



< THE RUBIK  
*South Africa*  
dhk Architects  
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# THE ESSENTIAL AFRICA

## SAINT-GOBAIN GLASS



Saint-Gobain Group's vision is to be the worldwide leader in light and sustainable construction. It's integrated solutions for the renovation of public and private buildings, light construction and decarbonization are developed through a continuous innovation process and provide sustainability and performance.

Saint-Gobain Glass cares about building better for people and the planet by offering glass solutions for façades, windows, interior design and protection that deliver performance and sustainability. We strive to serve and support all construction stake holders involved in new-build and renovation projects.

In every living and working place, wherever comfort, performance and safety are required, we fulfill the needs of our customers, from small contractors and installers to big processors, manufacturers or architects. Our teams are guided by one single ambition: to be considered your preferred partner by staying close to you to anticipate your needs and providing innovative solutions for sustainable construction

## OUR PRESENCE IN AFRICA, EUROPE AND ASIA FOR YOUR PROJECTS

### MANUFACTURING FACILITIES

High performance glass combining energy efficiency and caring about people and the environment.

- Clear and tinted glass
- Patterned glass
- Coated glass
- Laminated glass
- Mirrors

### GLASS PROCESSORS FOR INTERNATIONAL PROJECTS

- Windows
- Façade
- Interior Design
- Specialties (domestic appliances, active glazing, commercial refrigeration, fire and bullet protection...)

### MANUFACTURING FACILITIES FIGURES

- 31 floats
- 14 coaters
- 1 patterned line

### THE SAINT-GOBAIN GLASS INTERNATIONAL TEAM

Founded in 1962, the international team represents Saint-Gobain's export business and provides the full Saint-Gobain flat glass range of both, basic glass and processed product, coming from the group's different factories worldwide.

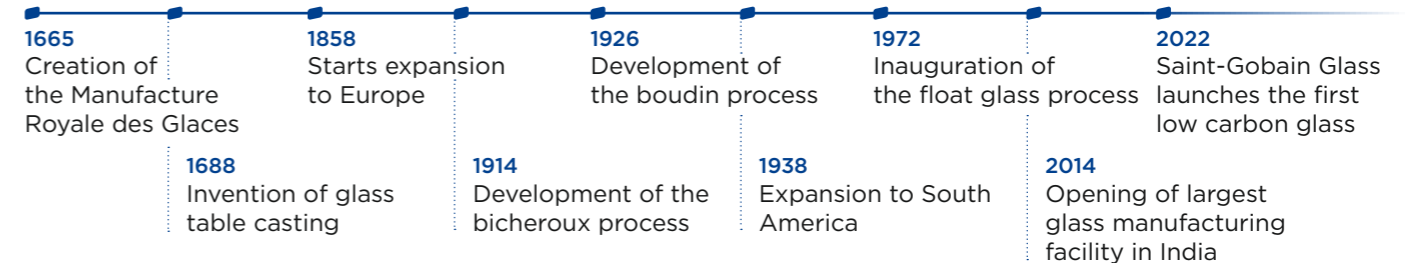
### LOCAL REPRESENTATIVES

Our sales and technical team across the region is on hand to be by your side at every step of your project.

A dedicated team of experts can provide you with valuable support such as a sustainability analysis, structural calculations, daylighting analysis and acoustic performance calculations for glass during the design stage thereby, helping you choose the most suitable glass options for your projects.



### SAINT-GOBAIN GLASS TIMELINE





^  
**TOM PATTERSON**  
**THEATRE - Canada**  
 ©Scott Norsworthy

**GLASS FOR SUSTAINABLE CONSTRUCTION**

better buildings, reduced environmental impacts and improved indoor conditions for the health and well-being of occupants. We understand that sustainable construction is not just about the process but also how the building will be used. For this purpose, we provide our customers with innovative solutions that support their journey towards sustainability, and we advocate for better policies, standards, and practices within the construction market.

Saint-Gobain Glass offers a complete range of energy efficient coated glass and insulated glazing. With solar control, low emissivity, low maintenance and transparency, our glass meets the requirements of low energy consumption buildings.

The technology behind solar control and low emissivity is a thin transparent coating of metallic oxides, deposited on one or two glass panes of a double or triple glazing unit. Being an invisible thermal shield, this coating retains the heat inside the building and captures the solar energy to keep it outside.

