HITACHI
Inspire the Next

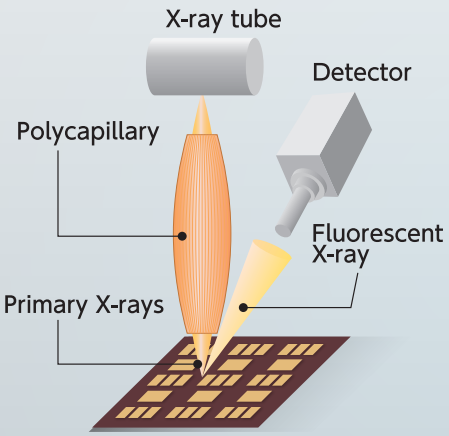
Fluorescent X-ray Coating Thickness Gauge

FT160 Series

FT160S, FT160, FT160L / FT160Sh, FT160h, FT160Lh

Latest in high end model. It provides high precision, high throughput in the coating thickness measurement of plating applied at nano-order level to small, microscopic electronic components, by featuring a polycapillary optic system and high count rate silicon drift detector.

■ Features of FT160 Series



▶ Polycapillary X-ray optic system.
Irradiating about 30 μmϕ high intensity primary X-ray beam enables high precision measurement.

▶ High performance Silicon Drift Detector(SDD).
High count rate SDD enables high precision measurement.

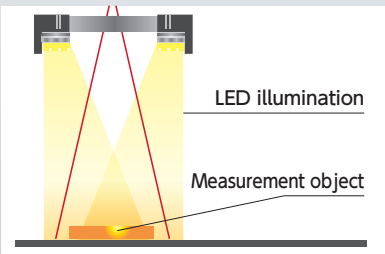
▶ Auto measure assist through image processing software.
Accurate multi-point auto measurement function increases efficiency..

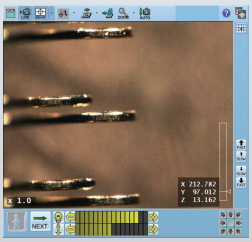
▶ Simple operation by simple software design and help function.
Easy operation by simple software design and help function.
Registering measure methods makes daily routine measurement easy.

▶ Safety-minded design for operator.
Sealed housing minimizes the risk of X-ray leakage.
Wide door design improves sample visibility and operability.

■ Improved visibility of samples

Samples having shape of bump or terminal contact may have difficulties at positioning the point of measurement, depending on how sample observation illumination is aligned.
FT160 redesigned illumination improves sample visibility and accuracy of positioning.




Conventional

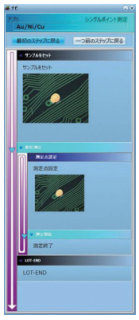

FT160 Series

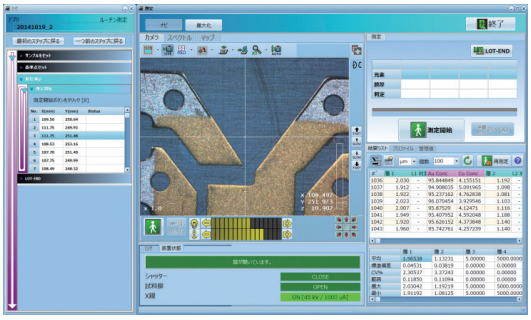
■Simple software (XRF Controller) for better usability

【Launcher Screen】
Select application from large icons.

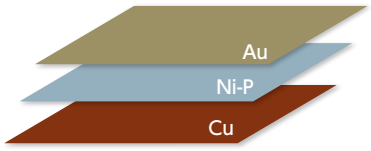
【Navigation Screen】
Verify next operation with Measurement Navigation.

【Screen at measuring】
Large sample image makes positioning of micro sample easy. Measurement results are automatically saved and compiled to data base.





■Measurement example of electroless Ni (EN) and immersion gold (IG) on PCB



Coating thickness and composition of ENIG plating by 30 repetitions measurement

FT160 conditions	
Method	Film FP
Time	100 S

	Au(μm)	Ni-P(μm)	P(wt%)
Average	0.094	3.25	8.52
SD	0.001	0.01	0.35
RSD (%)	0.8	0.5	4.1

■FT160 Series Basic Specifications

Exterior

Model	FT160S	FT160Sh	FT160	FT160h	FT160L	FT160Lh
Tube target	Mo	W	Mo	W	Mo	W
Targeted elements	$_{13}$Al to $_{92}$U		$_{13}$Al to $_{92}$U		$_{13}$Al to $_{92}$U	
Dimensions (mm)	690(W) × 900(D) × 710(H)		930(W) × 900(D) × 710(H)		1030(W) × 1260(D) × 710(H)	
Stage (mm)	300(W) × 245(D)		420(W) × 320(D)		620(W) × 620(D)	
Weight (kg)	150		160		175	
Stroke (mm)	300(X) × 260(Y)		400(X) × 300(Y)		300(X) × 300(Y)	
Measurable size(mm)	300(X)×245(Y)×80(Z)		400(X)×300(Y)×100(Z)		600(X) × 600(Y) × 20(Z)	

Hitachi High-Tech Science Corporation

Head Office
Toranomon Hills Business Tower, 1-17-1 Toranomon, Minato-ku, Tokyo 105-6409 TEL: (080) 1172-7021

Chubu Branch Office
13-19 Nishiki 2 Chome, Naka-ku, Nagoya-shi, Aichi 460-0003 TEL: (090) 2769-0829

Kansai Branch Office
3-31 Miyahara 3 Chome, Yodogawa-ku, Osaka-shi, Osaka 532-0003 TEL: (090) 2769-0647

Kyushu Branch Office
12-20 Kamikawabatamachi, Hakata-ku, Fukuoka-shi, Fukuoka 812-0026 TEL: (080) 8822-1954

https://www.hitachi-hightech.com/hhs/

⚠ **Safety caution**
In order to use product safely, be sure to read the operation manual first.

Notification of X-ray device installation
Notification of installation must be submitted to relevant labor standards inspection office 30 days before installation when installing an X-ray device.

2020-HHS-FT01/2020.04FT160E