Neo Instruments Co

Electroplating Coating Thickness Analyzer

NEO CP-TH7 is the latest X-ray fluorescence spectrometer launched by CIPU Technology, mainly designed for analyzing and detecting the thickness of multi-layer complex coatings on hardware components, electronic conductive communication parts, plastic shell electroplated parts, automotive components and connectors, cables, etc.

NEO CP-TH7 uses a semiconductor detector, which can be configured with a Si-PIN or SDD detector. It adopts 0.1-1mm multi-aperture collimators, suitable for detecting the electroplating thickness of small local areas of various components and the proportional detection of electroplating element composition.

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CP-TH7 Coating Thickness Analyzer

Configuration Advantages：

- ✧ A top-illuminated electroplating coating thickness detector with a detection limit of 0.001μm and a detection accuracy of RSD <1%. It can be configured with an SDD high-resolution thickness gauge.
- ✧ Equipped with a 12-megapixel high-definition camera to easily distinguish the test area.
- ✧ Manual adjustment of the XY platform for easy positioning of the test area.

Parameter Advantages:

- ✧ Multi-layer coating detection: Detection layer range 1-5 layers; detection range of element content in plating solution 1ppm - 99.99%.
- ✧ Mobile platform range 160×160mm, sample chamber height 120mm, crosshair positioning.
- ✧ Detected coating types: metal electroplating coatings, plastic electroplating coatings, electroplating solution liquids.

Software Advantages:

- ✧ Adopts multi-modal MultiRay-FP testing algorithm, with measurement accuracy and stability fluctuating in thousandths. Multiple repeated tests can be set, and relevant statistical data can be displayed: maximum value, minimum value, average value, relative standard deviation (RSD), etc.
- ✧ For alloy substrates/composite coatings, in addition to detecting coating thickness, it can display the composition ratio between elements, atomic percentage, or mass percentage.
- ✧ Diverse settings for print reports, classified storage, and printing of test records by different operators.

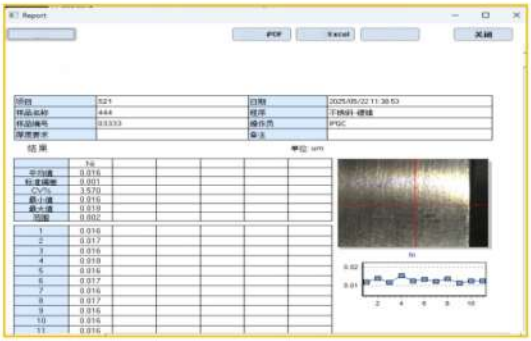
Product Features

The software can preset 25 application programs and display them classified by different categories.

High-pixel camera with 800x magnification for clear visualization of the test sample area.

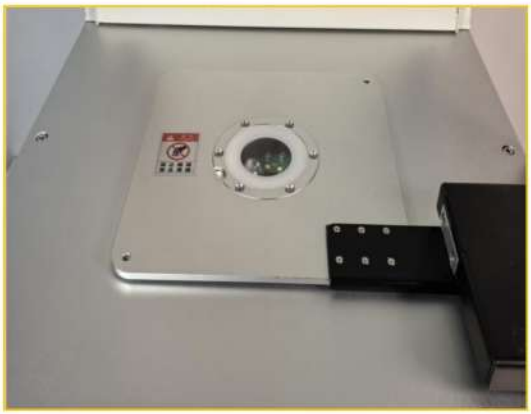
Uses a powerful FP algorithm to ensure data accuracy and stability. Displays the elemental composition of the tested material.

One-click preview and printing of result reports, with customizable report headers and company logo addition.



Integrated one-click testing function for convenient production testing.

Standard configuration of six collimators (φ0.1mm, 0.2mm, 0.3mm, 0.4mm, 0.5mm, 1mm) to adapt to testing of all materials.



Technical Parameters of Coating Thickness Gauge

NEO CP-TH7

CoatingElemnt Range	P-U (Phosphorus to Uranium)
Detection Items	1. Single layer: Ni/Fe, Cr/Fe, Ni/Cu, Sn/Cu, Zn/Fe, Au/Ni, ... 2. Multi-layer: Au/Ni/Cu, Cr/Ni/Fe, ... 3. Composite layer: AuPd/Cu, CuAg/Fe, NiP/Cu... 4. Alloy substrate: Ni/stainless steel, Ni/brass... 5. Glass substrate: CuGaSeAgIn/Mo/glass... 6. Plastic substrate: Cr/plastic... 7. Composition of electroplating solution, composition of composite electroplating layer
Sample Type	Solid, liquid, powder
X-ray Tube	Standard Mo target, optional W target and Rh target 0.1mm micro-focus X-ray tube Tube life >20,000 hours
Detector	Electrically cooled Si-PIN detector (145±5eV), optional SDD detector (125±5eV)
Test Time	10s-30s (automatically adjusted by software)
Collimation System	Spot sizes: φ0.1mm, 0.2mm, 0.3mm, 0.4mm, 0.5mm, 1mm (customizable via software)
Camera Positioning	12-megapixel resolution, crosshair, adjustable focus and brightness
Weight	42Kg
Dimensions	Overall: 500mm×380mm×360mm Sample chamber: 300mm×300mm×120mm Micromotion platform: 30mm×20mm
Environmental Range	Temperature: 15°C-30°C Humidity: ≤75%
Computer Configuration	Intel(R) CPU, 8GB RAM, Windows 10/11 OS
Display	≥22-inch display
Data Storage	≥256GB solid-state drive, capable of storing hundreds of millions of data entries
Radiation Protection Standards	Compliant with GB18871-2002 and GBZ115-2002 standards

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