

# STANDARD EMI SHEILDING WINDOW

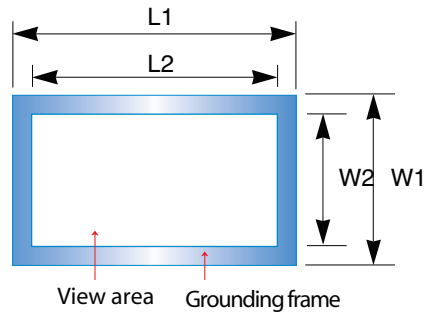
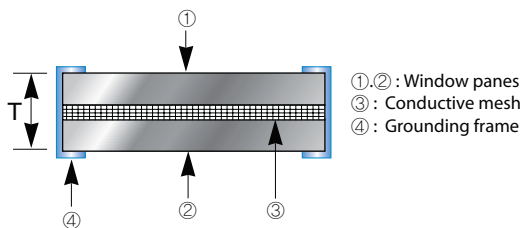


- RoHS compliant
- High shielding effectiveness
- Low price

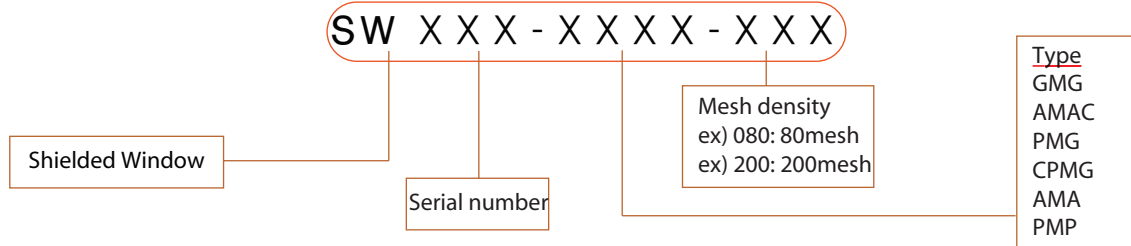
- Conductive wire mesh is sandwiched between two acrylic or glass panes, with grounding frame. Ideal for shield rooms, allowing observation inside the room without opening a door or a video camera.
- Shielding performance and transparency are in inverse relation and custom settings are available to meet individual needs.



## STRUCTURE

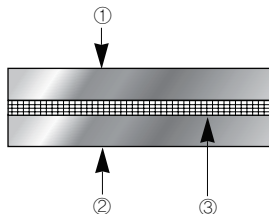


## PART NUMBER STRUCTURE



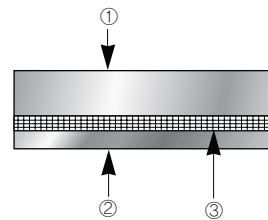
## TYPES & DIMENSIONS

### ■ GMG type



Layer construction	Total Thickness T (mm)	Dimension W1 x L1 (mm)
① Glass	Min. 3	Min. 20x20
② Glass	Max. 10	Max. 600x1100
③ Mesh		

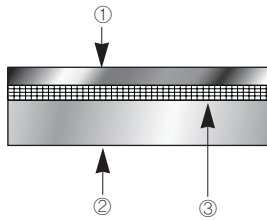
### ■ AMAC type



Layer construction	Total Thickness T (mm)	Dimension W1 x L1 (mm)
① ② Acrylic	Min. 2	Min. 20x20
③ Mesh	Max. 16	Max. 850x1750

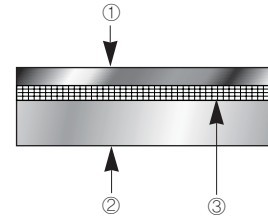
- ▶ Low price without sacrificing performance when compared to cast type shield windows.
- ▶ Tint is darker when viewed from one side than the other, due to the way mesh is knit.

■ PMG type



Layer Structure	Total Thickness T (mm)	Dimension W1 x L1 (mm)
① Polyester film	Min. 2	Min. 20x20
② Glass	Max. 7	Max. 600x1100
③ Mesh		

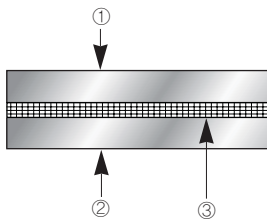
■ CPMG type



Layer Structure	Total Thickness T (mm)	Dimension W1 x L1 (mm)
① Conductive PET	Min. 2	Min. 20x20
② Glass	Max. 7	Max. 600x1100
③ Mesh		

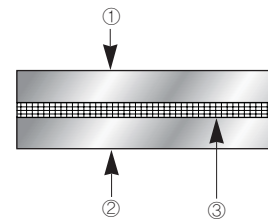
- ▶ Use of conductive PET in addition to mesh makes this the best performing shielding window.
- ▶ Recommended for shield room window