For us, over the whole life cycle, buildings should enhance people's health and wellbeing while having a reduced footprint on the planet. They should offer better economic value and quality for the developers, owners and occupants.

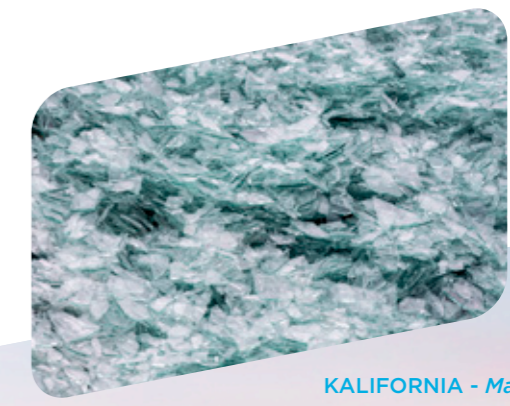
Our mission is to facilitate the shift towards sustainable construction by offering glass solutions that prioritize both sustainability and performance. This means that we strive to deliver innovation, design and cost-efficiency through



ORAÉ® is the world's first low-carbon glass, with a verified Environmental Product Declaration (EPD) setting a new standard at 6.64kg CO<sub>2</sub> eq./m<sup>2</sup> (from Cradle-to-Grave for a 4mm substrate).

It is produced by combining high recycled glass content (64% according to ISO 14021:1999) and renewable electricity. As a result, ORAÉ® offers a carbon footprint reduction of 42% compared to our European baseline product.

Intended for use in the glazed parts of a facade, COOL-LITE® ORAÉ® is a perfect response to the stricter sustainability requirements of the building industry without any compromise on technical or aesthetic performance.

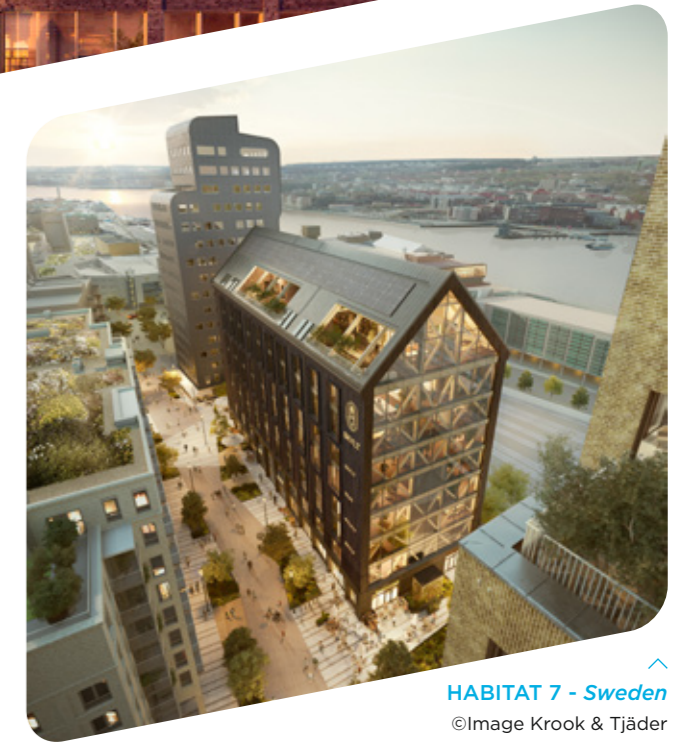


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**KALIFORNIA - Malakoff, France** >  
 ©Ateliers 2/3/4/



^  
**CARRÉ INVALIDES - France**  
 ©Nexity DR

COOL-LITE® ORAÉ® is available with our highly selective solar control coatings. Contact us for more information.



^  
**HABITAT 7 - Sweden**  
 ©Image Krook & Tjäder

## KEY GLAZING PERFORMANCE FACTORS

### ■ g-VALUE / SHGC

Total Solar energy entering into the building. Value between 0 and 1. The lower the SHGC, the more efficient the glazing is in blocking solar entry.

