



PROTECTING WHAT'S

THE MOST VALUABLE:

PEOPLE.

SAFETY

DAYLIGHTING & VIEWS

SOLAR CONTROL

DESIGN FREEDOM

INCREASED VALUE



SAFETY

- Clear Sight Lines
- Forced Entry Protection
- Bullet Resistant

DAYLIGHTING & VIEWS

- Natural Daylighting
- View Preservation
- Glare Control

SOLAR CONTROL

- Occupant Comfort
- Energy Savings
- Downsize HVAC

DESIGN FREEDOM

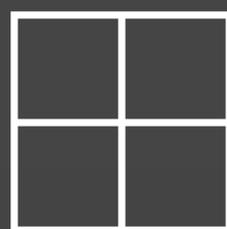
- Maximize glass while being code compliant
- Reducing shading elements
- Easy Installation and operation

INCREASED VALUE

- Sustainable Design
- Reduced Fading
- Noise Reduction & Safety

CREATING SAFE PLACE TO WORK, LIVE AND HEAL

With Suntuitive Defender we are introducing the first glass product in the world that combines the benefits of dynamic glass with the safety aspects of forced entry protection and bullet resistance. Now you can have a work environment filled with light, made comfortable by dynamic glass, and the peace of mind of working in a secure space!



Dynamic Glass

+



Safety

=

SUNTUITIVE[®]
Defender

Suntuitive Defender takes the best of the traditional Suntuitive product advantages (optimized daylight, solar control, design freedom, and increased value) and adds an important new set of benefits. Forced Entry Protection, Attack Resistance and Bullet Resistance are now available with Suntuitive Defender.

Traditional protective glazing is a great and effective product, but it is severely limited in performance from both energy efficiency and aesthetics. Suntuitive Defender changes the whole paradigm with a product that delivers multiple levels of security without losing the design and comfort advantages that have made Suntuitive Dynamic Glass the most adopted dynamic technology in the world.

PROTECT WHAT'S THE MOST IMPORTANT: PEOPLE!





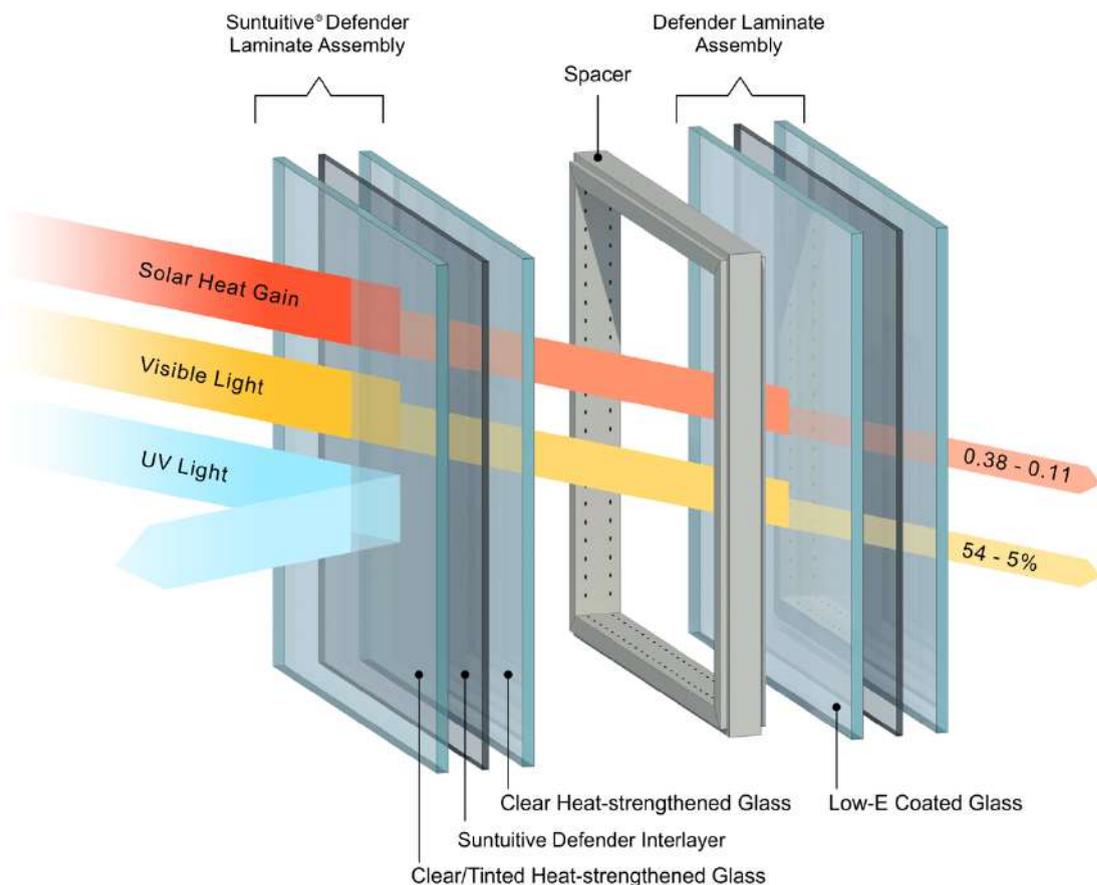
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***IT'S OUR
RESPONSIBILITY TO
DESIGN SPACES THAT
INCREASE WELL-BEING
AND OFFER SAFETY.***

