

PERFORMANCE GLASS

LoE³-366° — LoE³-340° — LoE-i89° — Optitherm™

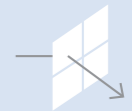
At the forefront of performance driven glass to enhance sustainability, Glassworks are proud to have a range of the most advanced energy saving glass products with proven performance figures that set new benchmarks in the building industry.

DEFINITIONS



VISIBLE LIGHT TRANSMISSION (VLT)

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



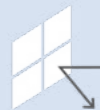
U-VALUE

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.



LIGHT TO SOLAR GAIN RATIO (LSG)

Calculated by dividing the VLT by the SHGC and measures the balance between light and solar control. A figure over 1.0 means the glass lets in more light than heat.

LoE³ – 366[®]

A clear performer for all seasons

366



Left and above
Yarra Valley Grammar, Ringwood – 6mm LoE³-366 with clear

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

Bottom right
Sorrento beachfront home – 8mm LoE³-366 with clear lam

6MM LOE³-366, 12MM ARGON, 6MM CLEAR FLOAT

Visible Light Transmittance (VLT)
63%

U-Value
1.35

Solar Heat Gain Coefficient (SHGC)
0.27

LSG
2.33

LoE³-366[®]

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.



LoE³-340[®]

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 37%; 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 LOE³-340, 12MM ARGON, 6MM CLEAR FLOAT

Visible Light Transmittance (VLT)
37%

U-Value
1.36

Solar Heat Gain Coefficient (SHGC)
0.18

Light to Solar Gain (LSG) ratio
2.05

340



LoE³ - 340[®]
The ultimate solar
control glass

LoE-i89[®]

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 Insulating glass unit (IGU) for even greater performance.

When combined with our LoE³-366[®] 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, LoE-i89 is able to be installed as a single glazed or double-glazed unit or incorporated with Glassworks LoE³-366 glass for the optimum performance unit.

6MM LOE-I89, MONOLITHIC

Visible Light Transmittance (VLT)	87%
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U-Value	3.63
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Solar Heat Gain Coefficient (SHGC)	0.72
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6MM LOE-I89, 12MM ARGON, 6MM CLEAR FLOAT

Visible Light Transmittance (VLT)	78%
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U-Value	1.62
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Solar Heat Gain Coefficient (SHGC)	0.64
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Right
Residential house - LoE-i89 on clear

LoE – i89[®]

The clearest hard coated glass perfect for cooler climates

i89

Best all-round performing combinations

6MM LOE³-340, 12MM ARGON, 6MM LOE-i89

Visible Light Transmittance (VLT)	37%
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U-Value	1.11
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Solar Heat Gain Coefficient (SHGC)	0.17
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6MM LOE³-366, 12MM ARGON, 6MM LOE-i89

Visible Light Transmittance (VLT)	61%
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U-Value	1.10
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Solar Heat Gain Coefficient (SHGC)	1.10
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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.

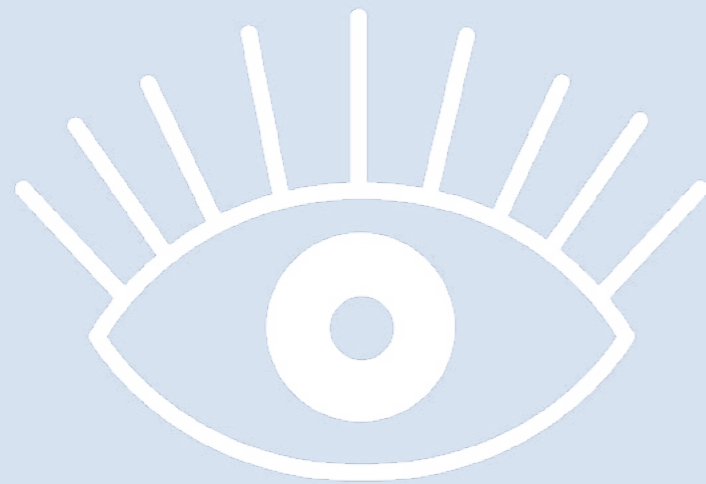
Optitherm™

Optitherm™ is a budget-friendly single silver ultra-clear low-E coated IGU option that is often specified for residential and commercial buildings in cooler climates for its superior clarity balanced with moderate solar control.

In fact, it achieves a VLT of 77%, akin to a clear uncoated unit, with an SHGC of 0.56 as opposed to 0.71 and U-Value of 1.4 rather than a 2.5.

This makes Optitherm a highly viable entry-level low-E coated IGU for commercial projects with thermal benefits that far outweigh the added investment

	REGULAR CLEAR IGU 6MM 12 ARGON 6MM	OPTITHERM™ IGU 6MM 12MM ARGON 6MM	
COATED SURFACE	NONE	2	3
VISIBLE LIGHT TRANSMISSION	78%	77%	77%
SHGC	0.71	0.54	0.56
U-VALUE	2.55	1.40	1.40
LIGHT TO SOLAR GAIN	1.09	1.39	1.34



Clarity in action



**HIGH-VOLUME
PREMIUM RESIDENTIAL**

PIER1 Apartments-
Victoria

Built by Figurehead



Glass performance table

PRODUCT CONSTRUCTION			LIGHT TRANSMISSION	
OUTDOOR LITE	AIRSPACE	INDOOR LITE	VISIBLE (%)	SOLAR(%)
6mm LoE-i89° Clear	Mono		87	68
6mm Clear	Mono		88	78
6mm Clear	12	6mm Clear	78	62
6mm LoE ³ -366° (2)	12	6mm Clear	62	23
6mm LoE ³ -366° (2)	12	6mm LoE-i89 Clear (4)	61	23
6mm LoE ³ -366° (2)	12	6mm Grey	29	11
6mm LoE ³ -366° (2)	12	6mm Bronze	34	13
6mm LoE ³ -340° (2)	12	6mm Clear	37	14
6mm LoE ³ -340° (2)	12	6mm LoE-i89 Clear (4)	37	14
6mm LoE-i89° Clear (2)	12	6mm Clear	78	55
6mm LoE-i89° Clear (2)	12	6mm LoE-i89 Clear (4)	76	51
6mm LoE-i89° Clear (2)	12	6mm Grey	36	28
6mm Optitherm (2)	12	6mm Clear	77	47
6mm Clear	12	6mm Optitherm (3)	77	47

LIGHT REFLECTANCE			U-VALUE		SC	SHGC
OUTDOOR		INDOOR	WINTER			
VISIBLE (%)	SOLAR (%)	VISIBLE (%)	AIR	ARGON		
8	10	8	3.63		0.83	0.72
8	7	8	5.81		0.95	0.82
15	12	15	2.70	2.55	0.82	0.71
11	38	12	1.63	1.34	0.31	0.27
11	38	11	1.30	1.10	0.31	0.27
10	38	6	1.63	1.34	0.30	0.26
10	38	6	1.63	1.34	0.30	0.26
13	36	15	1.64	1.36	0.21	0.18
13	36	14	1.31	1.11	0.20	0.17
14	13	14	1.87	1.62	0.73	0.64
14	13	13	1.47	1.29	0.70	0.61
12	12	6	1.87	1.62	0.69	0.60
14	25	14	1.67	1.40	0.62	0.54
14	24	14	1.67	1.40	0.65	0.56



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