

COOL-LITE® KN TRILOGY

Characteristics and specific benefits:

- 1 Remarkable qualities, that allow optimum choices depending on the purpose and location of the project
- 2 Long-term efficiency of the energy consumption
- 3 Possibility to create indoor spaces that are adapted to the current notions of urban comfort
- 4 High creative potential, adequate to the contemporary architecture
- 5 Harmonisation of the technical performances and characteristics specific to the portfolio of products, depending on the urban theme

GLASS PROCESSING FROM THE COOL-LITE® KN TRILOGY

INSULATING GLASS UNITS

COOL-LITE® KN glass must always be assembled in IGU, with the coating on face #2.

TEMPERING

COOL-LITE® KN II glass must be tempered (secured/heat-treated) before being used.

COOL-LITE KN 166 A&T can be used in both versions (tempered or not heat-treated - annealed), depending on the requirements of the building in which it should be integrated. Attention: annealed version (not heat-treated) and tempered (heat-treated) will not be used together (mixed) on the same façade, because the technical performances and the aesthetics of the two products are different.

"HEAT SOAK" TEST

It is recommended to be done for all tempered glass, in order to avoid spontaneous breakages due to NiS inclusions.

CURVING

COOL-LITE® KN II glass can be curved with certain limitations. Please contact our technical department.

LAMINATION*

COOL-LITE® KN glass can be laminated, with the coating not in contact with the PVB film.

*Note: COOL-LITE® KN II (including COOL-LITE® KN 166 II glass) it must be tempered before lamination.

SAINT-GOBAIN COOL-LITE® KN TRILOGY

THE SINERGY BETWEEN HUMANS AND BUILDINGS: A MULTIVERSE OF COMFORT

KN 148 II RHAPSODY
KN 166 II & KN 166 A&T AMBIANCE
KN 177 II SYMPHONY





MULTIFUNCTIONAL COMFORT IN THE URBAN LIFE

The trilogy of COOL-LITE® KN is the mix of performance regarding transparency, light transmission and ambient, that can accomplish multiple architectural purposes. Each of the three types of glass in the portfolio comes with a multitude of architectural options, depending on the requirements of the space and the design of the project:

- **COOL-LITE® KN 148 II RHAPSODY** stands out due to its aesthetic refinement and the capacity to create comfortable interiors, efficiently exploited energy-wise.
- **COOL-LITE® KN 166 II & KN 166 A&T AMBIANCE** is the upgraded balance between light transmission and comfort, as well as between creative potential and functional performance.
- **COOL-LITE® KN 177 II SYMPHONY** creates a continuous and relaxing communication between spaces, through its high and neutral light transmission, at the same time.

More specifically, creators of the spaces designed with the COOL-LITE® KN glass can find at least one solution to the need of combining style consistency with technical performance, so that the thermal comfort is doubled by the visual one, but also by the psychological comfort, due to the numerous benefits these types of glass provide to people.



GLASS THAT CREATES THE SPRINGTIME FEELING

The **COOL-LITE® KN** trilogy is capable of efficiently “filtering” out the environmental factors and will only let in those elements that improve our comfort. An action with a positive outcome: lower consumption of power to heat and cool the rooms, including significant long-term savings and a lower impact upon the planet.

Each of the three **COOL-LITE® KN** types of glass comply with the new NZEB requirements, and their energy efficiency is an important criterion for the certification of the green buildings, such as LEED and BREEAM.



REMARKABLE TECHNICAL CHARACTERISTICS

The performance of the **COOL-LITE® KN** range of products stands out with its features:

- Diminished sun heating (g solar factor is low);
- Reduced heat transfer from the inside to the outside (low Ug coefficient);
- Long term energy efficiency.



ADAPTABILITY – MAINSTREAM FOR CREATIVITY

Thermal and optical qualities are enhanced by aesthetics: the **COOL-LITE® KN** range, with its hues and potential, provides multiple choices to architects, façade designers, contractors and developers who create residential or non-residential buildings (hotels, medical facilities, restaurants, shopping malls, office buildings, etc.) of the latest generation, with outstanding personality even in avant-garde urban environments, generous with the visual experience.



COOL-LITE® KN 148 II RHAPSODY

Indoor comfort and outdoor aesthetic excellence

COOL-LITE® KN 148 II RHAPSODY stands out with its powerful imprint on the personality of buildings: its ivory hues give any building the appearance of nobility and integrates it naturally in the surrounding architectural landscape. As opposed to the distinct, high-class hue of the exterior, the inside viewer's perception will be of a neutral light, that will let outer colours render accurately, while allowing the light pass through, thanks to the low level of reflection.

