Shielding Windows - VITCEM

FT_B18_01_27

Window combines transparency with electro-magnetic protection. This technology protects sensitive equipment from BF & HF radiated disturbances and vice versa. The principle is "simple": we insert an electro-magnetic protection in the form of a canvas or very fine metal fabric between two transparent plates. The reinforcement can be done on the edge by overflow of the canvas all around the glass or by a conductive seal glued directly on the edge of the glass. In this case, the joint will be glued to the slice that has undergone a silver-based treatment beforehand. The plate is most often made of polycarbonate, but can also be laminated glass

or for very aggressive media we also have glass. Specific treatments on the plates are possible (anti-scratch, anti-reflective, etc.). The applications are numerous: bays, enclosures, screens of video monitors, multimedia flat screens, plasma, LCD, LED...

Technical characteristics

Features	Type of material available		
	Polycarbonate	Laminated glass	ITO glass
Base Color	Transparent		
Base MATERIAL	Laminated polycarbonate	Strtified glass	ITO in glass or laminated glass
Internal conductive material	Blackened Copper Mesh (angles: 30°, 45° or 90°)	micro-mesh	Conductive paint of 15 Ω/
Optical transparency (%)	80	89	90
Min Thickness (mm)	1,5 / 2 / 2,5	2,8	1.2 not stratified 2.8 startified
Max Thickness (mm)	3 à 4	-	-
Tolerances on thickness (mm)	+/- 0,2		
Operating Temperatures (°C)	-40 à +72	-40 à +90	-40 à +100
Basic anti reflection treatment	Non	Oui	Oui
Basic anti-glare treatment	Oui		
Anti-scratch treatment	On request		
Maximum size (mm)	520 x 680	600 x 900	380 x 480
Tolerances on dimensions (mm)	+/- 0,2		
Machining of various shapes	Oui		
UV stable	Oui		
Shock resistance	Oui		
Mass recovery	Yes (usually bus-bar silver)		
Standard Busbar Width (mm)	2 / 3 / 4 / 5 / 6,2 / 10 / 13 / 15		
Tolerances on Busbar (mm)	+ / - 0,5		

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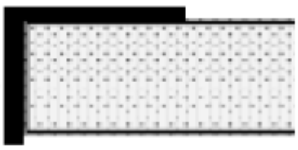
Shielding performance

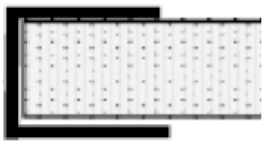
Frequency Range/ Attenuation of Shielding (dB):	Méthodes de Tests			
	IEEE STD 299		IEEE STD 299	MIL STD 285
	Laminated glass	ITO glass	Polycarbonate Laminate	
200 KHz	-	-	-	82
1 MHz	-	-	-	69
10 MHz	-	-	-	65
30 MHz	48	33	46	66
80 MHz	73	30	67	68
100 MHz	57	27	51	70
200 MHz	63	27	57	71
500 MHz	56	28	54	65
1 GHz	47	31	53	57
2 GHz	44	26	53	58
5 GHz	27	22	34	60
10 GHz	16	10	27	49

Standard Busbar Shapes

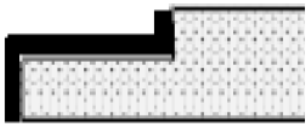
L-shape



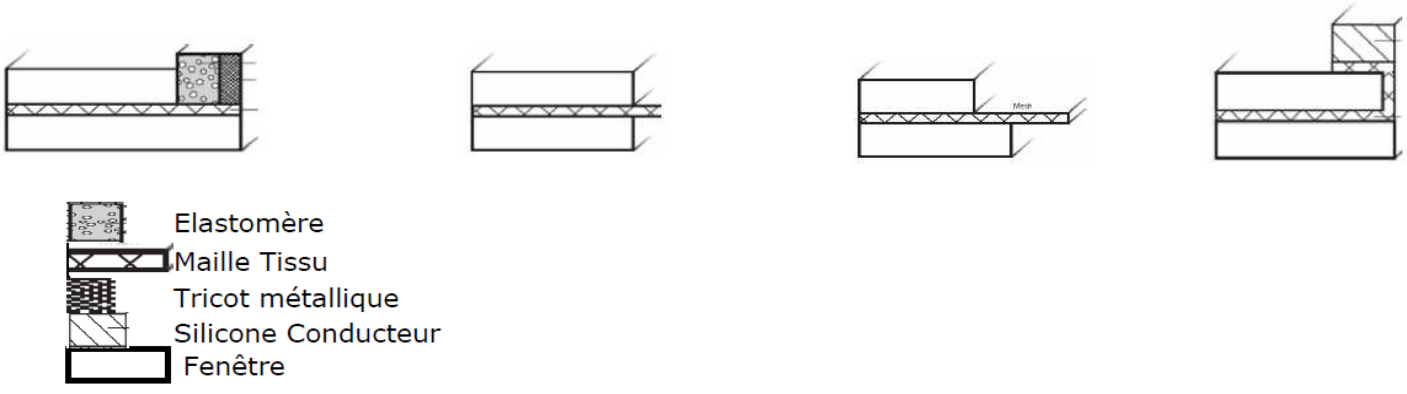
C-shape



Stepped shape



Some common examples of window construction are:



The results were obtained under laboratory conditions and should be considered only as an indication. As AB2E has no control over its customers' equipment and many other factors, it is the user's responsibility to carry out its own tests to ensure that the product corresponds to its needs.