●●	●●	●●●	●●●●	●●
Light Transmission	●●●	●●●●	●●●	●●●	●●●
Low Reflection	●●●	●●●●	●●	●●●●	●●●
Processability	●●●●	●●	●●	●●	●●
<b>Main advantage</b>	Easy to process	Perfect for all climate types	The best U <sub>g</sub> -value with good solar protection	The best in cooling dominant conditions	Recommended in heating dominant conditions

## Processing options

	G & G fasT	TOP <sup>N+</sup> & TOP <sup>N+</sup> ∠	TOP I.0	ENERGY <sup>N</sup> & ENERGY <sup>N</sup> ∠	PLANIBEL TRI
Laminated	●	●	●	●	●
Toughened					
Bent <sup>(*)</sup>	G & G fasT	Top <sup>N+</sup> ∠		Energy <sup>N</sup> ∠	
Screen-printed <sup>(*)</sup>					
No edge stripping	●				
Single glazing	●				
Virtually unlimited shelf life	●				

(\*) Some conditions do apply.

## Performances

Insulating glass unit (double and triple)

Assemblies	Insulating glass unit 4-15-4							Insulating triple glazed unit 4-14-4-14-4 <sup>(*)</sup>		
	G (#3)	G fasT (#3)	TOP <sup>N+</sup> (#3)	TOP <sup>N+</sup> ∠ (#3)	TOP I.0 (#3)	ENERGY <sup>N</sup> (#2)	ENERGY <sup>N</sup> ∠ (#2)	TOP <sup>N+</sup> (#2 #5)	TRI on Clear (#2 #5)	TRI on Clearvision (#2 #5)
LT (%)	74	74	78	80	70	73	75	70	72	74
LR (%)	17	18	13	13	20	12	13	18	19	19
SF (%) EN 410	73	72	61	64	50	41	45	48	60	63
U <sub>g</sub> -value [W/(m <sup>2</sup> .K)] 90% argon	1.5	1.5	1.1	1.1	1.0	1.0	1.0	0.7	0.7	0.7

Abbreviations: LT: Light Transmission; LR: Light Reflection; SF: Solar Factor; U<sub>g</sub> value: Thermal transmittance of the glass. The # symbol indicates the position of the low-emissivity coating in the double glazing composition.

(\*) The sheet of glass in the middle of a triple glazing assembly is always in extra-clear glass Clearvision.

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LOW-EMISSIVITY GLASS



GLASS UNLIMITED

THE PLANIBEL LOW-E RANGE

# PLANIBEL LOW-E



## PLANIBEL LOW-E: LOW-EMISSIVITY GLASSES

The range of coated glasses from AGC Glass Europe<sup>(\*)</sup> is not only the most extensive available, but is also undergoing improvements in terms of technical specifications (solar control, thermal insulation), appearance and processing options. Owing to AGC's policy of ongoing research, processors and architects now have access to pyrolytic and magnetron LOW-E glasses that can be toughened, bent and screen-printed. These advances mean that processors can offer their clients an enhanced service, faster turnaround and shorter replacement times. They also open up interesting avenues for architects and façade designers. All of these glasses offer a neutral appearance and a high light transmission rating. The metal oxide particles in the coating reinforce the insulating properties of the glass, thus improving the building's energy balance.

(\*) In this document, AGC stands for AGC Glass Europe.

### PLANIBEL G & PLANIBEL G fasT

The only pyrolytic LOW-E glasses

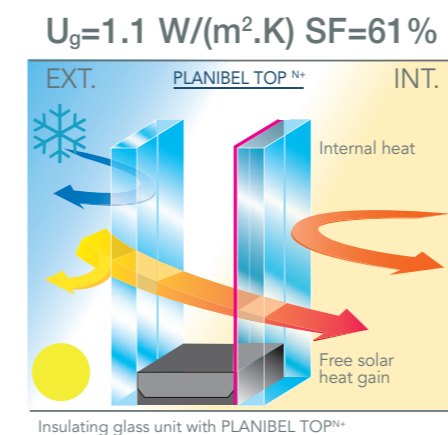
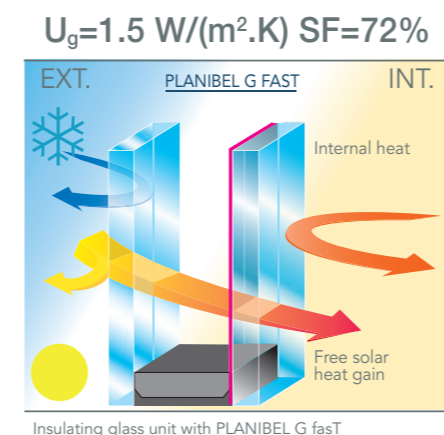
- Applications**  
Residential and commercial buildings
- Use**  
Single or double glazing
- Where**  
Heating dominant conditions
- Aesthetics**  
Neutral
- Advantages**
- > Good light transmission
  - > Highest energy gains from solar factor (SF: 72%) compared to all other LOW-E glasses
  - > Ease of processing
  - > No edge stripping
  - > Any type of toughening furnace
  - > G fasT coating can be positioned against the rollers (15% cycle time improvement)
  - > Can be tempered in radiative furnace.

