TIREXtreme glass AGC

for near-infrared technologies



AGC's TIREXtreme glass is a clear float glass with very high transmission in the near-infrared range, optimised for wave-guiding applications. This makes it the material of choice for any application dealing with near infrared and the perfect solution to implement infrared in-glass touch technologies in large displays.

TIREXtreme glass

GLASS UNLIMITED

What's so special about it?	What does this mean for you?
Unique near-infrared transmission	 Thanks to its special composition, TIREXtreme has near-infrared transmission 30 times higher than clear float glass and 5 times higher than extra-clear glass, making it possible to use as a waveguide: significant transmission up to four meters
Crystal clear appearance	 TIREXtreme features very high light transmission and a low level of coloration, ensuring optimal visual rendering of the display
Highly resistant	 TIREXtreme glass has superior resistance to scratches and excellent durability. It can be thermally or chemically toughened to meet the highest standards of mechanical resistance
Enabling state-of-the-art in-glass near-infrared technology	 Technology using invisible infrared light inside the glass to detect touch points
	 The only glass solution allowing "in-glass" touch in large dimensions, up to 100 inches
What can you use it for	be inspired
Interactive screens	 TIREXtreme allows "in-glass" touch in large dimensions
New solar technologies	 TIREXtreme is a key enabler for transparent luminescent solar concentrators allowing scaling up of promising green technology through waveguiding
Infrared detection and communication	 TIREXtreme is perfectly suited for cover glass for infrared emitting/receiving devices ensuring optimal protection for Lidar systems, remote control, etc.

Near-infrared transmission comparison



Performance

Thickness	1.6 mm	3.2 mm	4 mm
TL (EN410 – D65, 2°)	91%	90%	90%
TE (ISO 9050)	91%	90%	90%
Near-IR absorption coefficient (850 nm)	0.5 m ⁻¹		
Young's Modulus	70 GPa		
Density	2500 kg/m ³		

Availability

TIREXtreme is readily available in the maximum size of $3.21 \times 6 \text{ m}$ and in thicknesses of 1.6 mm, 3.2 mm and 4 mm.

TIREXtreme can be manufactured in any thickness from 0.5 mm to 5 mm on request.

Processing options

Safety	Toughening (thermal and chemical)	
	Safe foil application	
Cutting	Straight, circular or free shape	
Shaping and edge finishing	Edge grinding, drilling, laser finish	
	Bending (thermo-forming and cold-bending)	
Special treatments	Silkscreen printing	
	Acid etching	
	Anti-reflective coating	
	Wet coating application (anti-fingerprint/hydrophobic coating)	
	UV gluing	

The information contained in this data sheet is intended to assist you in designing with AGC materials. It is not intended to and does not create any warranties, express or implied, including any warranty of merchantability or fitness for a particular purpose. The user is responsible for determining the suitability of AGC materials for each application.

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