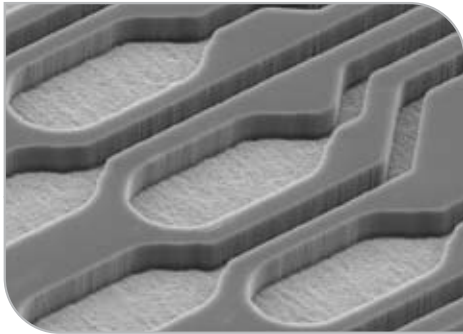


Paragon™ - Ultra Family Laser Direct Imaging Solutions

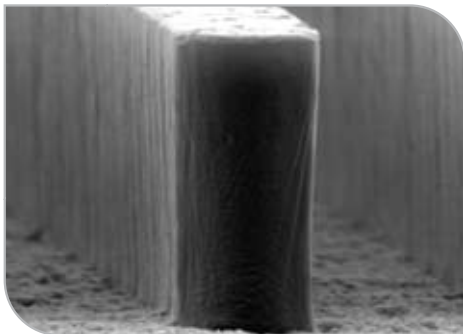


Paragon™ - Ultra Family

Flip-Chip BGA and Flip-Chip CSP manufacturing with Orbotech's field-proven Laser Direct Imaging (LDI) solutions increases accuracy and ensures higher yields. The Paragon-Ultra family is designed for Flip-Chip applications in a Semi-Additive Process and in Modified versions of a Semi-Additive Process. Now you can enjoy all the benefits of Orbotech's LDI and achieve the highest imaging quality with a simplified operation.



Pitch 30µm



Feature size 12µm

Benefits

- Minimum feature size of 12µm and minimum pitch of 30µm enables Flip-Chip manufacturing in a SAP and Modified versions of SAP
- Superior accuracy for tighter annular rings
- Several imaging modes to best suit your process
- Intuitive and user friendly interface for fast and easy set-up
- Automated solution for increased yields
- Uses conventional UV resists
- Proven performance – working in production at many Flip-Chip manufacturing sites worldwide





Feature Size and Pitch

Suitable for your FC-BGA and FC-CSP production requirements

- Minimum feature size = 12 μ m
- Minimum pitch = 30 μ m
- Proven in production on SAP and Modified versions of SAP

Registration Accuracy

- Side-to-side registration: maximum accuracy of 10 μ m for inner layers
- Annular ring: with superior accuracy (<5 μ m, FtG), smaller landing pads can be imaged

Dynamic Imaging Modes

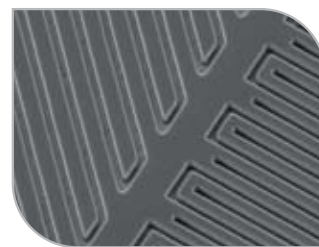
- Adjustment per panel: each individual panel can be scaled according to its distortion
- Different scale factors in one panel: a panel can be subdivided for scaling purposes
- User feedback: results of each image can be used to improve future image results

Ease-of-Use

- Intuitive and user friendly interface for fast and easy set-up
- Recognizes a wide array of different target types
- Option for target generation with integrated UV marker system
- Uses conventional resists - no need for special LDI resists

Automated Solution for Increased Yields

- Maximum choice of automation vendor to increase efficiency with minimized handling
- Maximum flexibility in configuration choice – stand-alone, in-line, or robotic system
- Maximum support from Orbotech's global team of service engineers



Line and Space of 12/18 μ m
Pitch 30 μ m