

# NUVOGO™ 800XL

The New Way of Imaging



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## The New Way of Imaging.

Nuvogo™ 800XL is a leading Direct Imaging (DI) solution for mass production digital imaging of fine-line HDI, Flex, Rigid-Flex and MLB applications. This cutting-edge system is powered by the new MultiWave Laser Technology™, which simultaneously generates a multi-wavelength laser beam, offering maximum robustness on a vast range of resist types. Based on Orbotech's field-proven Large Scan Optics (LSO) Technology™, this system's large format is designed for unprecedented throughput of up to 6,500 panels per day per line, helping to decrease total cost of ownership while maintaining optimal quality at high speeds.

### Benefits

#### Leading Mass Production Digital Imaging

- Up to 6500 panels / day / line using automated in-line solution (290 panels per hour, per line)
- Fully-integrated automation for seamless production
- Fast and easy setup; operator friendly
- Clean, handling-free environment
- Dual table transport mechanism for optimal imaging time

#### MultiWave Laser Technology™ for Maximum Resist Robustness

- Compatible with any resist for maximum flexibility; supports optimal factory utilization
- Unmatched uniformity of line-structure quality

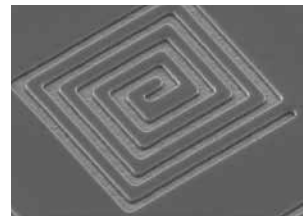
#### Highest Imaging Quality with LSO Technology™

- Resolution of 18µm lines and spaces for the most advanced HDI production
- High depth-of-focus up to ±300µm
- Advanced scaling modes for optimal registration

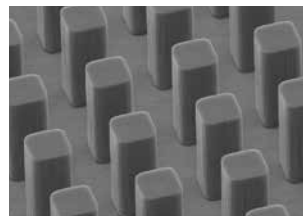
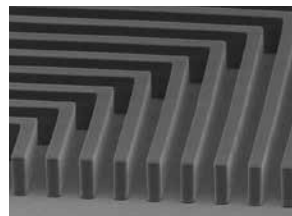
#### Lower Total Cost of Ownership (TCO)

- Up to 40% lower service cost per print
- Increased overall efficiency for significant long-term savings
- Suitable for a wide variety of resist types, offering the option to use lower-cost materials

### Microscope image



Fine lines and spaces of 18µm for the most advanced applications



Double lamination resist achieved with MultiWave Laser Technology™



### Leading Mass Production Digital Imaging

Nuvogo™ 800XL's cutting-edge digital imaging solution sets a new standard in DI for mass production of high-end electronic devices. Equipped with the industry's most advanced optics and electronics using the MultiWave Laser Technology™, Nuvogo™ 800XL is designed to achieve fine-line structures at unmatched speeds.

Nuvogo™ 800XL raises the bar by delivering high throughput of up to 290 panels/hour per in-line solution (automated set of two systems). Orbotech's proven dual table transport mechanism allows the system to achieve maximum use of system time for panel imaging. Smooth job changes are facilitated by the system's fast setup capabilities and automatic acquisition of targets. Nuvogo™ 800XL operates in a clean, hands-free environment, ensuring no handling damage.

### MultiWave Laser Technology™ for Maximum Resist Robustness

Powered by MultiWave Laser Technology™, Nuvogo™ 800XL offers maximal flexibility by matching any resist to fit all practices. Adaptable multi-wavelength laser offers unrivaled power and precision for superior uniformity in line-structure quality. Nuvogo™ 800XL works in sync with Orbotech's field-proven LSO Technology™ to achieve an enhanced depth-of-focus for superior results on panel topography changes (thin layers, Flex and Rigid-Flex). Designed for optimal production flexibility through maximum resist robustness, Nuvogo™ 800XL supports optimal capacity utilization helping to reduce overall operational costs and ensure a faster return on investment.

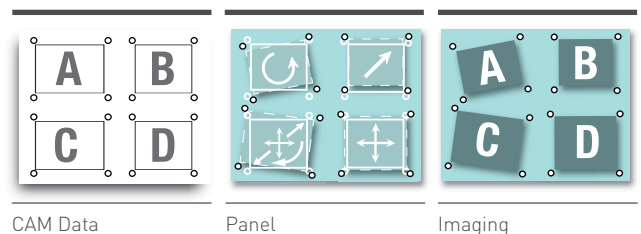
### Highest Imaging Quality with LSO Technology™

#### Registration Accuracy

Featuring registration accuracy down to  $\pm 10\mu\text{m}$ , annular rings with microvias can be stacked with greater precision

#### Innovative 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



### Depth-of-Focus (D.o.F.)

- D.o.F up to  $\pm 300\mu\text{m}$  for overcoming the most challenging surface topography changes and/or any distortion or abnormalities with the most advanced image quality
- Single scan for Rigid-Flex allows uniform imaging of the entire panel

### Resolution and Line Uniformity

Best line uniformity (down to  $18\mu\text{m}$ ) achieved using LSO Technology™ and a powerful light source

### 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

## 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).

## Lower Total Cost of Ownership (TCO)

Nuvogo™ 800XL ensures greatly reduced total cost of ownership, while still being able to meet the industry's increasing demands for high-end mass production. With up to 40% less service cost per print, the system offers manufacturers a significantly lower TCO to quickly achieve maximum ROI. Setting a new industry standard, the system provides efficient power consumption while still providing a powerful light source and the most sophisticated optical and electronic systems. As the system is suitable for a wide variety of resist types, manufacturers are afforded the flexibility to choose lower-cost resist types whenever possible in order to further reduce total operating costs.