

Orbotech Nuvogo™ 780/780XL

Mass Production Direct Imaging (DI)



Orbotech Nuvogo 780/780XL

Orbotech Nuvogo 780/780XL is a mass production Direct Imaging (DI) solution, optimized for MLB and HDI PCB makers. Utilizing KLA's field-proven Large Scan Optics (LSO)™ technology and MultiWave Laser™ technology, this solution provides high imaging quality while maintaining maximum flexibility on a wide range of resists and processes, reducing Total Cost of Ownership (TCO).



Benefits

Mass Production Digital Imaging

- High power laser for highest throughput
- Optimized imaging time with dual table transport mechanism
- In-line solution and fully-integrated automation for seamless production
- Clean, handling-free production environment

MultiWave Laser Technology for Maximum Resist Flexibility

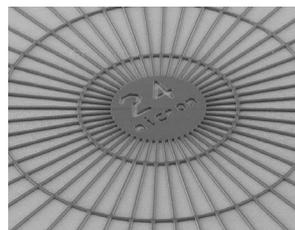
- Ensures flexibility to address a wide range of resists with the highest throughput
- MultiWave Laser technology brings unmatched quality and uniformity of line structure

High Imaging Quality with LSO Technology

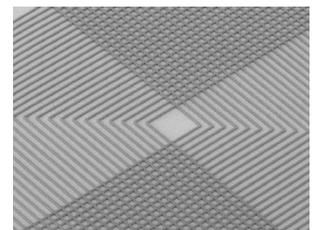
- High depth-of-focus for high quality on varying surface topographies
- Unique optics design for optimal line structure
- Optimal scaling modes for superior registration accuracy of $\pm 12\mu\text{m}$

Lower Total Cost of Ownership (TCO)

- Increased overall efficiency for significant long-term savings
- Suited for a wide variety of resists, offering the option to use lower-cost materials



Fine lines/spaces of $24\mu\text{m}$



Double lamination resist achieved with MultiWave Laser technology

Technologies



LSO™ Technology



MultiWave Laser™ Technology

Mass Production Digital Imaging

Orbotech Nuvogo 780/780XL utilizes KLA's high power MultiWave Laser technology. Equipped with advanced optics and electronics, it is designed to achieve fine structures at high speeds. Its dual table transport mechanism achieves maximum use of system time for panel imaging. Furthermore, the system's fast setup capabilities and automatic acquisition of targets facilitate smooth job changes. Orbotech Nuvogo 780/780XL also operates in a clean, hands-free environment, to ensure that there is no handling damage.

High Power MultiWave Laser for Maximum Resist Flexibility

Orbotech Nuvogo 780/780XL is powered by KLA's high power MultiWave Laser which delivers unparalleled structure quality on a wide variety of resists matching MLB and HDI resist type requirements.

High Imaging Quality with KLA's LSO Technology

Orbotech Nuvogo 780/780XL incorporates KLA's field-proven Large Scan Optics (LSO) technology to deliver high depth-of-focus for superior results on panels with varied topographies. Furthermore, the single scan allows uniform imaging of the entire panel.

Various Scaling Modes

- Auto Scaling/Fixed Scaling/Group Scaling/Wise Scaling

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 barcode/2-D barcode (Data Matrix Code)

Registration Accuracy

- Registration accuracy of $\pm 12\mu\text{m}$

Ease-of-Use

- Operator-friendly, intuitive graphical user interface
- Seamless connectivity to CAM ensures fast and easy set-up
- Recognizes a wide array of different target types to meet any production demands

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 Nuvogo 780/780XL offers PCB manufacturers greater flexibility and lower operational costs by using a wide variety of resists. Orbotech Nuvogo 780/780XL delivers a high capacity, high quality and highly efficient production process.

Specifications

	Orbotech Nuvogo 780	Orbotech Nuvogo 780XL
Maximum Throughput*	300 prints/h Imaging Size 24" x 18"	290 prints/h Imaging Size 25" x 18"
Minimum Feature Size*	24µm	
Address Resolution	2.0µm	
Registration Accuracy (FtG)**	±12µm	
Side-to-Side Registration (FtB)**	24µm	
Maximum Substrate Size	635mm x 660mm	660mm x 812mm
Maximum Exposure Area	609.6mm x 660mm	635mm x 812mm
Substrate Thickness	0.025mm - 8mm	
Imaging Energy Range	25 - 2,200mJ/cm ²	

*Depends on resolution and photoresist properties

** All values are 3σ, full format

The above specifications are subject to change without notification.

KLA SUPPORT

Maintaining system productivity is an integral part of KLA's yield optimization solution. Efforts in this area include system maintenance, global supply chain management, cost reduction and obsolescence mitigation, system relocation, performance and productivity enhancements, and certified tool resale.

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Rev 8.0_5-11-2022