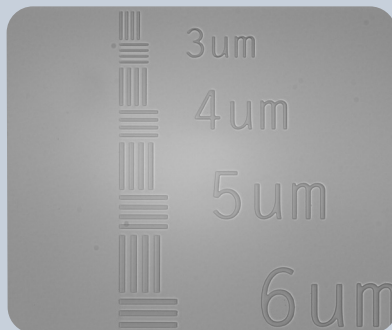


Patterned ITO and IMITO

Indium Tin Oxide (ITO) is a thin film coating with electrically conductive and optically transparent properties. To minimize surface reflectance and improve transmission, the ITO can be index matched, producing Index Matched ITO (IMITO). Utilizing the PixelTec process, these coatings can be custom patterned on a variety of substrates and also with other thin film coatings.

EXAMPLES

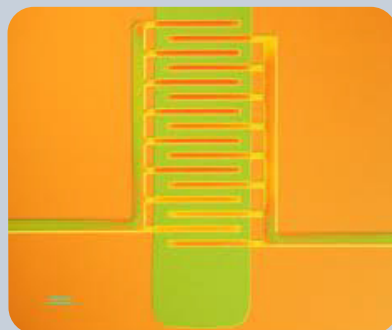
ITO Islands



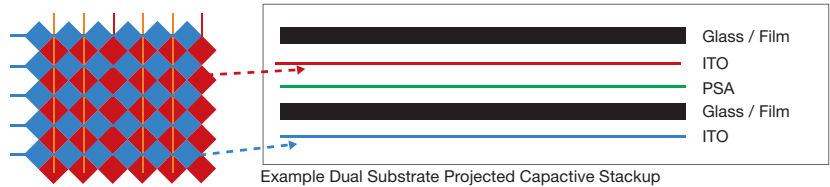
ITO Holes



ITO Pattern



Example ITO Patterning



Technical Data

- Electrical Resistance & Index Matching – customized to application
- Environmental – Tested to MIL-C-14806
- Pattern capabilities – micron precision - custom to application

Benefits



- Electrically conductive and optically transparent coating
- High physical density of coating
- Low specific electrical resistance
- High environmental and temperature stability
- Clean / sharp micron level patterning
- Patterning done without etching or ablation damage
- Solderable busbars can be patterned with the ITO to produce a completed component

Applications

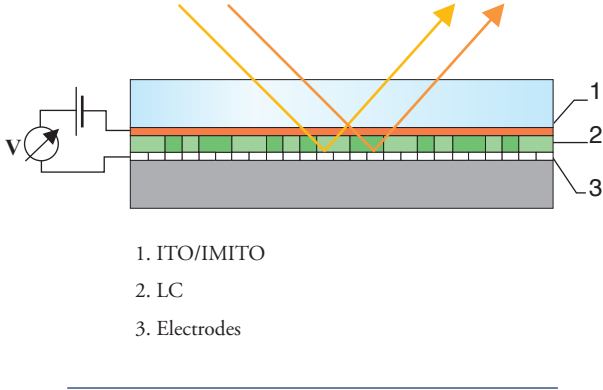


- Electrodes for LCD and LCOS sensors and displays
- EMI and RFI shielding
- Touch panels
- BioChips
- Microelectronic assemblies

ITO and IMITO

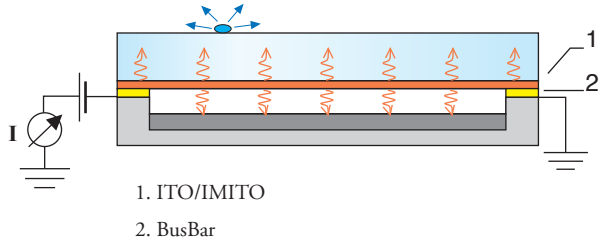
LC Display (or LCOS Microdisplay)

ITO can be used as an electrode for applying voltage across liquid crystals. Voltage impacts polarization of light and adjusts pixel brightness.



Heater Window

Electrical current across ITO layer can heat the glass and prevent moisture condensation on the surface. Yellow lines are deposited busbars for electrically connecting the ITO.



Applications



- Electrical layer in LCD technology
- Counter electrode for micro-displays
- Electrode on heater windows
- Electro-Magnetic Shielding (EMS)
- Avionics displays
- Shipboard, periscope and vehicle displays
- Security and surveillance cameras
- Medical instrumentation

ITO Sheet Resistance vs Thickness