### ■ U-Value

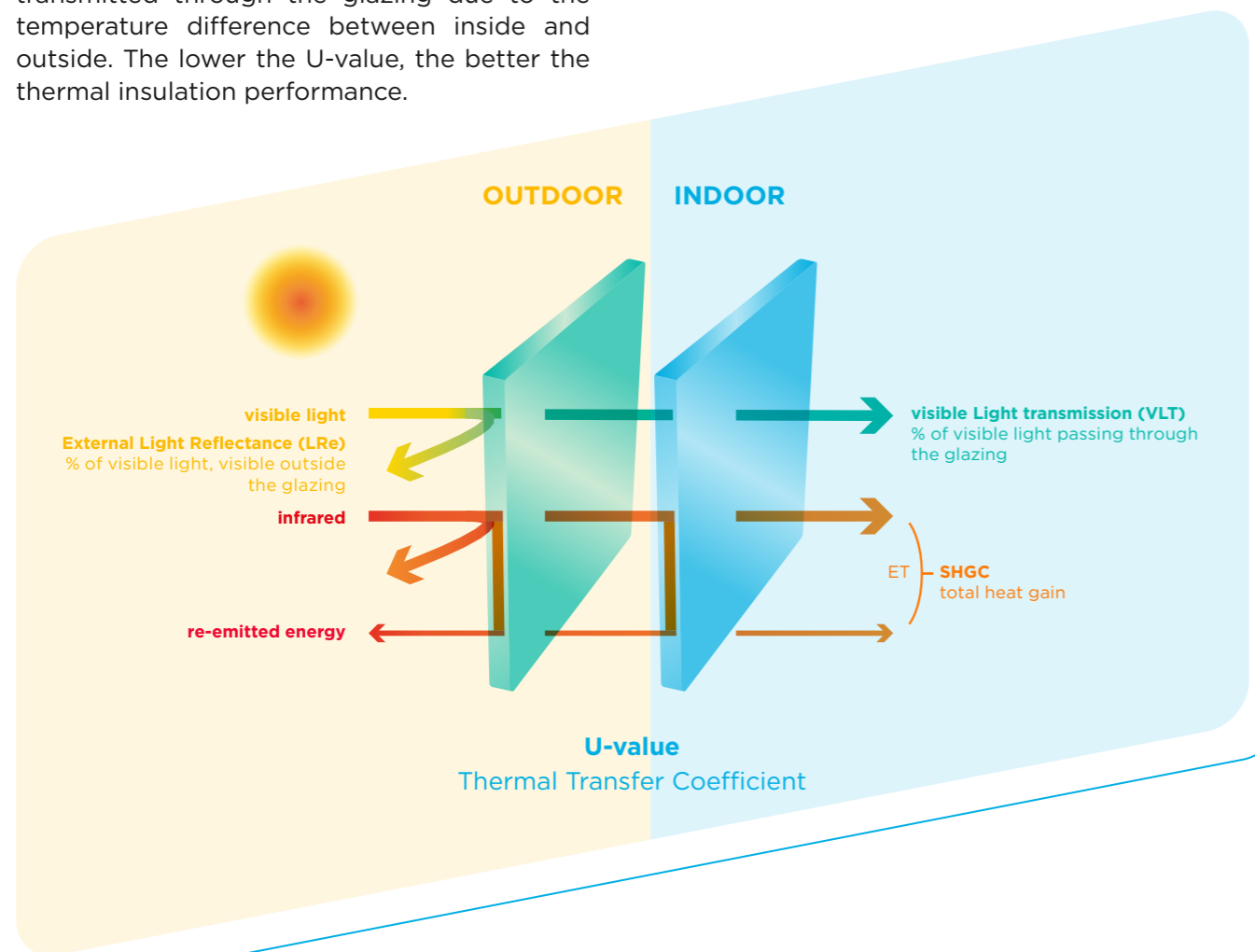
Thermal transfer coefficient. Quantity of heat transmitted through the glazing due to the temperature difference between inside and outside. The lower the U-value, the better the thermal insulation performance.

### ■ LSG / SELECTIVITY

Ratio between the light transmittance (VLT) and the solar heat gain coefficient (SHGC). The higher the LSG, the better the glazing is in reducing more solar energy than visible light.

### ■ Shading Coefficient (SC)

$SC = SHGC / 0.87$



## GLASS SOLUTIONS FOR FACADES

We respond to your needs with solar and heat control, large dimensions, aesthetics, design and total transparency. Our main field of specialty is providing glazing products for hospitality, schools, hospitals, office buildings, homes and other buildings where solar heat reduction and daylight are needed.

### COOL-LITE®

High performance advanced solar control glass that provides optimum light transmission with minimal visual glare. Solar control can be chosen from very high to very moderate (LT from 10% to 70% and solar factor from 0.15 to 0.70).

