

Superior X-Ray Series

High-Performance Manual X-Ray of PWAs, Semiconductors and Hybrid Packages

KEY BENEFITS

- Enables inspection of printed wiring assemblies, semiconductor packaging and hybrid applications in a compact workstation configuration.
- Supports an extensive choice of X-ray sources, manipulators, image intensifiers and options.
- Meets the special nondestructive inspection requirements of today's production, research and development, and quality assurance departments.
- Supports a variety of cabinet sizes and sample manipulators for optimal flexibility.
- Offers the highest magnification and smallest spot size available.
- Enables processing of real-time X-ray images enabling repeatable, accurate results for both production and research applications.
- Offers easy upgrade to programmable motion for automated inspection.

THE SX SERIES OFFERS SMT AND SEMICONDUCTOR MANUFACTURERS YIELD MANAGEMENT SOLUTIONS TO REDUCE COSTS, IMPROVE QUALITY AND INCREASE THROUGHPUT.

UNSURPASSED PERFORMANCE

The Photon Dynamics Superior X-ray (SX) Series provides users with a high-resolution and high-magnification X-ray inspection capability in a flexible, compact workstation configuration. With its wide selection of X-ray sources, image intensifiers, sample manipulators and software, the SX Series is designed specifically to meet the special nondestructive inspection requirements of today's production, research and development, and quality assurance departments.

FLEXIBLE SOLUTION

Only the SX Series allows users to choose from a large range of X-ray sources. These include low-maintenance, sealed micro-focus tubes all the way to high-resolution demountable tubes with replaceable filaments and high geometric magnification. To accommodate future changes in inspection requirements, the SX Series is designed specifically to support future retrofit requirements.

VERSATILE SAMPLE MANIPULATORS

The SX Series is available with a variety of four-axis and five-axis sample manipulators. The SX Series offers up to 18" x 24" x-y travel for samples up to 5 pounds in weight. Full 360 degrees rotation, and tilt up to 30 degrees are also available. Photon Dynamics' unique stepper-motor drives provide the greatest range of motion available, from ultraslow use at high magnifications to high-speed over large distances. All SX systems are easily upgradable to programmable motion for automated inspection.

THE BEST IMAGE PROCESSING AVAILABLE

The SX Series is equipped with Photon Dynamics' own RTI-580 image processing system, designed for processing real-time X-ray images. Powerful and easy to use, RTI imaging systems provide repeatable, accurate results for both production and research applications.

The RTI-580 is available with Photon Dynamics' machine vision technology built in for fully automated inspection of die attach, bond wires, correct assembly, BGA soldering and other criteria. The SX-1000, as well as the SX-2000, which handles larger boards, are ideal solutions for nondestructive inspection needs. Photon Dynamics' technical staff will be glad to evaluate your samples and requirements at no charge, and recommend the most cost-effective SX Series configuration.

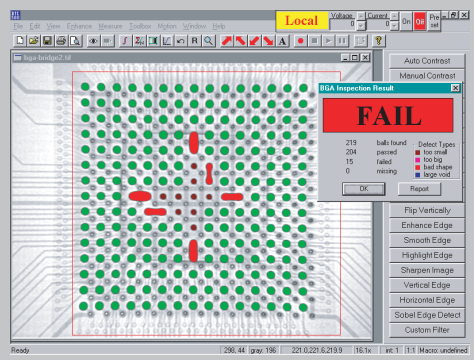


Performance

← High Resolution Flexible



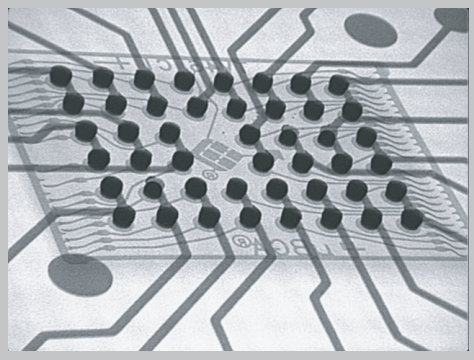
PHOTONDYNAMICS™



SUPERIOR X-RAY SERIES Specifications

ABOUT US

Photon Dynamics, Inc. is a leading global supplier of integrated yield management solutions for the display, electronics and glass markets. Founded in 1986, Photon Dynamics has sales offices and customer support services in San Jose and Aliso Viejo, California; Austin, Texas; Beijing, China; Eindhoven, The Netherlands; Hsinchu and Taipei, Taiwan; Markham, Ontario, Canada; Redhill, Surrey, UK; Seoul, Korea; and Tokyo, Japan.



PHOTONDYNAMICS™

Superior Solutions.
Superior Yields.

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TYPE	X-RAY KV	POWER	FOCAL SPOT SIZE MINIMUM	GEOMETRIC MAGNIFICATION*
DEMOUNTABLE REFLECTION TARGET	30-125 kV			
	30-160 kV	60 watts max	< 5 µm	2 to 150 x
	30-225 kV			
DEMOUNTABLE TRANSMISSION TARGET	20-125 kV			
	20-160 kV	20 watts max	1 µm	4 to 1,200 x
SEALED REFLECTION TARGET	20-80 kV	8 watts		2 to 75 x
	20-100 kV	10 watts		2 to 75 x
	20-130 kV	39 watts	8-10 µm	2 to 70 x
	20-150 kV	75 watts		2 to 70 x

* Based on 600 mm source to intensifier distance with 6" image intensifier.

CABINET TYPES

SX-1000 Standard Cabinet: 72" w x 48" d x 86" h (1,829 mm x 1,219 mm x 2,184 mm) cabinet with 12" x 12" x 18" (305 mm x 305 mm x 60 mm) X-Y-Z indexing table with joystick control. Designed for semiconductor, hybrid and printed circuit applications. Dimensions include control station.

SX-2000 Large Cabinet: 84" w x 60" d x 86" h (2,133 mm x 1,524 mm x 2,184 mm) cabinet with 18" x 24" x 18" (460 mm x 610 mm x 460 mm) X-Y-Z indexing table with joystick control. Designed for semiconductor and larger printed circuit board applications. Dimensions include control station.

Safety Photon Dynamics' X-ray systems are manufactured to comply with the federal standard for cabinet X-ray equipment as established in Title 21, Subchapter J of the code of federal regulation sections 1020.40. Lead is used to line the cabinet and door, with lead doped glass for the viewing window. Interlock switches ensure that X-ray radiation cannot be generated with any part of the cabinet opened or removed.

Specifications are subject to change without notice.

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