GLASSWORKS

PERFORMANCE GLASS

LoE³-366® — LoE³-340® — LoE-i89® — Clear & Grey

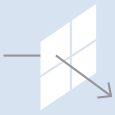
Glassworks performance range

At the forefront of performance driven glass to enhance sustainability, Glassworks are proud to have a range of the most advanced energy saving glass products with proven performance figures that set new benchmarks in the building industry.

DEFINITIONS

VISIBLE LIGHT TRANSMISSION (VLT)

measures the percentage of natural light entering a room and visibility from the inside out.



U-VALUE

measures how much heat is transferred through the glass. The lower the U-Value, the better the insulation properties of the glass.

SOLAR HEAT GAIN COEFFICIENT (SHGC)

measures how much solar radiation passes through the glass. The lower the SHGC the greater the thermal stopping power from direct sunlight.

LoE³–366®

6MM LOE-366, 12MM ARGON, 6MM CLEAR FLOAT

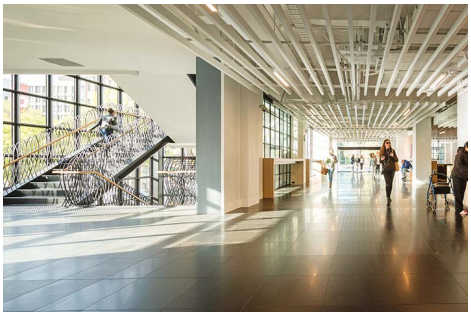
Visible Light Transmittance (VLT)
63%

U-Factor
1.35

Solar Heat Gain Coefficient (SHGC)
0.27

Ordinary window glass can't handle the summer's heat, and tinted glass spoils the view. LoE³-366®, however, has been specially formulated to reject the sun's heat without affecting the view. It lets more light in and keeps more heat out. It also blocks 95% of the sun's damaging ultraviolet rays, a leading cause of fading.

It's the perfect cold remedy too. When glass surface temperature falls below 11°C, there is a risk of thermal discomfort. To maintain the best comfort during the winter, LoE³-366 produces near constant surface temperatures, so buildings keep warm during the coldest months.



Left
RACV, Torquay – **6mm LoE³-366 with Bronze Glass**

Above right
Australian Catholic University, Melbourne – **6mm LoE³-366 with clear**

Bottom left
Bairnsdale Library – **6mm LoE³-366 with clear**

Bottom right
Bairnsdale Library – **6mm LoE³-366 with clear**

LoE³-340® produces an exceptional Solar Heat Gain Coefficient (SHGC) figure of 0.18. But what makes it extra unique is that unlike others where the visibility is compromised, it achieves a Visible Light Transmission (VLT) figure of 38%; well within the desired range of 30-40% for commercial projects.

It can even assist buildings with western elevations achieve energy ratings, without screens and overhangs, allowing for more architectural freedom and reduced costs.

What's more, the external reflectivity is only 13%, making it highly beneficial for building permits, and because it is locally stocked, short lead times can be met.

6MM LOE-340, 12MM ARGON, 6MM CLEAR FLOAT
Visible Light Transmittance (VLT) **38%**
U-Factor **1.36**
Solar Heat Gain Coefficient (SHGC) **0.18**

34

LoE–i89® is a single glazed low–E product that reflects escaping heat back into the room, making it the economical glass solution all year round, especially during the colder months.

What's more, LoE–i89® can be glazed monolithic or incorporated into an insulated glass unit (IGU) for even greater performance.

When combined with our LoE^3-366® in an IGU it delivers a U-Value of just 1.1 (the lowest currently on the Australian market) and a Solar Heat Gain Coefficient (SHGC) of just 0.27 to meet the most stringent energy standards – whilst providing the highest light transmission possible.

Available in clear or grey glass, LoE-i89 is able to be installed as a single glazed or double-glazed unit or incorporated with Glassworks LoE-366 glass for the optimum performance unit.

6MM LOE-I89, MONOLITHIC	**CLEAR**	**GREY**
Visible Light Transmittance (VLT)	87%	30%
U-Factor	3.63	3.7
Solar Heat Gain Coefficient (SHGC)	0.72	0.34
6MM LOE-I89, 12MM ARGON, 6MM CLEAR FLOAT	**CLEAR**	**GREY**
Visible Light Transmittance (VLT)	80%	27%
U-Factor	1.62	1.66
Solar Heat Gain Coefficient (SHGC)	0.64	0.27

Right
Residential house - **LoE- i89 on clear**

Best all-round performing combinations

6MM LOE-340, 12MM ARGON, 6MM LOE-i89	6MM LOE-366, 12MM ARGON, 6MM LOE-i89
Visible Light Transmittance (VLT) **37%**	Visible Light Transmittance (VLT) **61%**
U-Factor **1.11**	U-Factor **1.10**
Solar Heat Gain Coefficient (SHGC) **0.17**	Solar Heat Gain Coefficient (SHGC) **0.27**

NEAT® TECHNOLOGY

LoE³-366, 340 and i89 come standard with Neat technology - **an easy-clean coating** which harnesses the sun's rays to loosen dirt so the rain can wash it away. This is thanks to the titanium dioxide layer which reacts chemically with the sun's UV rays and causes the organic materials on the glass to decompose and rinse away with the rain, and a silicon dioxide layer which makes it ultra smooth, allowing water to evaporate quickly to reduce water spotting. Enjoy the added convenience and cost benefits of less window cleaning.

