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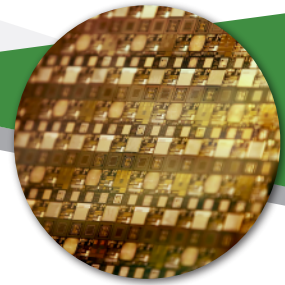
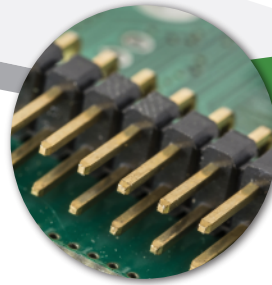
Coating Measurement Instruments

O SERIES XRF

High Precision Coating
Measurement System



What's Distinctive:
High performance for small samples



Who Benefits

The O Series desktop XRF is best suited to customers who have:

- › Very small parts/features such as semiconductors, connectors, or PCBs
- › Requirements to test many samples or locations per new lot of material
- › The need to measure ultra thin coatings (<100 nm)
- › Very short measurement times (1-5 seconds)
- › The need to meet the requirements of IPC-4552A

Key Features

The O Series combines high performance with a small x-ray spot size. This is enabled by a poly-capillary optics system which focuses the x-rays from the tube exit window to a spot size 80µm FWHM while retaining virtually 100% of the tube flux. Instead of attenuating the x-rays that can't fit through the small apertures, as with collimator systems, the poly-capillary optics assembly enables virtually all of the x-rays from the tube to reach the sample. The result is a greater sensitivity for testing very small components or thin coatings. Shorter test times produce even higher repeatability when comparing poly-capillary optics vs. a similar sized collimator.

Configuration

The standard configuration includes 80µm optics, a programmable X-Y sample stage, and a high resolution SDD detector to process the higher count rates. The camera has a 45x video magnification and 5x higher digital zoom. The optics system has a very close focal distance, so samples must be flat.

BOWMAN

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Made
in the USA



BOWMAN O SERIES XRF

Superior technically.
Supported locally.

Specifications

X-ray Excitation

50 W Mo target with Capillary Optics @80um FWHM

Detector

Silicon drifted detector with 135eV resolution

Focal Depth

Fixed at 0.1"

Video Magnification

45x: with Dual Camera

50x: with Single Camera on 15" screen

Working Environment:

68°F (20°C) to 77°F (25°C) and up to 98% RH, non-condensing

Weight

53kg

Programmable XY:

Table size: 15" x 13"

Travel: 6" x 5"

Element Range

Aluminum 13 to Uranium 92

Analysis layers and elements

5 layers (4 layers + base) and 10 elements in each layer.

Composition analysis of up to 25 elements simultaneously

Filters/Collimators

2 primary filters

Digital Pulse Processing

4096 CH digital multi-channel analyser with flexible shaping time. Automatic signal processing including dead time correction and escape peak correction

Processor:

Intel, CORE i5 3470 (3.2GHz), 8GB DDR3 Memory, Microsoft Windows 10 Prof, 64bit equivalent

Camera optics:

1/4" CMOS-1280x720 VGA resolution

Power Supply:

150W, 100~240 volts; frequency range 47Hz to 63Hz

Dimensions (HxWxD):

Internal: 140mm (5.5"), 310mm (12"), 340mm (13")

External: 450mm (18"), 450mm (18"), 600mm (24")

The Bowman Partner Network

Bowman's Partner Service Network was established to facilitate large multi-national projects in the PCB industry. Today, it has become the model for XRF technical service worldwide, serving board shops, electronics manufacturers, automotive and aerospace OEMs, jewelry manufacturers, and contract metal finishers in all sectors.

The Bowman Partner Network enables XRF technical service experts worldwide to provide same-day response to every service, repair and upgrade requirement.



Bowman global partners are certified annually, and maintain the highest standards of excellence and best practices.



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