

Orbotech Diamond™ GWXL

Direct Imaging for White Solder Mask on Glass

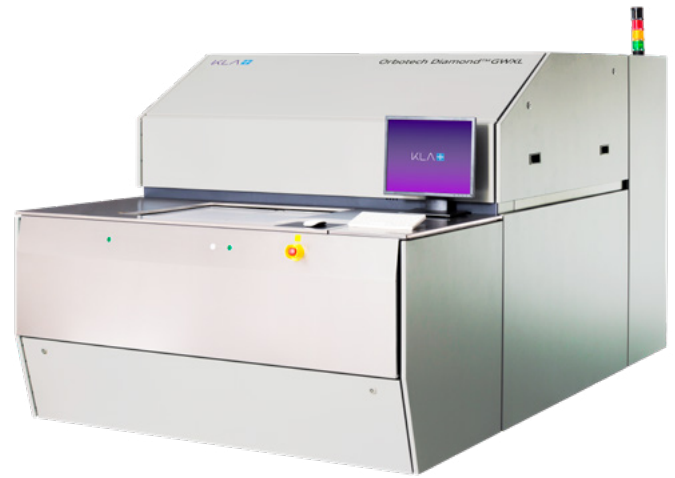


Orbotech Diamond GWXL

Orbotech Diamond GWXL is an advanced high-capacity direct imaging (DI) solution exclusively designed for the unique challenges of white solder mask applications on glass substrate (e.g. miniLED).

The Orbotech Diamond GWXL is a dedicated system for white solder mask that delivers high-quality and high throughput, based on the field proven Orbotech Diamond 10W solution.

Powered by KLA's proprietary SolderFast™ technology, Orbotech Diamond GWXL raises the DI bar for white solder mask applications, enhancing imaging accuracy and quality, while decreasing total cost of ownership (TCO).



Benefits

High-Quality Imaging

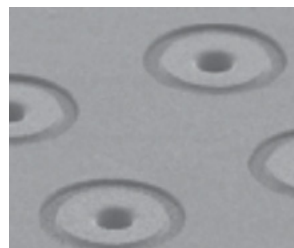
- High quality imaging of white solder masks on glass
- Multi-wavelength spectrum for high-quality sidewalls and excellent surface quality
- Significantly reduced undercuts for white solder masks
- High depth of focus (DOF) for challenging topographies

High Capacity, High Throughput

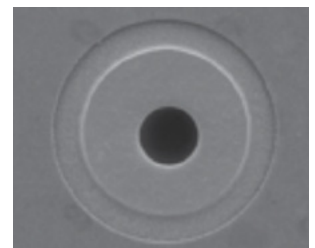
- Patented, high power illumination source
- One-Pass Exposure for uniform imaging of the full panel area in a single print
- Dual-table transport mechanism for optimal imaging time
- On-the-fly target recognition and acquisition capabilities
- Automation ready for unique glass handling

Outstanding Imaging Accuracy

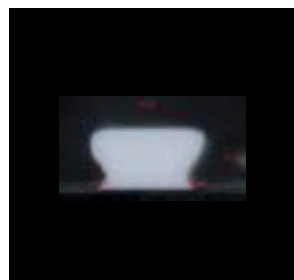
- Registration accuracy as fine as $\pm 10\mu\text{m}$
- Unique registration methods for targets covered by white solder mask
- Advanced scaling modes for challenging panel distortions