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Suntuitive Defender Laminate Assembly and Defender Laminate Assembly



With some additions to the interlayer stack

Our thermochromic elements, embedded in PVB (polyvinyl butyl) interlayer laminated between two pieces of glass, activate by heat from direct sunlight. As the light heats the glass the Suntuitive Interlayer becomes warm and darkens, effectively causing the glass unit to darken as necessary. As the sunlight recedes the glass returns to its clear state.

Suntuitive Defender offers the benefits of dynamic glass combined with Forced Entry Protection or even (pictured) bullet resistance by adding a laminated construction on the inboard of the glass unit. Each of these versions are constructed to fit most new and existing applications and as such are perfect for glass replacement as well as new projects!

WORLD'S BEST PERFORMING SAFETY GLASS

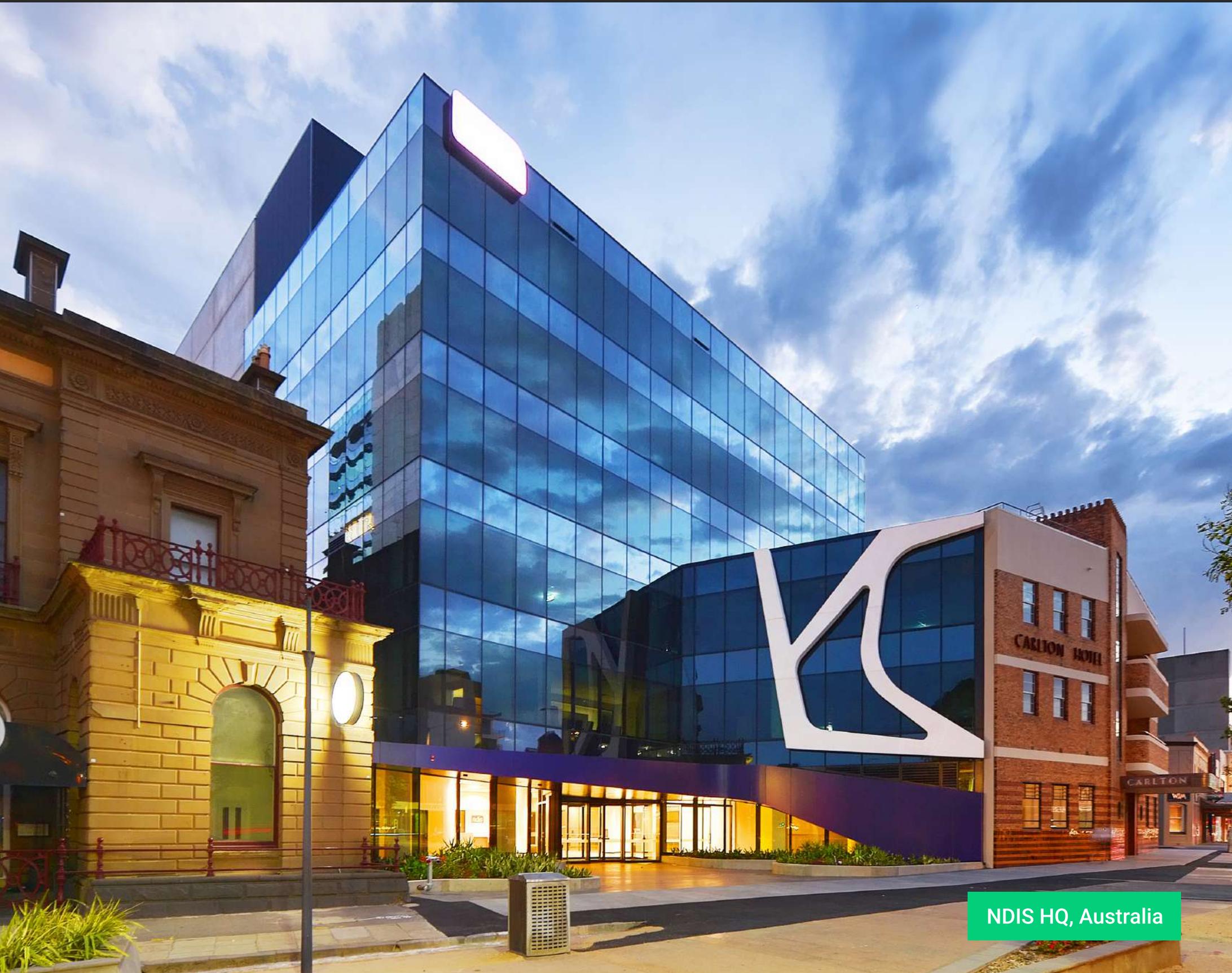
Suntuitive Defender is like no other safety glass. It doesn't just offer protection from intruders, but also offers protection from the sun, which increases the visual and thermal comfort for those inside. Research has shown that optimized light and comfort increases the well-being and productivity of building occupants. Suntuitive Defender's benefits are enjoyed every day and not limited to those events you hope will never happen!

