The Lumina Instruments AT1 introduces an innovative technology in laser scanning:

- Enables full surface scan and imaging of **sub-nanometer film coatings, nanometer size particles, scratches, pits, bumps, stress points** and other defects
- Scans and displays a 50 x 50-mm sample in 30 seconds
- Capable on transparent, silicon, compound semiconductor or metal substrates
- Accommodates non-circular and fragile substrates
- Able to separate top/bottom features on transparent substrates
- Up to 300x300 mm scan area
- Can scribe location of defects for further analysis

The AT1 has four detection channels. Within minutes, it provides four images of the full surface. Each image represents specific defects:

1. Polarization channel for film, scratches, stress points
2. Slope channel for pits and bumps
3. Reflectivity channel for particles on rough surface
4. Dark Field channel for particles and scratches

Based on the multiple detections, the AT1 generates the defect map and report:

- Map and location
- Color coded defects
- Size of defects
- Image of the defects
Example of 4 images from the same area of 8” amorphous Silicon sample

TOOL SPECIFICATIONS

Scan time 50mm x 50mm in 30 seconds
Scan area 300x300 mm
Scribe Diamond scribe - adjustable
Sensitivity Film Defects <50 Angstroms
Particles, PSL 70 nm on smooth Si
Temp 18 – 30°C
Voltage 120 / 230 VAC
Current 6 A / 4 A
Weight 450 lbs / 205 kg
Dimension 880 x 2005 x 743 mm (34.6 x 79 x 29.2 inches)