#### Applications

- Curtain walling
- Windows in traditional facades
- Fenestration applications
- Single glazing (ST range)
- Double-skin applications

### COOL-LITE® ST series

Solar control glass with variable aesthetic. The COOL-LITE® ST range provides a flexible sun protection (from very high to moderate), while maintaining a contribution of natural light. They are easy to transform and install.

### COOL-LITE® KNT/KS series

Glass with dual functions: solar control and thermal insulation, for more energy saving. The result is a pleasant atmosphere and a regulated temperature.

### COOL-LITE® SKN series

Dual function glass with high performances: solar control and thermal insulation. The thermal and visual control inside the building is greatly improved.

### COOL-LITE® XTREME series

Double function glass with very high performances. They have the best selectivity (ratio between natural light and solar energy transmitted) ever achieved.

## OUR DIGITAL TOOLS



### CALUMEN® FIND TOMORROW'S GLASS TODAY

Calumen® is a glazing configurator designed for all building professionals, whatever their level of expertise in glass products: architects, designers, engineering offices, consultants, façade makers, window manufacturers, glass processors and general contractors.

- Determine the light, energy, thermal or acoustic performances of your glazing
- Find a suitable glazing for your project based on its required performance values
- Personalize settings such as type of glazing, type of coating, glass and cavity thickness
- Get an illustration of the aesthetic of the façade
- Make comparisons between our products to do the best choice
- Save your glazing configuration for further access at any time
- Calculate the carbon footprint of your glazing\*.

\*Carbon footprint values presented are estimations based on the Life Cycle Analysis of our European products (A1-A3).



AVAILABLE FOR WORLDWIDE  
USERS IN 13 LANGUAGES:  
<https://calumen.com>



### GLASSPRO LIVE OUR INNOVATIVE GLASS VISUALIZATION TOOL

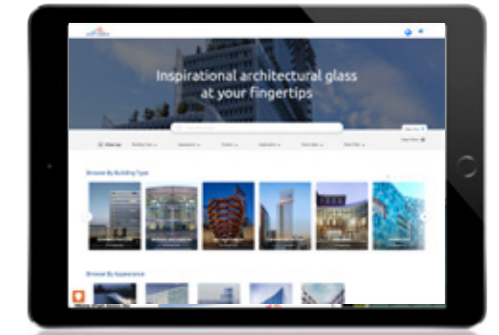
GlassPro Live is an on-demand rendering service that enables architects to visualize and compare all Saint-Gobain Glass products, helping them select the most suitable coated glass to achieve their desired aesthetics.

Utilizing spectral rendering technology and real measurement with attention to the aspect fidelity on glass material, our renderings, whether on predefined scenes or custom designs, are created using high-definition 3D synthesis images called "physico-realistic." These images accurately represent the visual properties of the glass under various lighting conditions and environments, providing a precise and detailed understanding of how the glass will appear in real-world scenarios.

With GlassPro Live, architects can experience a new level of accuracy and



realism, enabling them to make informed decisions and confidently choose the best glazing solution for their projects."



### CALUMEN® GALLERY OUR PROJECT LIBRARY

- Discover our product range to find the ideal glass for your project which fulfils best your expectations.
- Explore our gallery of projects to see a range of applications on finished projects.
- Find the apps and calculation tools you need in Tools & Resources.
- Navigate through product brochures, a technical glossary and BIM files also available on the page.





## UNIQUE PROCESSED GLASS SOLUTIONS

We play our part in designing some of the world's most iconic architectural projects, offering a wide range of innovative glazing solutions for facades. Partners such as visionary architects or contractors striving to deliver the ultimate building envelope have helped establish Saint-Gobain Glass as a key supplier.



GET TO KNOW MORE ABOUT EASYPRO®

### EASYPRO®

A revolutionary and unique temporary surface protection developed and offered exclusively by Saint-Gobain Glass. Deposited on to-be-tempered coated glass, it delivers effective protection against mechanical damage as well as ageing, during transport and processing, from deposition of the coating until tempering.

During tempering, EASYPRO® simply burns off without leaving any residue inside or outside the furnace and without any negative impact on the environment or personal health and safety. It improves the optical quality of heat-treated glass and helps to deliver optimal aesthetics.

