

Replication

Screen printing machine

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Material class:

Silicon

Polymer
X

Metal
X

Ceramic
X

Glass

Organic

Other

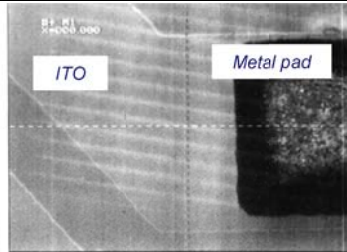
Short technology description:

Multilayer screen printing deposition (0.5 – 20 um each layer)

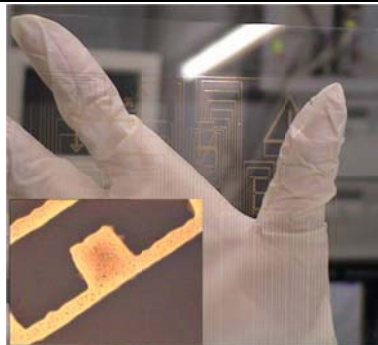
AUREL VS1216 Machine

- Print area: up to 250x250 mm
- Substrate size: up to 350x300 mm
- Screen size: 350x400 mm
- TV camera alignment system (10 um resolution)
- Squeegee speed: 0 - 300 mm/s
- Squeegee pressure: 0.5 – 18 kg

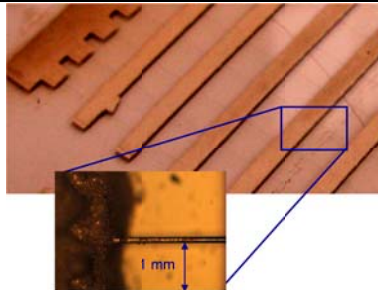
Typical structures and designs:



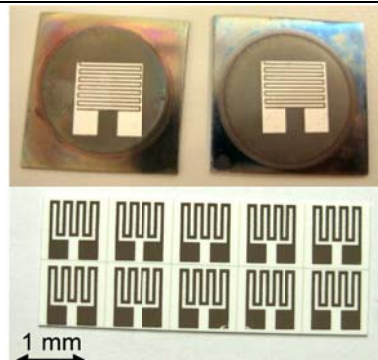
Aligned 20 um silver pad on ITO track



High resolution (100 um) gold lines on glass substrates



Embedded W wires in screen printed Ni contact over glass



Screen printed Ni on alumina and Ag on porous titania for gas sensors

Special features:	<ul style="list-style-type: none">- Large area deposition of several materials at different heat treatment conditions- Deposition on several substrates (glass, alumina, silicon, metals, plastics)- Alignment features- Software control of all the parameters
Limitations, constraints:	<ul style="list-style-type: none">- Maximum resolution achieved 100 um- Mask design and fabrication
Material examples:	<ul style="list-style-type: none">- Conductors for high T substrates (800°C): Ag/Pd, Al- Conductors for medium T substrates (500°C): Ag, Ni, Al, Au- Conductors for low temperature (150°C): Ag- Phosphors polymers