

# CMI900

Cost effective, high performance XRF for  
the measurement of coating thickness  
and material composition



OXFORD  
INSTRUMENTS







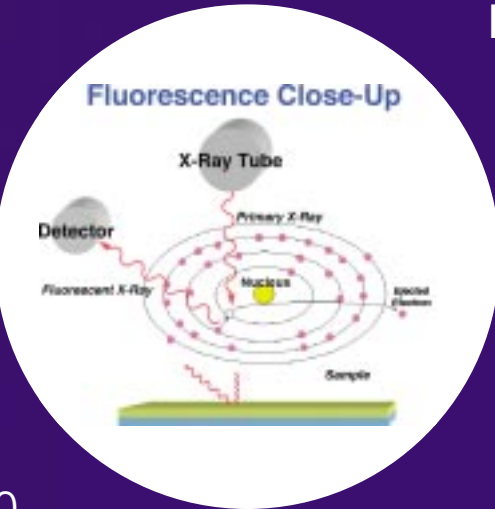
# CMI900 from Oxford Instruments for analysis of: Multi-layer Coating Thickness & Composition • Alloy ID & Chemistry • Plating Solution

**Oxford Instruments**  
proven XRF expertise worldwide

- 35 years XRF experience
- 25 years in coating measurement
- 15 years in XRF coating thickness measurement
- world-wide sales and support network
- extensive portfolio of analytical instrumentation

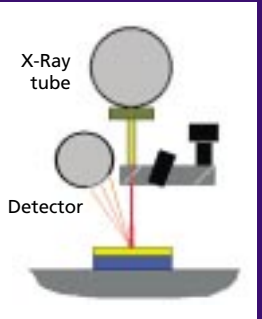
## What is X-Ray Fluorescence?

Fluorescence is a process in which an atom or a molecule absorbs a photon of certain energy and releases another photon of lower energy

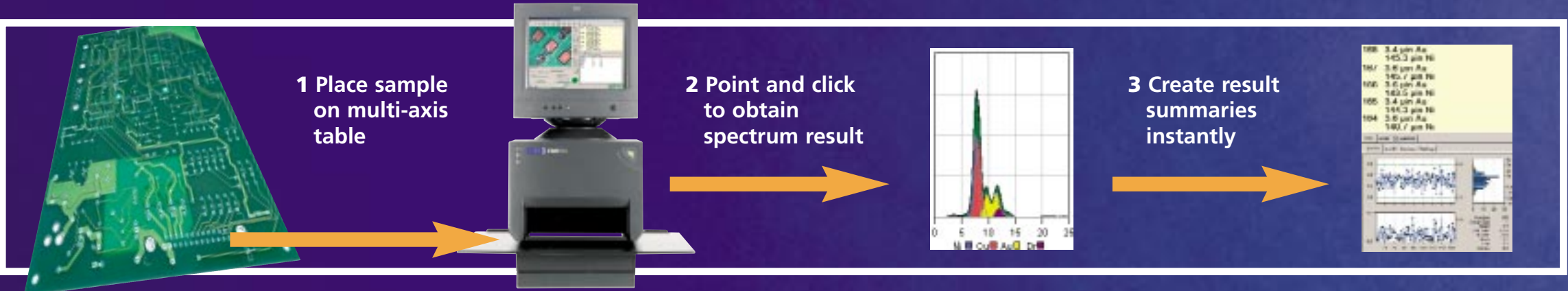


## How does the CMI900 use fluorescence?

- X-Ray tube provides bombardment of excitation photons to the sample
- Detector measures the secondary, or fluoresced X-Rays
- The X-Ray's intensity determines the thickness and/or composition



## Results as easy as 1 - 2 - 3



**CMI900** – High performance XRF spectrometer

### Accuracy

- Empirical calibrations – highest accuracy
- FP Model – easy calibrations
- Certified Standards – ensures traceability
- A2LA approved lab – guaranteed integrity
- Re-certification of Standards – service commitment

### Precision

- Laser Focus – repeatable sample presentation
- High Countrate – good precision
- 75 Watt upgrade – best precision

### Long-term Stability

- Thermal compensation – measures the system temperature and corrects for changes that could cause drift
- Spec-Cal – single click of the mouse will check the system performance and self-correct, if necessary

## Innovative technology

### 50 Watt Micro-Focus X-Ray Tube

- Increased count rate, improved precision
- 75 Watt upgrade

### Multi-Collimators

- Improved application capability
- Optimize the balance between count rate and spot sizes
- Various size of round and rectangular collimators are available
- Up to 6 collimators can be installed

### Laser Focus

- Laser is set at 0.5" (13mm) Focal Plane
- Single click starts the Z-axis scan
- Automatically finds the correct Z-axis coordinate at the focal distance set
- Improves system reproducibility (operator independent)