#### EASYPRO® offers flexibility and productivity:

- It reduces surface scratches and remakes
- It increases shelf life in stock or after cutting
- It eliminates time to unseal the pack
- It optimizes tempering cycles
- It improves tempering quality
- It reduces the amount of packaging and avoids plastic waste



## INTERIOR GLAZING

Great living places often start with a beautiful interior design. Transparent, hygienic, long-lasting, colorful and even “active”, glass brings so many creativity-unleashing benefits.

With our solutions, we help our customers and partners imagine the greatest kitchens, bathrooms or workspaces.

- 1 MASTERGLASS**  
Translucent patterned glass
- 2 TIMELESS**  
Anti-corrosion glass, less time in cleaning, timeless in brilliance
- 3 MIRASTAR**  
Mirror effect, corrosion-proof and impervious to water vapor and cleaning agent
- 4 PLANILAQUE COLOR-IT**  
High durability lacquered glass

VISIT OUR WEBSITE



GET IN CONTACT WITH US



Average performance values of DGU (6mm | 12 Air | 6mm) with coating on surface #2, according to NFRC standard.

PRODUCT	Light Transmittance LT (%)	Solar Heat Gain Coefficient (SHGC)	Shading Coefficient SC	Selectivity LT/SHGC	External Light Reflectance LRe (%)	Internal Light Reflectance LRI (%)	U-Value (EN 673) W/(m².K)		Possible use as single glazing (coating on surface #)	Processing				Maximum size (cm)	IGBD Code
							12mm air	12mm argon		Annealed coating	Temperable coating (one single stock)	Processing Bending*	Processing Screen-printing and enamelling†		
<b>NEUTRAL</b>															
COOL-LITE® XTREME 70/33 II	70	0.30	0.34	2.33	11	13	1.6	1.3		XTREME 70/33				1800x 321	21053
COOL-LITE® XTREME 61/29 II	60	0.27	0.31	2.22	11	15	1.6	1.3		XTREME 61/29				1800x 321	21068
COOL-LITE® XTREME 50/22 II	47	0.21	0.24	2.24	16	18	1.6	1.4						1800x 321	21076
COOL-LITE® SKN 183 II <b>NEW</b>	73	0.39	0.45	1.87	12	13	1.5	1.1						1800x 321	20896
COOL-LITE® SKN 176 II	69	0.34	0.39	2.03	13	15	1.6	1.3		SKN 176				1800x 321	21100
COOL-LITE® SKN 165 II	60	0.32	0.36	1.88	16	18	1.6	1.4		SKN 165				1800x 321	21112
COOL-LITE® SKN 154 II	51	0.27	0.30	1.89	18	22	1.6	1.3		SKN 154		*		1800x 321	21136
COOL-LITE® SKN 152 II <b>NEW</b>	49	0.25	0.29	1.96	18	14	1.6	1.4						600x321	
COOL-LITE® SKN 146 II	40	0.25	0.28	1.60	11	11	1.7	1.4							20888
COOL-LITE® SKN 144 II	41	0.22	0.25	1.86	20	15	1.7	1.3						600x321	21160
COOL-LITE® SKN 133 II	30	0.20	0.23	1.50	13	10	1.7	1.4							
COOL-LITE® KN 166 II	60	0.38	0.43	1.58	23	25	1.7	1.4						600x321	21224
COOL-LITE® KN 148 II	46	0.31	0.35	1.48	27	18	1.7	1.4							
COOL-LITE® KNT 164	57	0.47	0.54	1.21	14	10	1.9	1.7				*	*	600x321	21176
COOL-LITE® KNT 155	47	0.38	0.44	1.24	17	10	1.9	1.6				*	*	600x321	21192
COOL-LITE® KN 153 II	46	0.35	0.40	1.31	14	13	1.8	1.5							
COOL-LITE® KNT 140	37	0.30	0.35	1.23	23	12	1.9	1.6				*	*	600x321	21208
COOL-LITE® KN 130 II	31	0.27	0.30	1.15	21	13	1.9	1.6							21316
COOL-LITE® ST 167	60	0.61	0.70	0.98	22	23	2.7	2.5	#2			*	*	600x321	21232
COOL-LITE® ET 151 II <b>NEW</b>	46	0.36	0.41	1.28	16	14	2.2	2.0							
COOL-LITE® ST 150	46	0.49	0.57	0.94	20	22	2.8	2.6	#2			*	*	600x321	21248
<b>SILVER</b>															
COOL-LITE® KS 147	43	0.30	0.35	1.43	43	37	1.7	1.5							
COOL-LITE® KS 146 II	42	0.28	0.32	1.50	33	19	1.7	1.3						600x321	21336
COOL-LITE® KS 138 II	36	0.26	0.29	1.38	38	20	1.7	1.5						600x321	21320
COOL-LITE® KS 130 II	30	0.22	0.25	1.36	44	19	1.7	1.4							20869
COOL-LITE® ST 120	19	0.25	0.29	0.76	32	29	2.5	2.3	#2			*	*	600x321	21280
COOL-LITE® ST BRIGHT SILVER	62	0.63	0.72	0.98	34	33	2.7	2.5						600x321	21228
MIRASTAR	3	0.10	0.12	0.30	54	58	2.0	1.8	#2			*	*	600x321	
<b>GREY</b>															
COOL-LITE® ET 127 II <b>NEW</b>	24	0.23	0.27	1.04	12	17	2.0	1.8							
COOL-LITE® KN 125 II	24	0.23	0.26	1.04	22	17	1.8	1.5							
COOL-LITE® ST 136	34	0.38	0.43	0.89	23	22	2.6	2.5	#2						21264
<b>GOLD</b>															
COOL-LITE® KG 137 II	35	0.29	0.34	1.21	33	32	1.7	1.4							
COOL-LITE® KG 122 II	22	0.24	0.27	0.92	23	34	1.6	1.3							
COOL-LITE® STG 127 II	25	0.26	0.30	0.96	28	17	2.6	2.4							
REFLECTASOL LIGHT GOLD	40	0.57	0.65	0.70	38	40	2.7	2.5	#2			*	*	600x321	
<b>BLUE-GREEN</b>															
COOL-LITE® KBT 440	30	0.22	0.26	1.36	18	16	1.8	1.6				*	*	600x321	
COOL-LITE® KB 430 II	20	0.20	0.23	1.00	16	22	1.7	1.5						600x321	
COOL-LITE® STB 436	26	0.27	0.31	0.96	14	20	2.6	2.4				*	*	600x321	11381
COOL-LITE® STB 420	16	0.22	0.26	0.73	16	32	2.5	2.4				*	*	600x321	11377

