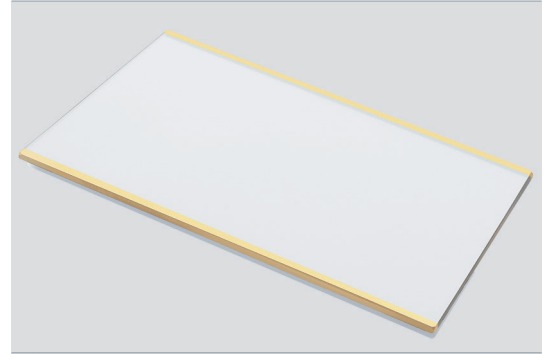




# ITO and IMITO

## 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)

### Technical Data

#### Cleanliness

No defects > 10 μm achievable

#### Maximal sheet size

200 mm square

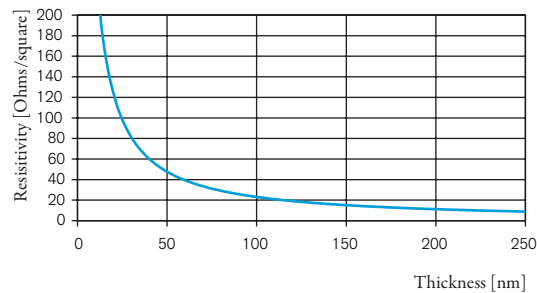
#### Index Matching

Customized – depends on matching media

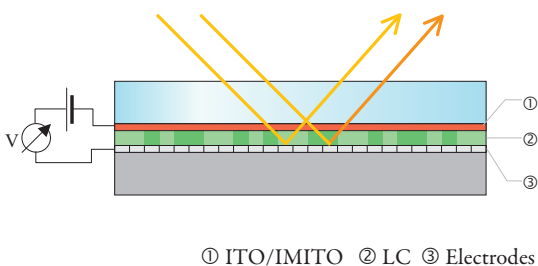
#### Environmental

Tested to MIL-C-14806

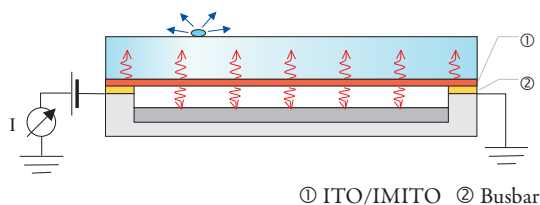
### ITO Resistivity against Thickness



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



**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.



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