

Orbotech Nuvogo™ 50F/50FXL

Mass Production, Fine Line Direct Imaging (DI)



Orbotech Nuvogo 50F/50FXL

Orbotech Nuvogo™ 50F/50FXL is a mass production direct imaging solution, optimized for HDI, Flex and Rigid-Flex PCBs. Featuring KLA's field-proven Large Scan Optics (LSO)™ technology, an optimized optical path and advanced scaling algorithms, Orbotech Nuvogo 50F/50FXL ensures high imaging performance and line quality. With a production capacity of up to 7,000 panels per day, per line, the system is highly efficient, maintaining excellent quality at maximum speed, while reducing total cost of ownership (TCO).



Benefits

Mass Production Digital Imaging

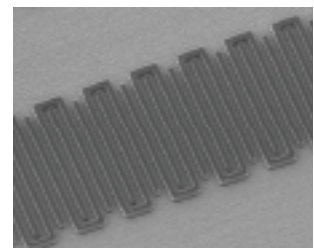
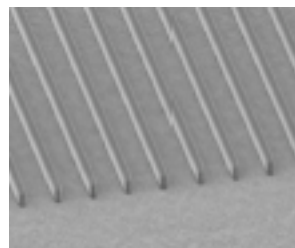
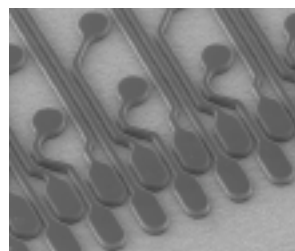
- High capacity: up to 7,000 panels/day/line
- Efficiency through fast target acquisition
- Optimized imaging time with dual table transport mechanism

High Imaging Quality

- Optimal line structure down to 15/15µm L/S
- High depth-of-focus (DOF) for challenging topographies
- Advanced scaling modes for optimal registration ($\pm 10\mu\text{m}$)

High Efficiency

- Effective job queue management for maximum productivity
- Maximum productivity through effective queue management
- Automation-ready for seamless production
- Low cost-per-print (CPP) resulting from high throughput

