Conformal coatings used by electronic manufacturers contain UV indicators for the purpose of inspection. Since coatings are transparent, units must be viewed under black light in order to verify coverage and non-coverage. The Nordson ASYMTEK FX-940UV makes inspection of conformal coatings simple and convenient by automating the inspection process for quality and consistency of coatings.

Advanced High Power UV Lighting and newly available image processing technology integrate several techniques, including coverage inspection, color inspection, normalized correlation and rule-based algorithms, to provide complete inspection coverage with an unmatched low false failure rates.

With minimal programming, the inspection set-up is fast and intuitive typically requiring less than 30 minutes. A known good board is used to learn the coverage and non-coverage areas. The automated inspection typically takes only a few seconds with inspection results immediately displayed. These results can be stored and reviewed off-line. The FX-940UV also reads all common barcodes and captures board images for product traceability.

**Features:**
- Top down and optional side viewing cameras
- Proprietary UV lighting
- 100 mm clearance for tall components
- Traceability
- Optional thickness measurement

**Automated Inspection for:**
- Conformal coat coverage
- Micro Coatings / dispensed materials
- Flux coverage
- Selected areas of non-coverage
- Delamination / cracks and bubbles
- Part presence / Correct part / polarity
- SPC, barcode reading and archiving of board image with inspection results
- Includes SMT and THT component inspection
FX-940UV ACI / AOI  Automated conformal coat inspection

Specifications

Inspection Capabilities
Throughput: Up to 30 sq. in./sec. (194 sq. cm)
Maximum Board Size: 18.5” x 19” (470 x 482mm)
Clearance: 4” (100mm) top and bottom
Optional Upgrade: 4 side angle cameras, Board flipper
Defects Detected: Coatings and dispensed material coverage, non-coverage, cracks and delamination, SMT and THT part defects.

Software
Algorithms:
Conformal Coating Inspection
Color detection, OCV, OCR, Barcode recognition, both image and rules based algorithms.
None

Data Requirements:
Not required

CAD Translation Package:
Optional - Rework, Review and Program Creation

Programming Skill Level:
Technician or operator

Operating System:
Windows 7

Off-line Software:
Real-time local and remote monitoring of first pass yield, defect trends, and machine utilization.

SPC Software:
Text, SQL, ODBC, MS Access, XML.

Data Outputs:

Hardware
Imager:
Proprietary UV red and blue LEDs
Up to 18 megapixel color imaging sensor
23, 12 or 8 micron pixel size

Facilities
Power: 110-220 VAC, 50/60 Hz, 15 amps
Footprint: 39” x 52” x 60” (1000mm x 1329mm x 1531mm)
Weight: 950 lbs (430 kg)
Machine Installation: < .5 hour

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Automated inspection for conformal coat.
Side angle viewing cameras.
Defect image of missing conformal coat.