### PLANIBEL TOP<sup>N+</sup> & PLANIBEL TOP<sup>N+</sup> C<sup>(\*)</sup>

The perfect LOW-E glass with efficient free energy gains

- Applications**  
Residential buildings (mainly)
- Use**  
Double glazing
- Where**  
Cooling and heating dominant conditions
- Aesthetics**  
Neutral – non reflective
- Advantages**
- > Best combination of thermal insulation –  $U_g$ : 1.1 W/(m<sup>2</sup>.K) – light transmission and neutral aesthetics
  - > Good solar factor to make efficient use of free energy gains (SF: 61%)
  - > PLANIBEL TOP<sup>N+</sup> C<sup>(\*)</sup> good aesthetical matching
  - > Available on CLEARVISION for better neutrality and increased free solar heat gain.

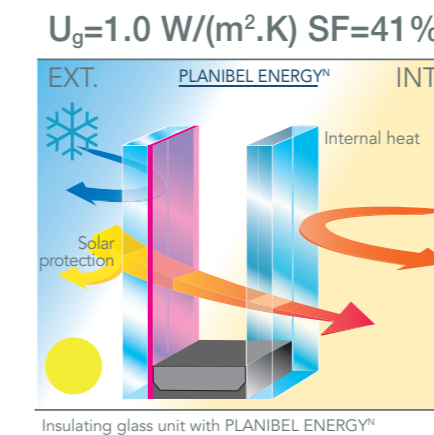
(\*) (toughenable version of PLANIBEL TOP<sup>N+</sup>)  
The TOP<sup>N+</sup> C<sup>(\*)</sup> coating slightly changes its color after toughening.



### PLANIBEL ENERGY<sup>N</sup> & PLANIBEL ENERGY<sup>N</sup> C<sup>(\*)</sup>

Smart glasses for all seasons

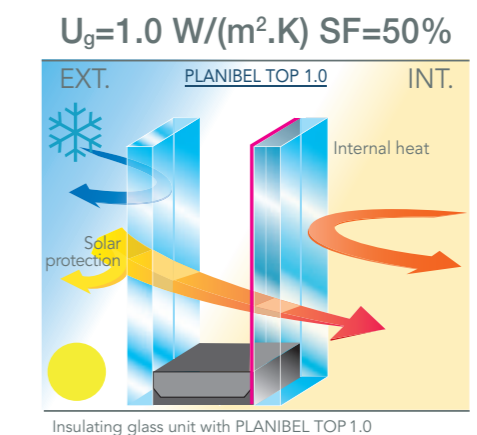
- Applications**  
Residential and commercial buildings
- Use**  
Double glazing
- Where**  
All commercial buildings and residential buildings in cooling dominant conditions
- Aesthetics**  
Neutral – non reflective
- Advantages**
- > Smart glass: reflecting the sun's heat (SF: 41%) with high thermal insulating against the cold [ $U_g$ : 1.0 W/(m<sup>2</sup>.K)]
  - > ENERGY<sup>N</sup> C<sup>(\*)</sup> perfectly matches ENERGY<sup>N</sup>: both products offer an ideal solution for architects and specifiers
  - > ENERGY<sup>N</sup> C<sup>(\*)</sup> can be bent and screen-printed (under certain conditions)
  - > Available also on PLANIBEL CLEARVISION for a better neutrality



### PLANIBEL TOP 1.0

The best  $U_g$ -value in DGU with good solar protection

- Applications**  
Residential buildings
- Use**  
Double glazing
- Where**  
Cooling dominant conditions
- Aesthetics**  
Neutral, light reflection
- Advantages**
- > Highest thermal insulation rating in its class –  $U_g$ -value: 1.0 W/(m<sup>2</sup>.K) – for an optimal thermal insulation in the winter
  - > A reduced solar factor (SF: 50%) to guarantee a better solar protection in summer
  - > Available also on PLANIBEL CLEARVISION for a better neutrality.



### PLANIBEL TRI

TGU with low  $U_g$ -value and the highest free energy gains to respect the environment

- Applications**  
Residential buildings
- Use**  
Triple glazing
- Where**  
Heating dominant conditions
- Aesthetics**  
Neutral
- Advantages**
- > Developed exclusively for triple glazing with low  $U_g$ -value and high solar factor to maximise free solar heat gain
  - > According to several studies, one of ift Rosenheim and one of TRIBU<sup>(\*)</sup>, PLANIBEL TRI is considered to be a good investment because it decreases the annual energy consumption by up to 10%
  - > Available also on PLANIBEL CLEARVISION for a better neutrality.

(\*) the 2 studies are available on [www.yourglass.com](http://www.yourglass.com).