COOL-LITE® KN 148 II RHAPSODY is obtained by applying a very thin silver coating on the PLANICLEAR® glass, using the most advanced technology.

Applications

COOL-LITE® KN 148 II RHAPSODY is an ideal option for highend projects dedicated to non-residential buildings (office buildings, stores, hotels, restaurants, etc.), but also to residential users (houses, apartments, verandas), with an outstanding visual result that will easily fit into the overall natural and urban architectural landscape.

IMPRESSIVE STRUCTURES OUTSTANDING AESTHETIC TOUCH

- A neutral outer appearance, with a slight ivory hue
- Average external reflection, with good colour accuracy
- Low internal reflection, for an enhanced visual comfort

Luminous factors	DGU*	TGU**
Light transmission (TL %)	47%	42%
Outdoor reflection (RLe %)	27%	28%
Indoor reflection (RLi %)	18%	20%

*6/16/4 mm COOL-LITE® KN 148 II on side #2, 90% Argon
**6/16/4/16/4 mm COOL-LITE® KN 148 II on side #2 and PLANITHERM® XN II on side #5, 90% Argon



TL / LRe / LRI according to EN 410

PLEASANT MICROCLIMATE

- Few heat losses during winter
- Reduced overheating during summer
- Convenient exploitation of the building, low heating and cooling costs

Solar control factors	DGU*	TGU**	Thermal transmission	DGU*	TGU**
Solar factor (g)	0,32	0,28	Ug [W/m²K] (0° related to vertical position)	1,0	0,5
Shading coefficient (SC)	0,37	0,32			

*6/16/4 mm COOL-LITE® KN 177 II on side #2, 90% Argon
**6/16/4/16/4 mm COOL-LITE® KN 177 II on side #2 and PLANITHERM® XN II on side #5, 90% Argon

g according to EN 410
Ug according to EN 673

A TRULY COLOURFUL VIEW

Aesthetics	
From outside	Neutral, slightly ivory
In transmission	Neutral

PRODUCT RANGE

Product	Thickness (mm)	Maximum dimensions (mm)
COOL-LITE® KN 148 II RHAPSODY	6, 8, 10 with EASYPRO®	6000 x 3210





KN 166 II & KN 166 A&T AMBIANCE

The balanced touch of the urban perspective

The mix of performance features of this glass generates a functional balance and improves the connection between buildings and humans. Who gets the advantage? The tenants of the space, that will benefit of great comfortable interiors. Thanks to its performant solar factor and thermal insulation coefficient, **COOL-LITE® KN 166 II & KN 166 A&T AMBIANCE** are able to create an indoor environment that is perfectly pleasant in terms of the temperature requirements. In addition, light generously filters in through this sort of glass and will invigorate the room. This is how the visual comfort, productivity and well-being of the occupants are enhanced significantly.

KN 166 II & KN 166 T AMBIANCE are the tempered (heat-treated) versions.

The support glass is PLANICLEAR®, and the coating specific to COOL-LITE® KN 166 AMBIANCE is applied with cutting-edge magnetron systems.

Applications

COOL-LITE® KN 166 II & KN 166 A&T AMBIANCE have a slight grey-silver nuance that will ideally complement any sort of frame or façade. This will add dynamism to the heart of the respective urban landscape, no matter the surrounding architecture. This modern glass is perfectly adapted to both non-residential applications (office buildings, stores or showrooms, façades, skylights, etc.), and residential buildings such as compounds with a fluid design and high number of stories.

COOL-LITE KN 166 A&T can be used in both versions (tempered or not heat-treated - annealed), depending on the requirements of the building in which it is to be integrated. **Attention:** annealed version (not heat-treated) and secured version of KN 166 A&T (heat-treated) will not be used together (mixed) on the same façade, because the technical performances and the aesthetics of the two products are different.



TL / LRe / LRI according to EN 410

Thermal transmission	COOL-LITE® KN 166 II EP & 166 A&T tempered		COOL-LITE® KN 166 A&T annealed	
	DGU*	TGU**	DGU*	TGU**
Ug [W/m²K] (0° related to vertical position)	1,0	0,5	1,1	0,6

g according to EN 410
Ug according to EN 673

PRODUCT RANGE

Product	Thickness (mm)	Maximum dimensions (mm)
COOL-LITE® KN 166 II EP AMBIANCE	6, 8, 10 with EASYPRO®	6000 x 3210
COOL-LITE® KN 166 A&T AMBIANCE	without EASYPRO®	

A WIDE RANGE OF PERSPECTIVES

THE FUNCTIONALITY AND CONFORT EQUILIBRUM

- Modern appearance
- Suitable for façades
- Good light transmission for an enhanced urban comfort

