

Application example:

large label placement

Customer Requirements

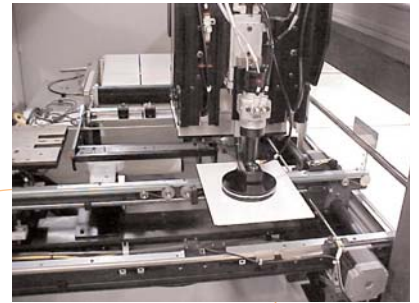
Universal Instruments' challenge was to place a large label on a ceramic substrate for use in setting up the customer's screen printers without printing the dielectric material directly on the ceramic boards. Printing directly on the boards had resulted in wasting the expensive ceramic substrates.

Universal Instruments' Solution

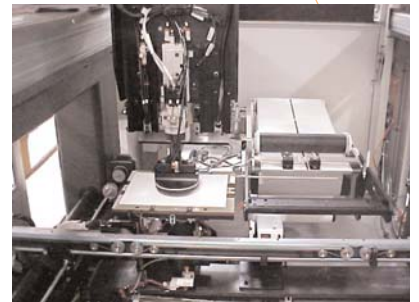
Universal Instruments integrated a Polaris Multi-Process Assembly Cell to place 6" x 8" or 3" x 5" labels on the ceramic boards onto which the circuits were to be printed. The labels needed to be placed within +/- 0.015" (.381 mm). Polaris was able to achieve this level of accuracy by utilizing a precision registration nest, where the substrates were placed and adjusted before placing the label. The labels were then transferred to the head and an upward-looking camera obtained the corrections from the feed variation. After placement, a squeegee removed the air bubbles from the label to ensure that the labels are totally flat. The completed substrate with label was then placed back onto the rails.

Technology Utilized

- Polaris Multi-Process Assembly Cell
- Label Feeder
- Color Inspection System
- Custom End Effector Tooling for Label Pick and Substrate
- Custom Registration Nest



Picking substrate from belt



Placing substrate in label fixture



Post-placement label squeegee (side view)

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