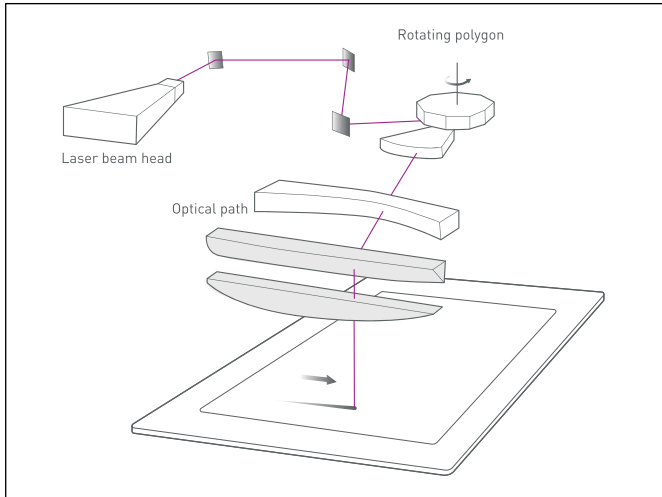


15/15µm Fine Lines/Spaces

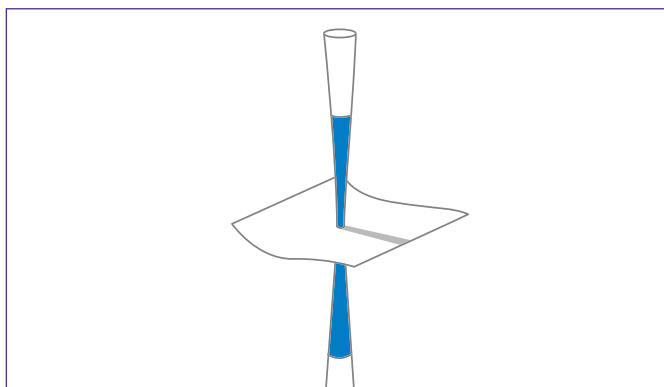


LSO™ Technology

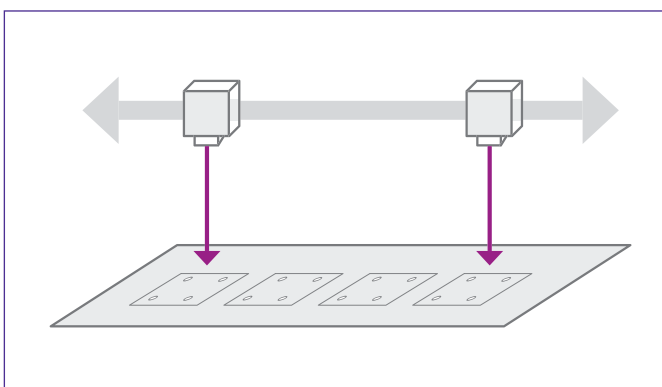
High Imaging Quality



Superior Line Structure in a Single Scan, Enabled by KLA's LSO™ Technology

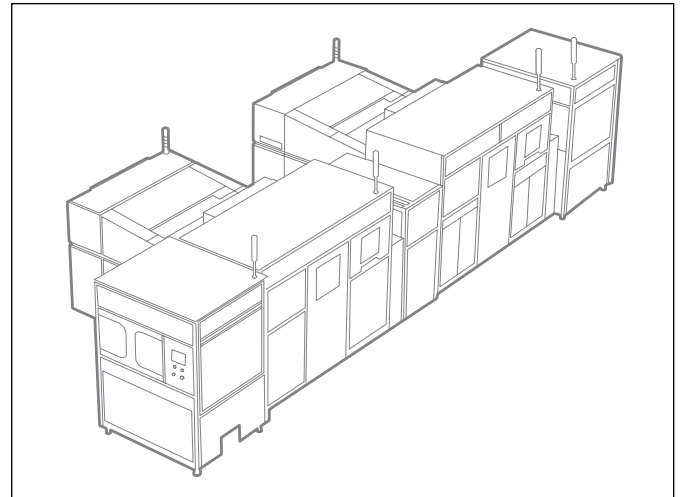


High Depth-of-Focus (DOF) for Challenging Topographies



On-the-Fly Target Recognition and Acquisition

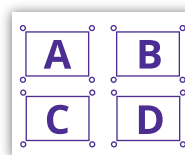
High Capacity Mass Production Solution



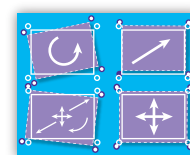
Automation-Ready Solution

Advanced Scaling Modes

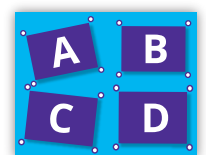
- Wise Scaling – best scaling mode for mass production, achieving highest panel unification in the batch
- Auto scaling/fixed scaling/group scaling
- Partial Scaling – sub-area registration for thin core layers
- Extremely fast target acquisition for minimum throughput loss



CAM data



Panel



Imaging

Traceability

Orbotech Nuvogo supports panel tracking. Marking options include: serial number stamp, sub-panel and PCB ID, date and time stamp, scaling stamp and machine ID.

Specifications

	Orbotech Nuvogo 50F	Orbotech Nuvogo 50FXL
Maximum Throughput*	300 prints/hour Imaging Size 24" x 18"	290 prints/hour Imaging Size 25" x 18"
Minimum Line/Space*	15/15µm	
Address Resolution	1.5µm	
Registration Accuracy FtG**	±10µm	
Side-to-Side Registration FtB**	20µm	
Maximum Substrate Size	635mm x 660mm 25" x 26"	660mm x 812mm 26" x 32"
Maximum Exposure Area	609.6mm x 660mm 24" x 26"	635mm x 812mm 25" x 32"
Substrate Thickness	0.025mm - 8mm	
Imaging Energy Range	10 - 2,200mJ/cm ²	

* Dependent on resist type, energy, target acquisition and scaling calculation.

** All values are 3σ, any panel size, 4 targets.

The above specifications are subject to change without notification.

KLA SERVICES

From tool installation and system optimization to productivity enhancements and global supply chain management, KLA Services is a trusted partner to customers around the world — delivering an unrivaled experience focused on maximizing tool performance and availability.

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