Saint-Gobain Glass reserves the right to change product performance features without notice or obligation. • The performance values shown are nominal and subject to variations due to manufacturing tolerances. • Solar control coating in contact with PVB modifies performances and aesthetics. • As our processing guidelines and product validation evolves regularly, and for any information related to processing conditions (tempering, bending, laminating...), please contact your TSM or local sales representative. • Saint-Gobain recommends for tempered glass to perform a Heat Soak test following EN14179 to reduce the risk of Nickel sulfite (NiS) breakage.

Average performance values of DGU (6mm | 12 Air | 6mm) with coating on surface #2, according to NFRC standard.

PRODUCT	Light Transmittance LT (%)	Solar Heat Gain Coefficient (SHGC)	Shading Coefficient SC	Selectivity LT/SHGC	External Light Reflectance LRe (%)	Internal Light Reflectance LRI (%)	U-Value (EN 673) W/(m².K)		Possible use as single glazing (coating on surface #)	Processing				Maximum size (cm)	IGBD Code
							12mm air	12mm argon		Annealed coating	Temperable coating (one single stock)	Processing Bending <sup>1</sup>	Processing Screen-printing and enamelling <sup>4</sup>		
<b>GREEN</b>															
COOL-LITE® SKN 465 II	49	0.27	0.31	1.81	12	18	1.6	1.4						600x321	21121
COOL-LITE® SKN 454 II	42	0.24	0.28	1.75	13	22	1.6	1.3						600x321	21145
COOL-LITE® KT 464	46	0.31	0.36	1.48	11	10	1.9	1.6			*	*	*	600x321	21181
COOL-LITE® KT 455	39	0.27	0.31	1.44	13	10	1.8	1.6			*	*	*	600x321	21197
COOL-LITE® KT 440	30	0.23	0.27	1.30	17	12	1.8	1.5			*	*	*	600x321	21213
COOL-LITE® KN 430 II	25	0.21	0.25	1.19	16	13	1.8	1.6						600x321	
COOL-LITE® KS 446 II	34	0.23	0.27	1.48	24	19	1.7	1.4						600x321	21341
COOL-LITE® KS 438 II	30	0.21	0.25	1.43	27	20	1.7	1.4						600x321	21326
COOL-LITE® ST 467	49	0.38	0.44	1.29	17	23	2.7	2.5			*	*	*	600x321	21237
COOL-LITE® ST 450	37	0.33	0.38	1.12	15	22	2.7	2.5	#2		*	*	*	600x321	21253
COOL-LITE® ST 436	27	0.27	0.31	1.00	17	23	2.6	2.5	#2		*	*	*	600x321	21268
COOL-LITE® ST 420	16	0.21	0.25	0.76	23	29	2.5	2.3	#2		*	*	*	600x321	21285
REFLECTASOL GREEN	24	0.30	0.34	0.80	33	53	2.7	2.6	#2		*	*	*	321x255	21396
COOL-LITE® KT 755	30	0.26	0.30	1.15	10	10	1.8	1.6			*	*	*	600x321	21201