■ AMA type



Layer Structure	Total Thickness T (mm)	Dimension W1 x L1 (mm)
① Acrylic	Min. 3	Min. 20x20
② acrylic	Max. 10	Max. 500x500
③ mesh		

■ PMP type



Layer Structure	Total Thickness T (mm)	Dimension W1 x L1 (mm)
① Polyester film	Min. 0.30	Min. 20x20
② mesh		Max. 600x1100
③ polyester film		

MATERIAL SPECIFICATION

■ Conductive Mesh

Type/Material	Color	Mesh/Inch	Surface Resistance [Ω / □]	Shield Effectiveness[dB] 20MHz-1GHz	Transparency [%]
Fabric mesh(PET+Cu,Ni plated)	Gray	80	0.153	54	66
Fabric mesh(PET+Cu,Ni plated)	Gray	200	0.095	64	37
Fabric mesh(PET+Cu,Ni plated+melanism process)	Black	138	0.279	60	70
Fabric mesh(PET+Cu,Ni plated+melanism process)	Black	132	0.172	53	65
Fabric mesh(PET+Cu,Ni plated+melanism process+conductive film)	Black	138	0.186	57	58
Stainless mesh	Silver	250	2.851	47	62
Stainless mesh(black plated)	Black	165	0.052	70	34
Brass mesh(black plated)	Black	200	0.283	62	42
Conductive film	Clear	0	56.9	9	84
Test method	-	-	* ESQ-517-04	ASTM D 4935	ASTM D 1003

Window

Material	Thickness [mm]	Remarks
Glass	1.1 1.5 2.0 3.2	
Acrylic	0.8 1.2 1.5 2.0 2.5 3.0	
Polyester film	0.1 0.135 0.188	
Acrylic casting plate	2 3 3.5 4 5 6 8 10 12 15 16	Outsourced

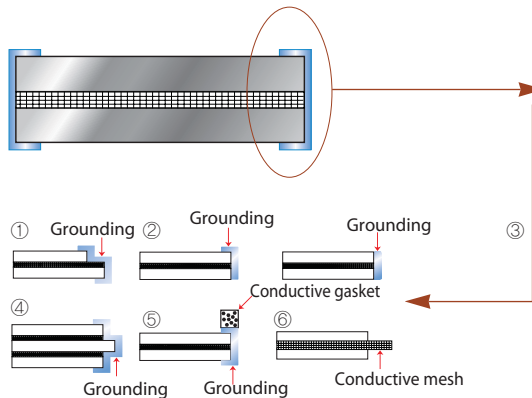
Surface Coating (optional)

Hard coating, AR<sup>1)</sup>, AG<sup>2)</sup>, color coating

Note: 1) AR: Anti-reflection

2) AG: Anti-glare

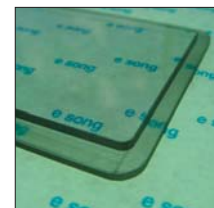
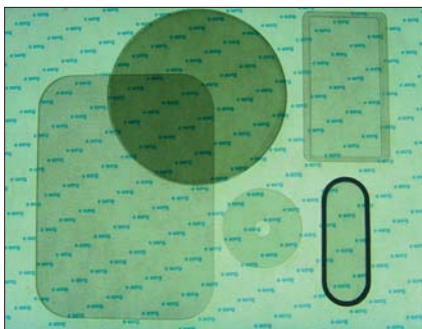
GROUNDING METHODS



While there are many ways of grounding the mesh, use of conductive paste is the most common and cost-effective. Once the window edge is coated with the conductive paste and cured, conductive fabric tape, Al tape, Cu tape with conductive PSA can complete the frame.

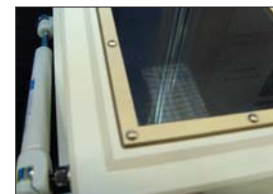
► Conductive paste (base material : Silver, surface resistance: 0.10Ω /25mm)

CUSTOM SHAPES

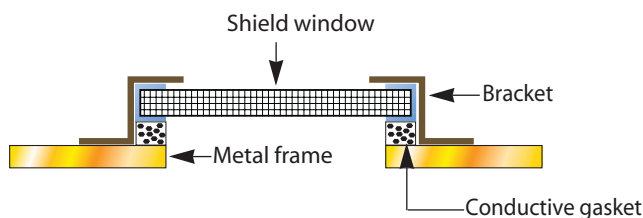


An electronic gadget's front plate can be made of the shielding window by silk screen printing as shown above.

USAGE EXAMPLES



Military equipment, vessel, industrial PDA, production equipment for semi-conductor, medical equipment, shield room, shield case, etc.



It is important to make good ground connection between the metal frame of the tank and the shielding window. Use of conductive foam gasket (compressed by 30% in height) will ensure good grounding connection.

► In this case of military tank, conductive silicone elastomer gasket is used to keep out moisture, water, and acid rain.