



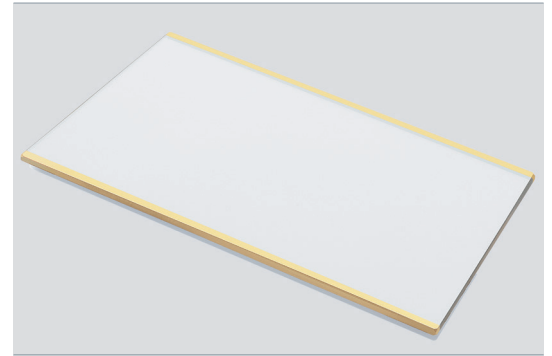
MATERION

// BALZERS OPTICS

ITO and IMITO

Conductive and Transparent Coating

Indium-Tin-Oxide (ITO) is a widely used material for thin film coatings with electrically conductive and optically transparent properties. The reflectance of light on interfaces or surfaces of an ITO layer may be reduced considerably by integrating it into an anti-reflective multilayer – a so called Index Matched ITO (IMITO). The Materion Balzers Optics ITO is very dense and remarkably free of pinholes.



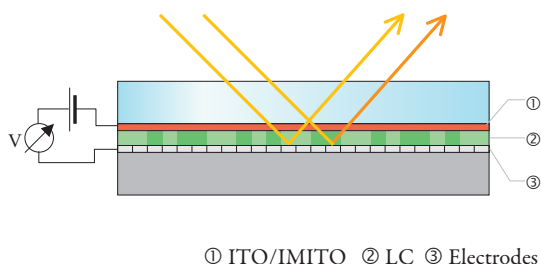
Benefits

- Electrically conductive and optically transparent coating
- High physical density of coating
- Low specific electrical resistance
- No pinholes
- High environmental and temperature stability
- ITO may be electrically contacted by Gelot™ busbars (please refer to datasheet OBA011PE)

Applications

- Electrode layer in LCD technology
- Counter Electrode on Lid Glass for LCOS micro-displays
- Electrode on Heater Windows
- Electro-Magnetic Shielding (EMS)

LC Display (or LCOS Microdisplay) ITO (red line) is counter electrode for applying a voltage across Liquid Crystalline (green area). Voltage impacts polarization of light and thus steers brightness of pixel.



① ITO/IMITO ② LC ③ Electrodes

Technical Data

Cleanliness

No defects > 10 μm achievable

Maximal sheet size

200 mm square

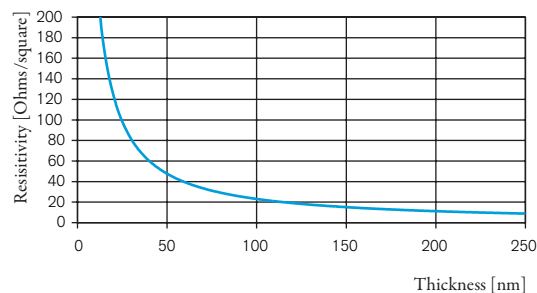
Index Matching

Customized – depends on matching media

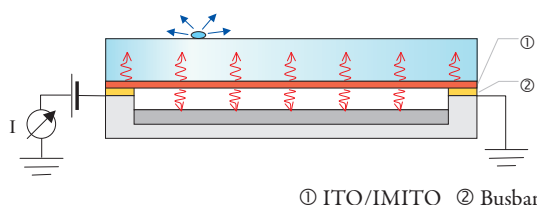
Environmental

Tested to MIL-C-14806

ITO Resistivity against Thickness



Heater Window Electrical current across ITO layer (red line) heats the glass and prevents from condensing moisture on surface. Yellow lines are busbars for electrical contacting of ITO.



① ITO/IMITO ② Busbar

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