

# NP-ITO 200 ohm

## Indium Tin Oxide Coated Polyester

Our range of Indium Tin Oxide (ITO) Coated Polyester Film has been developed to meet the ever demanding needs of the market for a high quality transparent conductive film. Our products have been utilised in a wide range of applications such as electroluminescent (EL) lamps, touch screens, position sensors, transparent heaters, shielding and liquid crystal displays (LCD).

The NP-ITO series is produced utilising a vacuum sputtering process that ensures an excellent coating uniformity and adhesion to the base film. High visible light transmission and low reflection are optimised for improved end product performance.

NP-ITO features electrical uniformity of 10 ohms per square foot.

Our standard roll length is 100m in widths of 300mm and 600mm, custom widths and lengths are available on request.

### Typical Properties of Polyester Film:

PET Properties		NP-ITO-5-200	NP-ITO-7-200	Testing Method
Thickness ( $\mu\text{m}$ )		125	175	Micrometer
Light Transmission (%)		89.10	88.70	ASTM D 1003
Haze (%)		2.60	3.30	ASTM D 1003
Tensile Strength (Mpa)	MD	181	163	ASTM D 882
	TD	198	187	
Elongation @ Break (%)	MD	128	159	ASTM D 882
	TD	109	135	
Heat Shrinkage (%)	MD	0.56	0.43	ASTM D 1024 (150°C, 30 min)
	TD	0.38	0.33	

### Typical Properties of ITO Coating on Polyester Film:

ITO Properties		NP-ITO-5-200	NP-ITO-7-200	Testing Method
PET Thickness ( $\mu\text{m}$ )		125	175	Micrometer
VLT (%)		83.40	83.20	ASTM D 1003
Haze (%)		2.40	2.63	ASTM D 1003
Clarity (%)		98.10	98.00	ASTM D 1003
Resistance Level (ohm/sq)		180	180	ASTM D 991
Uniformity (%)		20	20	ASTM D 991
Coating Adhesion (%)		100	100	ASTM D 3359
Shrinkage (%)	MD	0.50	0.75	ASTM D 1024
	TD	0.33	0.30	ASTM D 1024
Heat Test	R/Ro	0.83	0.83	30 min @ 110°C

### Product Handling:

As with all vacuum deposited thin film, it is relatively easy to scratch or crack the coating if the ITO layer is not handled with care. Care should be taken when the film is unwound from the roll to ensure it is not bent or creased. It is important never to allow the ITO coated side of the film to come into contact with a table or any such surfaces that could potentially scratch the coating which could lead to increased surface resistance and visible defects.

Before adopting our products for commercial use, the user assumes responsibility for determining fitness of use in their particular application and process. Nicomatic makes no warranties and assumes no liability in connection with any use of this information.

Specification subject to change without prior notice

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