

■specification

	Manual Table	Automatic Table
Table Size (mm)	170 x 110	240 x 220
Moving Range X (mm)	70	200
Moving Range Y (mm)	70	200
Moving Range Z (mm)	80	50
Max. Height of Object (mm)	80 (option 150)	50
Size of Main Unit (mm)	600(W) x 465(D) x 754(H)	
Weight of Main Unit (kg)	79	85
Max. Weight of Object (kg)	3	1

X-ray source (standard)	Micro focus X-ray tube / Target: Tungsten / Tube voltage: 50kV / Tube current: Max. 1.2mA
collimator	5 types (automatic switching) / 0.1, 0.2, 0.5, 1.0, 2.0φmm / (option) 0.05×0.5, 0.05φ
Irradiation method	Top vertical irradiation method
Detector	proportional counter
material observation	CCD color camera
filter	2 types (Co, Ni) automatic switching
Measurement target	Atomic number 22 (Ti) to 83 (Bi) / Atomic number 21 or less can be measured by the absorption method
Measurable range	Atomic number 22 to 24: 0.02 to about 20 μm Atomic number 25 to 40: 0.02 to about 30 μm Atomic number 41 to 51: 0.02 to approx. 70 μm Atomic number 52 to 83: 0.01 to approx. 10 μm
Calibration curve	Calibration curve automatic creation function / multipoint calibration curve
Correction function	base correction
application	Single-layer plating measurement / 2-layer plating measurement / 3-layer plating measurement / Alloy plating thickness measurement and component ratio measurement Electroless nickel plating measurement
Measurement function (common)	Automatic measurement / output format setting / automatic measurement condition setting / spectrum measurement / distance measurement between two points
Automatic stage function	Measurement position specification (X-Y-Z) / Same pattern repeat function / Origin correction function / Measurement position confirmation function / automatic calibration
Data processing	Statistics display: average, standard deviation, maximum, minimum, range, Cp, Cpk / histogram Profile display / 3D display of measured data / □-R control chart
Safety function	X-ray power key switch / fail-safe function
Other features	Stage coordinate display / equipment maintenance

As models change, manufacturer reserves the right to change specifications without notice.

EX-731

X-ray Fluorescence Coating Thickness Tester



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X-ray Fluorescence Coating Thickness Tester

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Double-filter System

In addition to numerical filter, Co and Ni mechanical filters have been introduced. They allow more precise testing of Nickel on Copper or Copper on Zinc.

Control software ExWin

Control software on Windows PC is easy to operate. It is easy to send data to spreadsheet and word processor software.

Built-in five kinds of collimators

Standard :
0.1, 0.2, 0.5, 1.0, 2.0 mmφ
Option : 0.05mmφ

Body with slit

Body with slit allows to measure long samples.

Automatic table

Automatic table type can use following function.

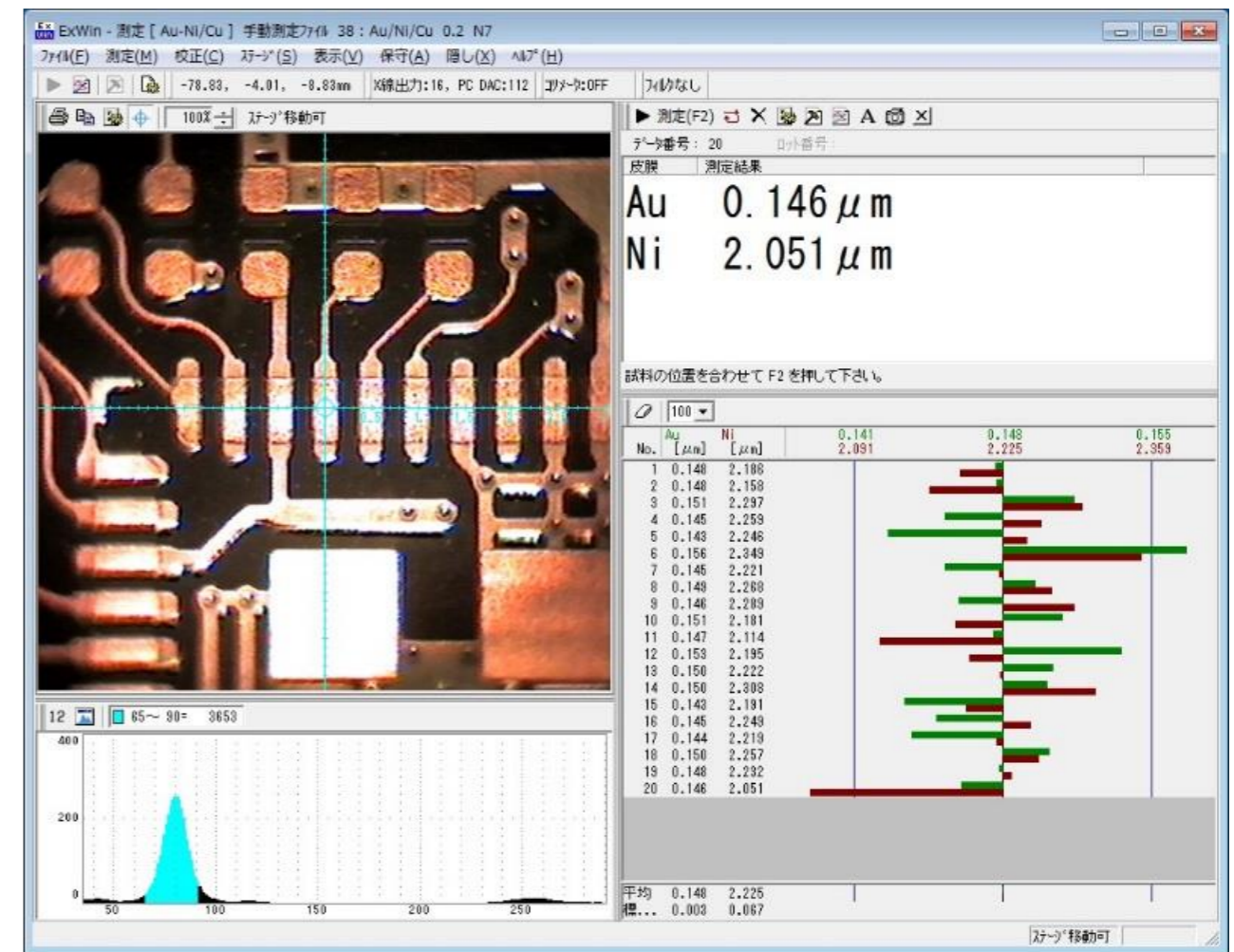
- Automatic measuring
- Automatic calibration
- Move by mouse click
- Measuring surface distribution
- Measuring 2 points distance