Luminous factors	COOL-LITE® KN 166 II EP & 166 A&T tempered		COOL-LITE® KN 166 A&T annealed	
	DGU*	TGU**	DGU*	TGU**
Light transmission (TL %)	61%	55%	52%	47%
Outdoor reflection (RLe %)	22%	23%	23%	24%
Indoor reflection (RLi %)	26%	26%	23%	24%

*6/16/4 mm COOL-LITE® KN 166 II EP & KN 166 T on side #2, 90% Argon
**6/16/4/16/4 mm COOL-LITE® KN 166 II EP & KN 166 T on side #2 and PLANITHERM® XN II on side #5, 90% Argon

ENERGY EFFICIENCY

- Well-balanced luminosity on every floor
- Comfortable interior every summer and winter
- Convenient exploitation of the building, low heating and air conditioning costs

Solar control factors	COOL-LITE® KN 166 II EP & 166 A&T tempered		COOL-LITE® KN 166 A&T annealed	
	DGU*	TGU**	DGU*	TGU**
Solar factor (g)	0,39	0,35	0,37	0,33
Shading coefficient (SC)	0,45	0,41	0,43	0,38

*6/16/4 mm COOL-LITE® 166 II EP & KN 166 T on side #2, 90% Argon
**6/16/4/16/4 mm COOL-LITE® KN 166 II EP & KN 166 T on side #2 and PLANITHERM® XN II on side #5, 90% Argon

URBAN INTEGRATION

Aesthetics	
From outside	Slightly neutral, grey-silver
In transmission	Neutral



COOL-LITE® KN 177 II SYMPHONY

The indoor synergy between comfort and harmony

COOL-LITE® KN 177 II SYMPHONY stands out due to the veracity of the hues and the refinement of the details, and is the outcome of centuries-old experience combined with cutting-edge technologies that Saint-Gobain uses to produce its glass. The result is a modern, premium product which proves the qualities that are typical to the COOL-LITE® KN II portfolio: a balance between thermal comfort, which is supported by the good solar control and the optical performances, such as the efficient capturing of natural light and a high fidelity of the natural colours.

Due to its exceptional light transmission and thermal insulation performances, COOL-LITE® KN 177 II SYMPHONY is the optimal choice for high-end projects of contemporary architecture even in Northern areas, mountainous areas or predominantly cloudy areas. This innovative type of glass provides the possibility to harmonize the essential elements that will ultimately build the genuine urban comfort.

Applications

COOL-LITE® KN 177 II SYMPHONY is a remarkable product that will be adaptable to even the most diversified and daring projects, offering enhanced comfort to every space. This is the ideal option for non-residential buildings (offices, airports, gyms, stores or showrooms, façades, skylights, etc.), but it can also be used in spectacular residential compounds. Its qualities turn out to be most efficient in those areas where the environment does not offer a high level of natural light.

HARMONY OF THE SPACES

PERCEPTION OF DETAILS FROM THE INSIDE TO THE OUTSIDE

- Proper parameters for premium buildings
- Colours are highly visible in transmission, so the glass can be used for spectacular projects
- Light transmission is very high, for urban integration even in Northern areas or mountainous areas

Luminous factors	DGU*	TGU**
Light transmission (TL %)	70%	63%
Outdoor reflection (RLe %)	24%	26%
Indoor reflection (RLi %)	22%	23%

*6/16/4 mm COOL-LITE® KN 177 II on side #2, 90% Argon
**6/16/4/16/4 mm COOL-LITE® KN 177 II on side #2 and PLANITHERM® XN II on side #5, 90% Argon

COMFORT, A MUST-HAVE LIFESTYLE

- Spaces with lots of light, even in shaded areas
- Indoor thermal comfort, in every season
- Convenient exploitation of the building, low heating and air conditioning costs

Solar control factors	DGU*	TGU**
Solar factor (g)	0,48	0,44
Shading coefficient (SC)	0,55	0,5

*6/16/4 mm COOL-LITE® KN 177 II on side #2, 90% Argon
**6/16/4/16/4 mm COOL-LITE® KN 177 II on side #2 and PLANITHERM® XN II on side #5, 90% Argon

SPECTACULAR VIEWS

Aesthetics	
From outside	Neutral, with slight silver reflections
In transmission	Neutral



TL / LRe / LRI according to EN 410

PRODUCT RANGE

Thermal transmission	COOL-LITE® KN 177 II SYMPHONY	
	DGU*	TGU**
Ug [W/m²K] (0° related to vertical position)	1,0	0,5

g according to EN 410
Ug according to EN 673

PRODUCT RANGE

Product	Thickness (mm)	Maximum dimensions (mm)
COOL-LITE® KN 177 II SYMPHONY	6, 8, 10 with EASYPRO®	6000 x 3210