COOL-LITE® KT 740	24	0.23	0.26	1.04	12	11	1.8	1.5			*	*	*	600x321	21217
COOL-LITE® K 730 II	16	0.19	0.22	0.84	11	22	1.7	1.5						600x321	
COOL-LITE® KBT 140	36	0.31	0.34	1.16	24	17	1.8	1.5			*		*	600x321	
COOL-LITE® KB 130 II	25	0.24	0.28	1.04	21	22	1.8	1.5					*	600x321	21352
COOL-LITE® KS 746 II	27	0.21	0.24	1.29	16	19	1.7	1.4						600x321	21345
COOL-LITE® KS 738 II	23	0.20	0.23	1.15	18	20	1.7	1.4						600x321	21329
COOL-LITE® STB 136	32	0.38	0.44	0.84	19	20	2.6	2.4	#2		*		*	600x321	
COOL-LITE® STB 120	20	0.27	0.31	0.74	21	32	2.5	2.4	#2		*		*	600x321	21312
COOL-LITE® ST 767	38	0.38	0.44	1.00	12	23	2.7	2.5	#2		*	*	*	600x321	21241
COOL-LITE® ST 750	29	0.33	0.37	0.88	11	21	2.7	2.5	#2		*	*	*	600x321	21257
COOL-LITE® ST 736	21	0.27	0.31	0.78	12	22	2.6	2.5	#2		*	*	*	600x321	21274
COOL-LITE® ST 720	12	0.22	0.25	0.55	16	29	2.5	2.3	#2		*	*	*	600x321	21289
REFLECTASOL BLUE	18	0.31	0.36	0.58	22	53	2.7	2.5	#2		*		*	321x255	21398
<b>BRONZE</b>															
COOL-LITE® KBRZ 127 II <span style="border: 1px solid black; border-radius: 5px; padding: 2px;">NEW</span>	27	0.22	0.25	1.23	19	17	1.6	1.4							
REFLECTASOL BRONZE	16	0.38	0.44	0.42	17	53	2.7	2.6	#2		*		*	600x321	21395
COOL-LITE® ST BRONZE 130 II <span style="border: 1px solid black; border-radius: 5px; padding: 2px;">NEW</span>	26	0.26	0.30	1.01	19	13	2.6	2.5							
<b>HIGH LIGHT TRANSMISSION LOW-E GLASS (DGU 6+12+6mm)</b>															
PLANITHERM® ONE II	69	0.46	0.53	1.52	23	22	1.7	1.4			ONE			600x321	21411
PLANITHERM® XN II	79	0.57	0.66	1.39	11	12	1.7	1.4			XN			600x321	21424
PLANITHERM® 4S	65	0.40	0.45	1.67	27	24	1.7	1.4						600x321	
PLANITHERM® 4S EVO II	60	0.37	0.43	1.62	22	26	1.6	1.3							
PLANISTAR® SUN	71	0.35	0.40	2.03	14	15	1.7	1.4						600x321	21406
PLANITHERM® UN II EASYPRO	78	0.56	0.65	1.39	12	12	1.6	1.3							21486
<b>ANTI-REFLECTIVE GLASS</b>															
VISION-LITE® (Laminated glass 44.2)	97	0.85	0.97	1.11	1	1	5.6	5.6			VISION-LITE®			600x321	21463
VISION-LITE® (Laminated glass 88.2)	96	0.83	0.95	1.07	1	1	5.3	5.3						600x321	21465

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SAINT-GOBAIN GLASS CARES ABOUT BUILDING BETTER  
FOR PEOPLE AND THE PLANET, MAKING THE WORLD A BETTER HOME.



September 2024

**SAINT-GOBAIN GLASS - AFRICA**

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