Data process

Several statistics and charts can be displayed and printed.

Be window X-ray tube

Be window X-ray tube is available (option). Using Be window X-ray tube can do more precise measurement by small collimator like 0.05mmφ, or of low atomic number elements like Titanium and Chromium.



Measurement conditions of plating/base material by non-numeric method

combination	Measurement condition [μm]	
plating	base material	
Cr	Fe	0.02~20
	Ni	
	Cu,Zn,BRS, etc	
Ni Ni-P	Fe	0.02~30
	Cu	
	BRS	
Cu	Fe	0.02~30
	Zn,BRS	
Zn	Fe	0.02~45
	Cu	
Ag	Fe,Cu,Zn,BRS	0.02~50
Sn	Fe,Cu,Zn,BRS	0.05~90
Au	Ni	0.01~8.0
	Cu	
Sn-Pb alloy	Cu,Ni	0.1~50 (Pb:10%)※1
Cr/Ni	Fe	Cr:0.01~5.0 Ni:0.1~20
	Cu	
	BRS	

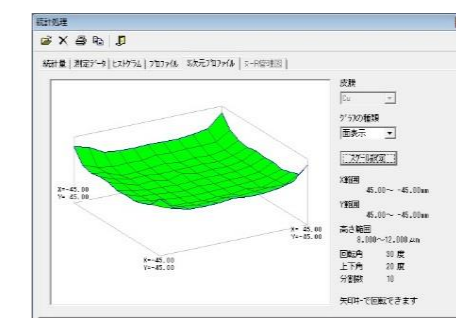
combination	Measurement condition [μm]
plating	base material
Ni/Cu	Fe Ni:0.02~20 Cu:0.1~20
Ag/Ni	Cu Ag:0.02~5.0 Ni:0.1~20
	Fe
Ag/Cu	BRS Ag:0.02~5.0 Cu:0.1~20
	Fe
Sn/Ni	Cu Sn:0.05~4.0 Ni:0.1~20
	Fe
Sn/Cu	BRS Sn:0.05~4.0 Cu:0.1~20
	Fe
Au/Ni	Cu Au:0.01~2.0 Ni:0.1~20
	BRS
	Fe
Au/Ag	Cu Au:0.01~2.0 Ag:0.02~5.0
	Ni
Ni-Zn alloy	Fe ---

※1 It varies depending on the alloy ratio.

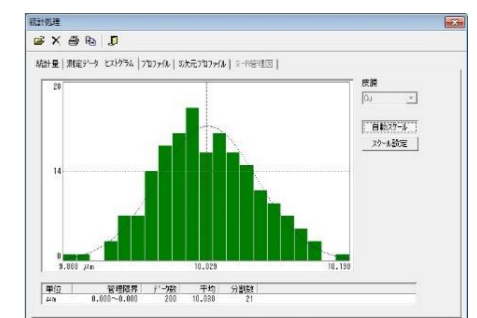
Main window (measuring)



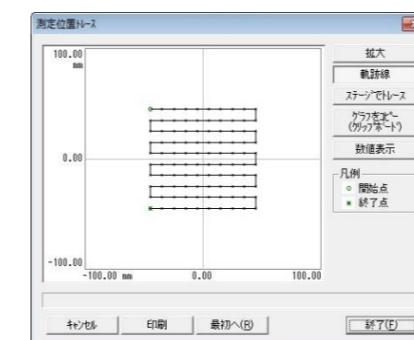
●Statistics



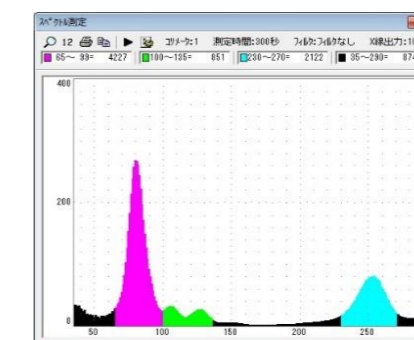
●3D-Chart



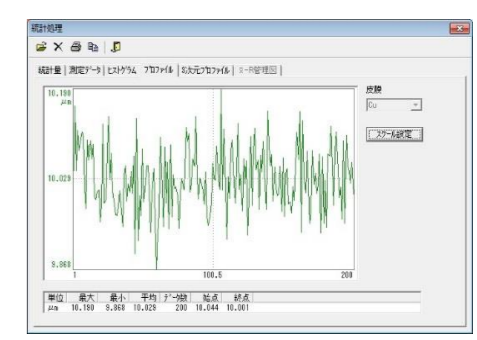
●Histogram



●Confirmation of measure point



●Spectrum



●Profile