Suntuitive Defender <i>L1 Bullet Resistant</i>		Visible Light Transmission (VLT)		Solar Heat Gain Coefficient (SHGC)		Total solar Transmission	
Exterior Tint	Low-e	Clear ↔ Tinted		Clear ↔ Tinted		Clear ↔ Tinted	
Clear	2x Low-E	0.54	0.08	0.38	0.17	0.25	0.07
	3x Low-E	0.49	0.07	0.31	0.13	0.18	0.03
Medium Grey	2x Low-E	0.38	0.06	0.28	0.14	0.17	0.04
	3x Low-E	0.34	0.05	0.25	0.11	0.12	0.02
Medium Blue	2x Low-E	0.34	0.05	0.28	0.14	0.23	0.03
	3x Low-E	0.31	0.05	0.24	0.11	0.12	0.02

- Clear values represent 5C and tinted values 65C.
- U-value is 0.24/0.25 for all of the options shown in the above table.



	Defender FEP (forced entry protection)	Defender L1 Bullet Resistant
Thickness (min)	15/16"	1 1/16"
Weight	6.16/lbs	7.33/lbs
Maximum Size	48 x 96	48 x 96
Forced Entry Protection (UL972)	yes	yes
Number of Swings Before Failure	187	273
Bullet Resistant		Level 1
Safety	CPSC 16 CFR 1201	
Manufacturer Compliance	ASTM C1036, ASTM C1048, ASTM C1172	
Options	Choice of tint, size, choice of low-e and shapes	



NDIS HQ, Australia



IT PAYS TO PICK THE BRIGHTER SOLUTION

It doesn't happen too often that the best solution is also the most cost-effective, but choosing Suntuitive Defender really delivers the best ROI in every way. Not only does it offer a high level of safety, but it offers all the benefits of dynamic glass on top of that. Increases in comfort and natural daylight result in better well-being and productivity of those inside. And at a cost that is lower than many comparable safety glass products. Dare we say 'no-brainer'?

	Defender	Other Safety Glass
Daylighting & Views		
Daylight optimization	●	
View preservation	●	
Glare control	●	
Solar Control		
Increased Occupant Comfort	●	
Energy Savings	●	
Downsize HVAC	●	
Design Freedom		
Maximize glass while code compliant	●	
Reduction of shading elements	●	
Easy installation and operation	●	●
Increased Value		
Sustainable Design	●	
Increased Productivity/Focus	●	
Reduced Fading	●	
Noise Reduction	●	●
Safety		
Clear Sight Lines (no blinds)	●	
Forced Entry Protection	●	●
Bullet Resistance Standard	● (L1)	●
Product Cost	\$	\$\$

