

## *X-Ray Tube System for Portable XRF*

State-of-the-Art



### Complete system includes:

- X-ray tube
- High voltage supply
- Control electronics

### FEATURES

- Small size
- Low power
- Transmission target
- Adjustable current and voltage
- Over 2000 hours life

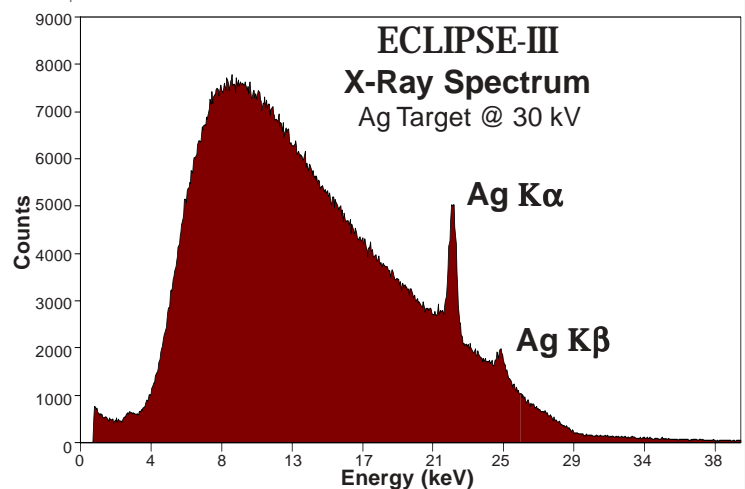
**ECLIPSE-III** is a self-contained miniature X-ray tube system, which includes the X-ray tube, the power supply and the control electronics. It is designed to replace radioisotopes in X-ray fluorescence analysis applications.

**ECLIPSE-III** has been designed to simplify the XRF process by providing grounded anode, variable current and voltage, and ease of operation. It features a 30 kV/100  $\mu$ A power supply, silver (Ag) transmission target, and a beryllium end window.

To further simplify the use of **ECLIPSE-III**, a portable Controller is provided, powered from 80 - 240 V AC. The Controller generates all the voltages needed to operate the x-ray tube and provides both voltage (kV) and current ( $\mu$ A) display and control. A flashing red LED and a beeper warns the user when x-rays are present.

### APPLICATIONS

- X-Ray Fluorescence (XRF) analysis
- Portable systems
- OEM
- Process control
- Research and teaching



ECLIPSE-III is a trademark of Oxford Instruments

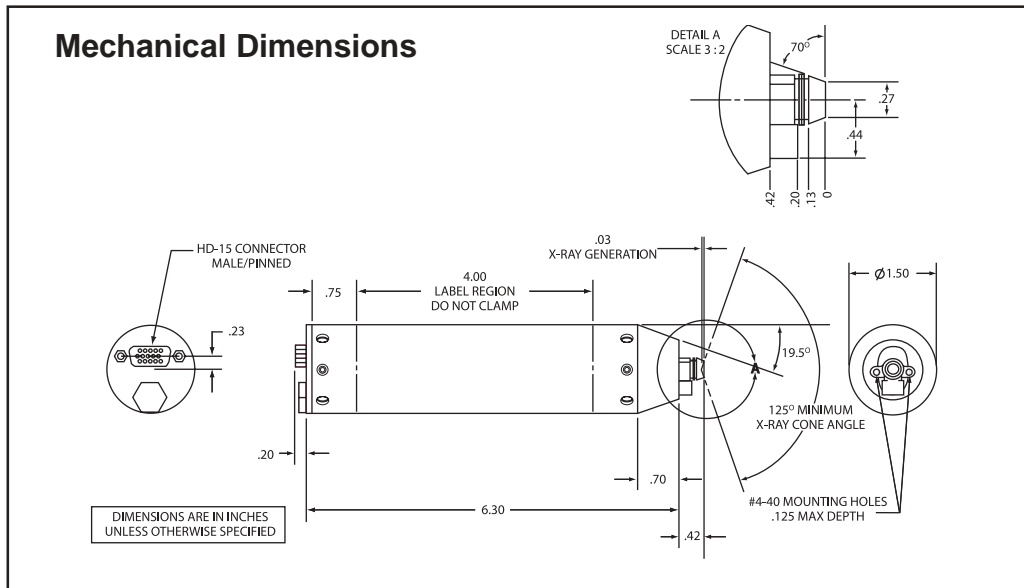
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# SPECIFICATIONS



	Transmission Target (E2T)
Anode current	100 $\mu$ A Max (3 W max)
Anode (target) voltage	Ground
Cathode voltage	-5 to -30 kV
Input power	15 DC
kV control	0 - 2.5 V DC
$\mu$ A control	0 - 2.5 V DC
Current stability	1% for I > 5 $\mu$ A 0.5% for I > 10 $\mu$ A
Target	Ag
Focal spot size	1.5 mm nominal
Be window	250 $\mu$ m
Cone angle	130 degrees
Cathode type	W filament
Dimensions	6.6" x 1.5"
Weight	0.64 lbs (300 grams)



## Radiation Precautions

The ECLIPSE-III is intended to generate x-ray radiation during normal operation. The ECLIPSE-III has been designed to focus radiation in the designated output direction, however radiation in other directions is possible and should be addressed with shielding and/or monitoring in the final application.

### Caution

**This device produces X-Rays when energized. To be operated only by qualified personnel.**

**Maximum operating temperature not to exceed 40 °C (104 °F)**

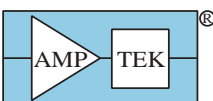
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