High-quality SM imaging



High registration accuracy

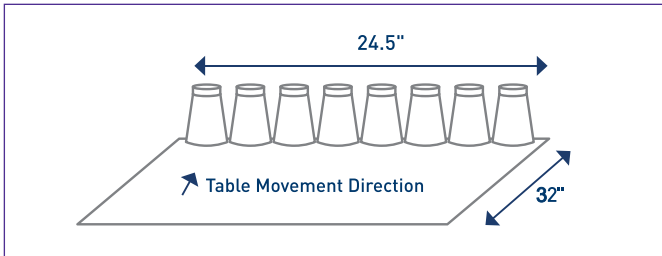


Orbotech Diamond GWXL
White SM Dam with
minimal undercut

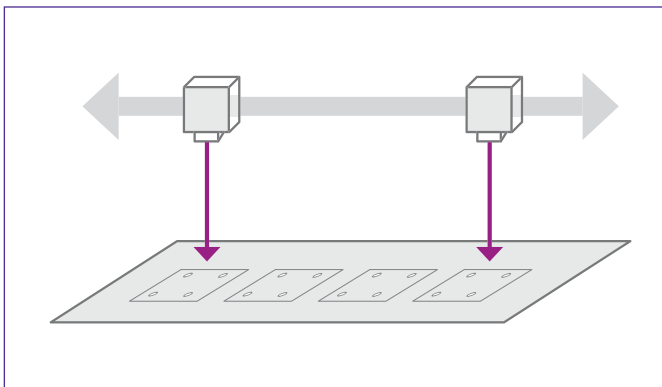


Other SM DI solution
White SM Dam with
severe undercut

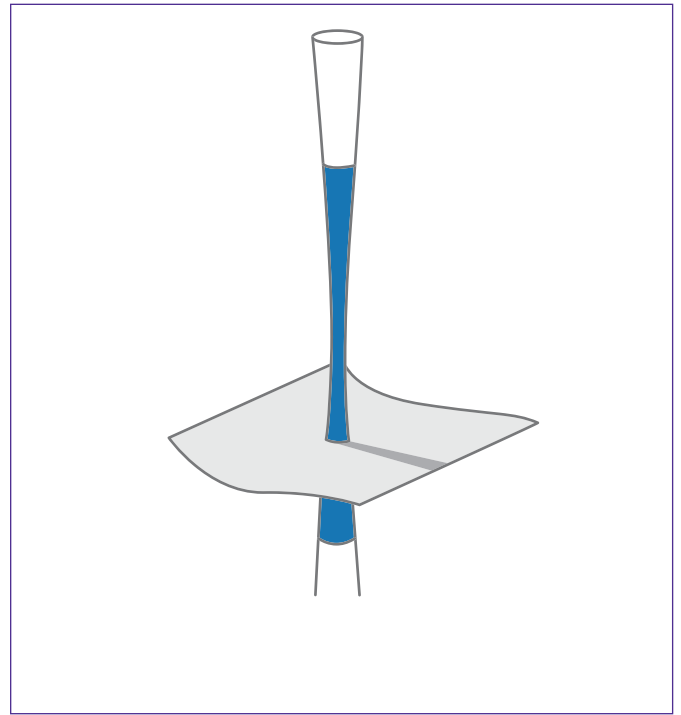




One pass printing for high throughput, high uniformity and no stitching



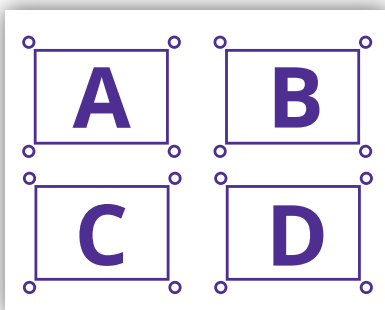
On-the-fly target recognition and acquisition



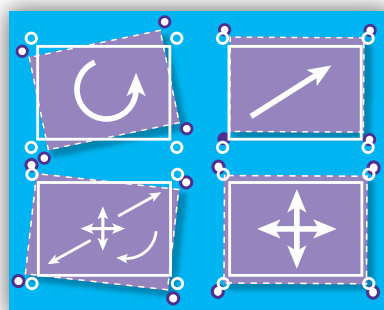
High depth of focus (DOF) for challenging topographies

Outstanding Imaging Accuracy

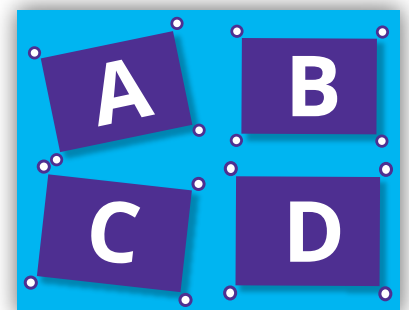
Advanced scaling modes and algorithms for challenging panel distortions include auto scaling, partial scaling, and non-linear scaling



CAM data



Panel



Imaging

Specifications

Minimum SRO*	100µm
Minimum Dam Size*	75µm
Registration Accuracy**	±10µm
Maximum Panel Area (X/Y)	25" x 32" (635mm x 812mm)
Maximum Exposure Area (X/Y)	24.5" x 32" (622mm x 812mm)
Exposure Energy Range	50-2,200 mJ/cm ²
Dimensions	Height: 1,960mm Depth: 3,315mm Width: 1,900mm
Weight	5,000Kg
Application	White solder mask exposure on glass substrate

*Dependent on solder resist type and process

** All values are 3σ

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.

© 2022 KLA Corporation. All rights reserved worldwide. KLA reserves the right to change the hardware and/or software specifications without notice. Orbotech is a registered trademark of Orbotech Limited, a KLA company. KLA and the KLA logo are registered trademarks of KLA Corporation. All brands or product names may be trademarks of their respective companies.

KLA Corporation
One Technology Drive
Milpitas, CA 95035
www.kla.com

Rev 1_3-10-2022