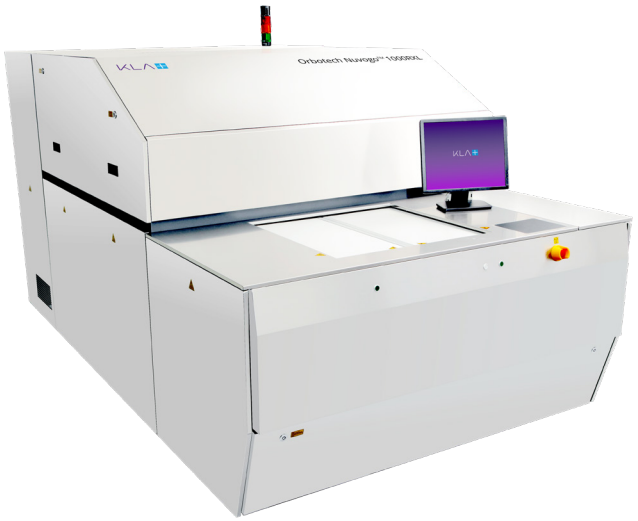
Orbotech Nuvogo™ 1000R/1000RXL

Mass Production Direct Imaging (DI)

Orbotech Nuvogo 1000R/1000RXL

Orbotech Nuvogo 1000R/1000RXL is a mass production Direct Imaging (DI) solution. Utilizing KLA's field-proven Large Scan Optics (LSO)™ technology and the MultiWave Laser™ technology, this solution provides high imaging quality while maintaining maximum flexibility on a wide range of resists and processes. In addition, It is designed for high throughput of up to 7,000 panels per day per line, helping to decrease total cost of ownership (TCO) while maintaining optimal quality at high speeds.



Benefits

Mass Production Digital Imaging

- Up to 7000 panels/day/line using automated in-line solution (300 panels per hour, per line)
- Fast and easy setup, operator friendly, fast "on-the-fly" target acquisition
- Optimized imaging time with dual table transport mechanism
- Clean and handling-free solution

High Power MultiWave Laser Technology for Maximum Resist Flexibility

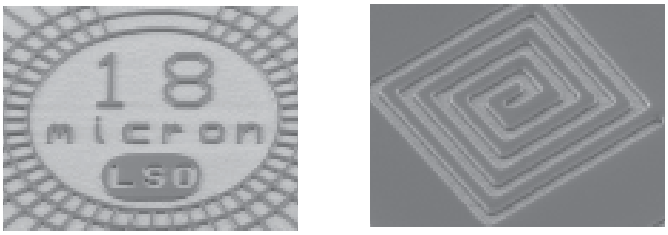
- Optimized for "low sensitivity" resists, including solder mask
- High uniformity and line-structure quality

High Imaging Quality with LSO Technology

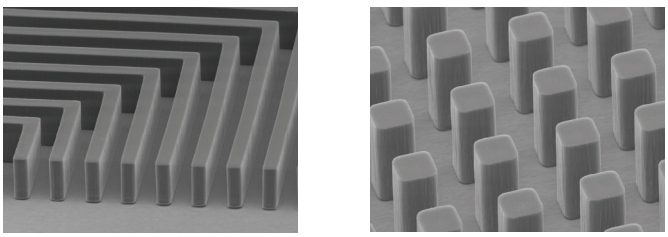
- Unique optics design for optimal line structure down to 18µm L/S
- High depth-of-focus (DOF) for unmatched quality on variating surface topographies
- Advanced scaling modes for optimal registration of ±10µm

Lower Total Cost of Ownership (TCO)

- High efficiency for significant long-term savings
- Suitable for a wide variety of resist types, offering the option to use lower-cost materials and solder mask



Fine lines/spaces of 18µm



Double lamination resist achieved with MultiWave Laser™ technology

Technologies

LSO™ Technology

MultiWave Laser™ Technology

Mass Production Digital Imaging

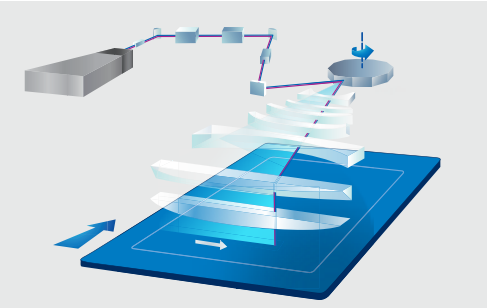
Equipped with advanced optics and electronics, this series is designed to achieve fine-line structures at high speeds of up to 300 panels/hour per in-line solution (automated set of two systems). Orbotech Nuvogo DI operates in a clean, hands-free environment, ensuring no handling damage. Its dual table transport mechanism achieves maximum use of system time for panel imaging. The system's fast set-up capabilities and automatic acquisition of targets facilitate smooth job changes.

High Power MultiWave Laser Technology for Maximum Resist Flexibility

Orbotech Nuvogo 1000R/1000RXL is powered by KLA's high power MultiWave Laser technology which provides maximum flexibility to match any resist or solder resist and is designed to fit all forms and processes. The adaptable multi-wavelength laser delivers incomparable line structure quality and superior uniformity on a variety of photoresists.

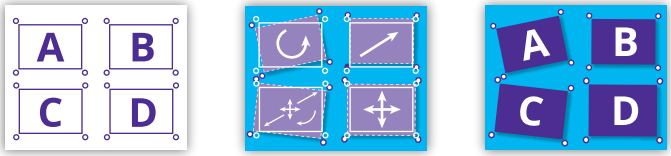
High Imaging Quality with LSO Technology

Orbotech Nuvogo 1000R/1000RXL incorporates KLA's field-proven Large Scan Optics (LSO) technology to deliver depth-of-focus. A single scan allows uniform imaging of the entire panel, and produces superior results on panels with varied topographies.



Various Scaling Modes

- Wise scaling - best scaling mode for mass production, achieving a balance between tight registration and low panel variation
- Auto scaling/fixed scaling/group scaling/non-linear scaling
- Partial scaling - sub-area registration for thin core layers, with any type of scaling
- Extremely fast target acquisition enables highest throughput



CAM data Panel Imaging

Registration Accuracy

Featuring registration accuracy of ±10µm, annular rings with microvias can be stacked with greater precision.

Ease-of-Use

- Operator-friendly, intuitive graphical user interface
- Seamless connectivity to CAM for fast and easy set-up
- Recognizes many different target types to meet any production demands

Traceability

Enables panel tracking by marking: serial number stamp; sub-panel and PCB; date and time stamp; scaling stamp and machine ID by alphanumeric stamping or 1-D/2-D barcode (Data Matrix Code).

Lower Total Cost of Ownership (TCO)

Orbotech Nuvogo™ DI series enables a reduced total cost of ownership while meeting the industry's increasing demands for high-end mass production. In addition to its reliable light source and efficient power consumption, Orbotech 1000R/1000RXL offers PCB manufacturers greater flexibility and lower operational costs by using a wide variety of resists. Orbotech Nuvogo 1000R/1000RXL delivers a high capacity, high quality and highly efficient production process.

Specifications

	Orbotech Nuvogo 1000R	Orbotech Nuvogo 1000RXL
Maximum Throughput*	300 prints/h Imaging Size 24" x 18"	290 prints/h Imaging Size 25" x 18"
Minimum Feature Size*	18µm	
Imaging Energy Range	25 - 2,200mJ/cm²	
Address Resolution	2.0µm	
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	

* Depends on photoresist properties
** All values are 3σ, any panel size, 4 targets

The above specifications are subject to change without notification.

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