

# Emi-ITO Glass

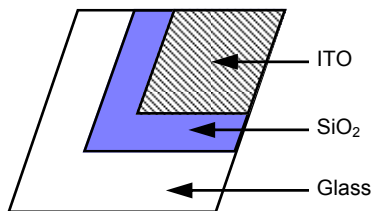
**Emi-ITO** is a range of EMI shielded windows with a conductive coating for use in EMI/RFI shielding applications. The combination of high visible light transmission, near neutral colour and low electrical resistance make an ideal EMI/RFI shield for electronic displays requiring moderate shielding effectiveness and high quality optical properties.

## Product Format

Emi-ITO windows are either un-laminated or fully laminated glass filters with an ITO coating of 12 ohms/sq. Windows are available to order as finished windows. Laminated versions offer greater strength and options for front surface treatment and edge profiles.

## Coating Properties

The soda lime float glass is coated with a primary layer of Silicone Oxide ( $\text{SiO}_2$ ) and secondary layer of Indium Tin Oxide (ITO).



Surface resistance:	12 ohms/sq
Coating thickness:	150nm
Heat Resistance:	140°C
Humidity (60°C/90%RH):	No effect
Adhesion to glass:	MIL M-13508 4.4.6
Abrasion resistance:	MIL C-675-A 4.6.11 MIL E-12397-B
Transmittance @550nm:	89%
Colour:	Clear
Reflection:	<4%

## Termination Method

Direct contact can be made to the conductive surface by a suitable conductive fabric over foam gasket, silver loaded silicone gasket, copper tape or silver epoxy painted busbar. Do not use gaskets containing metal wire which can damage the coating or place the window directly against a hard plastic or metal surface.

## Shielding Effectiveness

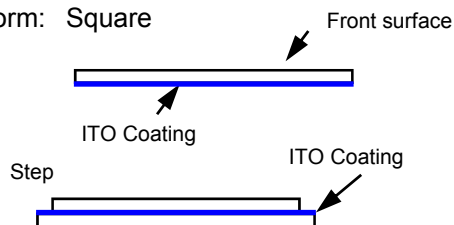
This table is a guide to the E-Field Shielding Effectiveness of Emi-ITO windows assuming that the window is correctly terminated.

(MHz)	Window diagonal (mm)						
	50	100	150	200	300	400	450
30	52	48	39	36	33	32	30
75	43	37	44	31	29	26	25
100	44	37	34	31	28	26	25
150	42	35	32	29	25	24	23
200	61	54	50	48	44	43	42
300	52	43	42	40	35	34	32
500	45	39	37	22	30	29	29
700	37	33	29	25	25	25	25
1000	32	26	24	24	24	24	24

Coatings of 12 ohms/sq has been chosen to provide a good balance between shielding and optical performance. Coatings greater than 20 ohms/sq lack shielding effectiveness and lower ohm/sq coatings have reduced light transmission and increased light reflection.

## Product Range

Size:	parts up to 400 x 500mm
Thickness:	1.1mm un-laminated 2.5 to 4.3mm laminated
Front finish:	Plain glass Anti-Reflective (MLAR) coating Non-Glare (etch85)
Edge form:	Square



## Design Options

- Contrast Enhancement & privacy filters
- Colours and Neutral density tints
- NIR blocking filters

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