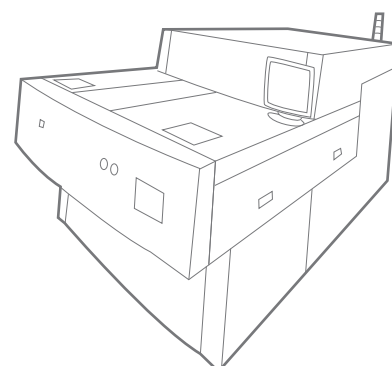


Paragon™-Ultra 300

Laser Direct Imaging for IC Substrates

PCB Production Solutions



Paragon™-Ultra 300



Featuring the leading-edge performance of Orbotech's Large Scan Optics (LSO) Technology™, Paragon™-Ultra 300 delivers the highest imaging accuracy and yields for today's most complex IC substrate applications including Flip-Chip BGA, Flip-Chip CSP, BGA/CSP and modules manufacturing. It provides fast throughput using enhanced electronics and a powerful laser system.

Benefits

Highest Imaging Quality for IC Substrate Manufacturing

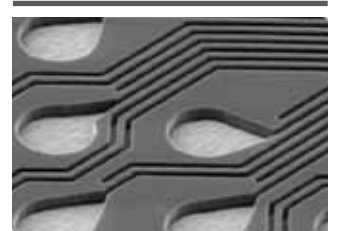
- High uniformity, fine-feature imaging using LSO Technology™
- Minimum feature size of 8µm, minimum pitch of 20µm
- Dynamic scaling modes for a range of complex applications
- Registration accuracy down to ±5µm
- Supports SAP, MSAP & subtractive processes

Ease of Use

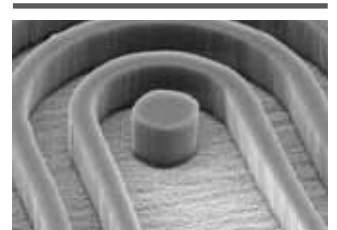
- Intuitive and user-friendly interface for fast set-up
- Recognizes a wide array of different target types
- Optional target generation with integrated UV marker
- Exceptional results on both conventional UV and LDI resists

Automated Operation

- Fast throughput using enhanced electronics and powerful laser
- Minimized handling for increased efficiency
- Flexible configuration – stand-alone, in-line or robotic system
- Seamlessly integrated automation
- Clean, handling-free environment



Pitch 20µm



Feature size 8µm



Highest Imaging Quality for IC Substrate Manufacturing

Paragon™-Ultra 300 is specially designed for the production of IC substrates and proven in a variety of processes including semi-additive, modified versions of semi-additive and subtractive. Utilizing the leading-edge capabilities of Orbotech's LSO Technology™, the highest level of imaging quality is ensured at fine resolutions. Several dynamic scaling modes flexibly accommodate a range of complex applications with feature sizes down to 8µm and minimum pitch of 20µm. The system achieves registration accuracy and tight annular rings within ±5µm.

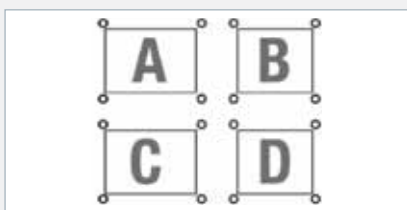
Registration Accuracy

- Side-to-side registration down to 10µm for inner layers
- Annular ring (±5µm, FTG) and imaging of smaller landing pads

Dynamic Scaling Modes

- Different scale factors per panel: a panel can be subdivided for scaling purposes
- Most effective and accurate sub-area registration using "Partial Scaling" in one shot
- Each panel and area can be scaled according to its distortion

CAM Data



Panel



Imaging



Partial Scaling enables sub-area registration and printing in one shot.

Ease of Use

Operating Paragon™-Ultra 300 is fast and easy with its user-friendly interface. Job setup is performed in an intuitive, step-by-step procedure utilizing downloaded CAM data. The system automatically recognizes a wide array of different target types. At the press of a button, Paragon™-Ultra 300 images each panel at full production throughput according to user-defined parameters. Exceptional results are achieved on either conventional UV or LDI resists.

Automated Operation

Paragon™-Ultra 300 systems are available in in-line and stand-alone automated configurations to suit your production requirements. Paragon™-Ultra 300 operates in a clean, hands-free environment for minimized handling damage and increased efficiency. It is also specially designed as a lighter weight system with a small footprint to save on operational costs.