## Table options

### Fixed Base

- Table position is fixed
- Economical and practical
- This flat base assembly provides a platform ideally suited for parts that do not exceed 1.30" (33 mm) in height
- Each of the three base options is slotted to accommodate oversized samples such as large PCB's

### Mini Well

- Can be used to accommodate parts that are too tall to measure with the fixed base platform
- Adjustable in one inch increments, this rack-styled chamber can accommodate parts up to 6.30" (160 mm) in height



### Programmable Base

- This package provides users with automatic and programmable control of parts being analyzed
- Using either a mouse or a joystick, the user can easily navigate the table to position the part being inspected to the precise point the user wants to measure
- Standard table size is 22" (56mm) (D) x 24" (60mm) (W).
- Travel is 7" x 7" (152.4 mm) x (177.8 mm)

### Easy System Calibration

- FP method reduces the number of standards required
- System is delivered pre-loaded with over 800 application parameters/methods
- Simple steps to add new calibrations

### Advanced System Security

- Simple user interface with limited features for the routine operator
- Manager level access for system maintenance
- System usage logged by operator

### Flexible Report Generator

- Creates custom report formats
- Applies custom statistical analysis formats
- Captures the sample image in reports

### Seven Languages

- English - Chinese (Traditional)
- Japanese - Korean - French - German
- Spanish

**CMI900 from Oxford Instruments**  
Fast, Productive, Cost Effective Analysis





click onto **www.oxford-instruments.com** for more information

## worldwide service and support

Oxford Instruments is completely committed to supporting our customers' success. We recognise that this requires world class products complemented by world class support.

With a comprehensive training agenda for technical engineers and end users combined with a

global service force of Oxford Instruments trained engineers in close to 70 countries, backed by experienced analysts in 10 regional offices and 7 fully equipped applications laboratories, we can offer unrivalled support, wherever you are.

Oxford Instruments, at High Wycombe, UK, operates Quality Management Systems approved to the requirements of BS EN ISO 9001. This publication is the copyright of Oxford Instruments Analytical Limited and provides outline information only which (unless agreed by the company in writing) may not be used, applied or reproduced for any purpose or form part of any order or contract or be regarded as a representation relating to the products or services concerned. Oxford Instruments' policy is one of continued improvement. The company reserves the right to alter, without notice, the specification, design or conditions of supply of any product or service. Oxford Instruments acknowledges all trade marks and registrations.

© Oxford Instruments Analytical Ltd, 2004. All rights reserved.

Part no: OIA/098/A/0704



Certificate No FM29142

### **Oxford Instruments Analytical**

#### **UK**

Halifax Road, High Wycombe  
Bucks, HP12 3SE England  
Tel: +44 (0) 1494 442255  
Fax: +44 (0) 1494 461033  
Email: [analytical@oxinst.co.uk](mailto:analytical@oxinst.co.uk)

#### **Australia**

Sydney, N.S.W. 1715  
Tel: +61 2 9484 6108  
Fax: +61 2 9484 1667  
Email: [sales@oxinst.com.au](mailto:sales@oxinst.com.au)

#### **China**

Beijing  
Tel: (8610) 6518 8160/1/2  
Fax: (8610) 6518 8155  
Email: [oiadmin@oxford-instruments.com.cn](mailto:oiadmin@oxford-instruments.com.cn)

#### **France**

Saclay, Cedex  
Tel: +33 (0) 1 69 85 25 24  
Fax: +33 (0) 1 69 41 86 80  
Email: [analytical-info@oxford-instruments.fr](mailto:analytical-info@oxford-instruments.fr)

#### **Germany**

Wiesbaden  
Tel: +49 (0) 6122 937 176  
Fax: +49 (0) 6122 937 178  
Email: [analytical@oxford.de](mailto:analytical@oxford.de)

#### **Japan**

Tokyo  
Tel: +81 (0) 3 5245 3591  
Fax: +81 (0) 3 5245 4466/4477  
Email: [oikkma@oxinst.co.jp](mailto:oikkma@oxinst.co.jp)

#### **Latin America**

Clearwater FL  
Tel: +1 727 538 7702  
Fax: +1 727 538 4205  
Email: [oxford@gate.net](mailto:oxford@gate.net)

#### **Singapore**

Tel: +65 6337 6848  
Fax: +65 6337 6386  
Email: [analytical.sales@oxford-instruments.com.sg](mailto:analytical.sales@oxford-instruments.com.sg)

#### **USA - Oxford Instruments Measurement Systems**

Elk Grove Village IL  
Tel: +1 847 439 4404  
Fax: +1 847 439 4425  
Email: [sales@msys.oxinst.com](mailto:sales@msys.oxinst.com)

**OXFORD  
INSTRUMENTS**