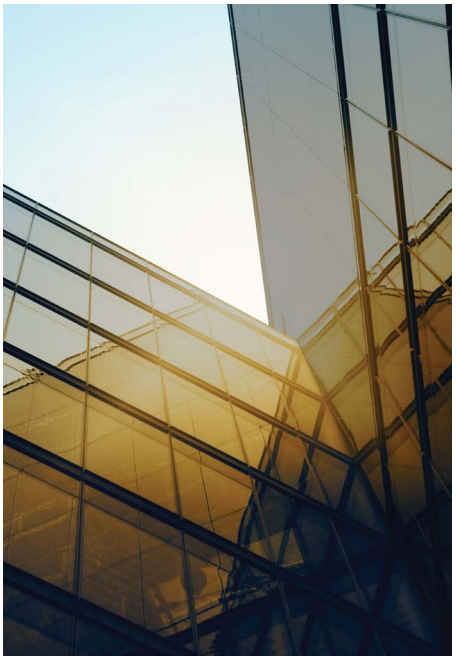
SolarAdapt™

SolarAdapt™ is Australia's only innovative thermochromic technology incorporated into a PVB interlayer that automatically adjusts the level of tint depending on the intensity of the sun without the need for power.

As the sun strikes the window, it absorbs and adapts the tint level based solely on the amount of direct sunlight and heat, reducing heat gain and air-conditioning loads, all the while achieving reduced glare and maximised daylight.

This is an IGU that achieves outstanding U-Value and low solar heat gain figures and combines perfectly with the best low-E glass for even better figures that assist with Green Star ratings.

	REGULAR IGU 6MM CLEAR 12MM ARGON 6MM CLEAR	8.5MM SOLARADAPT™ 12 ARGON | 6MM LOE-366®	
OUTSIDE GLASS TEMP		65°C	10°C
LIGHT TRANSMISSION	78%	11%	54%
SHGC	0.70	0.13	0.32
U-VALUE	2.5	1.63	1.63



Glass performance table

PRODUCT CONSTRUCTION			LIGHT TRANSMISSION	
OUTDOOR LITE	AIRSPACE	INDOOR LITE	VISIBLE (%)	SOLAR(%)
6mm LoE-i89® Clear	Mono		87	68
6mm LoE-i89® Grey	Mono		30	23
6mm LoE-366®	12	6mm Clear	63	24
6mm LoE^3-366®	12	6mm LoE-i89 Clear (4)	61	23
6mm Super Blue™	12	6mm LoE^3-366	37	14
6mm Super Green™	12	6mm LoE^3-366	46	16
6mm Grey	12	6mm LoE^3-366	31	12
6mm Bronze	12	6mm LoE^3-366	36	14
6mm LoE-340®	12	6mm Clear	38	14
6mm LoE-340®	12	6mm LoE-i89 Clear (4)	37	13
6mm LoE-i89® Clear	12	6mm Clear	78	55
6mm LoE-i89® Clear	12	6mm LoE-i89 Clear (4)	76	51
6mm LoE-i89® Grey	12	6mm Clear	27	19
6mm LoE-i89® Grey	12	6mm LoE-i89 Clear (4)	26	17

LIGHT REFLECTANCE			U FACTOR - SI		SC	SHGC
OUTDOOR		INDOOR	WINTER			
VISIBLE (%)	SOLAR (%)	VISABLE(%)	AIR	ARGON		
8	10	8	3.63		0.83	0.72
11	17	25	3.70		0.39	0.34
11	36	11	1.63	1.35	0.31	0.27
11	36	11	1.31	1.10	0.31	0.27
7	8	9	1.63	1.35	0.29	0.25
8	8	10	1.63	1.35	0.31	0.27
6	14	9	1.63	1.35	0.26	0.23
7	18	9	1.63	1.35	0.29	0.25
13	36	15	1.64	1.36	0.21	0.18
13	36	15	1.31	1.11	0.20	0.17
14	13	14	1.87	1.63	0.73	0.64
14	13	13	1.47	1.30	0.70	0.61
11	17	28	1.91	1.66	0.31	0.27
11	17	27	1.50	1.32	0.28	0.25

8A Kitchen Rd
Dandenong South 3175
T +61 3 8788 5888
F +61 3 8788 5899
info@glassworksaust.com
glassworksaust.com

GLASSWORKS