

# X-RAY Sources

## 50kV MAGNUM<sup>®</sup> X-ray Tubes



The MAGNUM<sup>®</sup> x-ray tube is now available in a 50kV package. The MAGNUM 50kV x-ray tube is a low power, miniature x-ray tube used for a variety of applications including handheld and benchtop instrumentation. MAGNUM x-ray tubes are small, lightweight, and can be packaged into custom enclosures.

### Applications

#### Portable XRF

- RoHS/WEEE
- Alloy sorting
- Soil analysis
- Environmental
- Lead in paint
- Plastics analysis
- Material ID
- Security

#### Handheld Imaging

- Medical/Dental
- Material ID
- Security

#### Bench top EDXRF

#### Instrument Calibration

#### Micro-Fluorescence

#### Micro-Diffraction

### Features

- Small, compact design
- Lightweight
- Close coupling of collimator & target
- Stable output
- Low power consumption
- Low spectral contamination
- High x-ray output
- Customizable configurations

### Benefits

- Close coupling of source to detector
- Portable, versatile
- Efficient utilization of x-rays
- Low detection limit
- Long battery life
- No unwanted peaks
- Short sampling time
- Flexible form factor

### Standard Package Includes:

- Transmission Target (End Window)
- MAGNUM tube potted in a brass shield
- High voltage power supply
- Standard High voltage wire length is 11.5 inches

### Customizable Options:

- Target materials and thickness
- Tube shield design
- Power supply packaging
- High voltage wiring length (minimum 4.0 inches; maximum 11.5 inches)
- Integrated tube and power supply
- DB9 Cable (ASM00362)
- 2 pin IDC cable (ASM00364)



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**MOXTEK**

[www.moxtek.com](http://www.moxtek.com)

### 50 kV MAGNUM

#### Mechanical Specifications

|                      |                   |
|----------------------|-------------------|
| Tube Type:           | Metal-ceramic     |
| Cathode Type:        | Tungsten filament |
| Ambient Temperature: | -10° to +50° C    |
| Storage Temperature: | -40° to +60° C    |
| Cooling:             | Conduction        |
| HV Insulation:       | Silicone potting  |
| Weight:              | ≈1.1 lb. (500g)   |
| Available Targets:   | Ag, W, Pd, Rh     |

### 50 kV MAGNUM

#### X-ray Tube Characteristics

|                         |                          |
|-------------------------|--------------------------|
| HV Polarity:            | Grounded anode           |
| High Voltage Potential: | 10 to 50 kV              |
| Beam Current:           | 0 to 0.200 mA            |
| Maximum Power:          | 10 watts                 |
| Focal Spot Size:        | Typical ~ 400 μm         |
| Stability:              | < 1.0% RSD               |
| Windows:                | Beryllium, 0.25 mm thick |
| Input Power:            | 20W (9-12 VDC)           |
| Standard Warranty       | One year                 |

### 50kV Ordering Information

| Part Number | Anode Target Material |
|-------------|-----------------------|
| TUB00050-1  | Ag                    |
| TUB00050-2  | W                     |
| TUB00050-4  | Pd                    |
| TUB00050-7  | Rh                    |

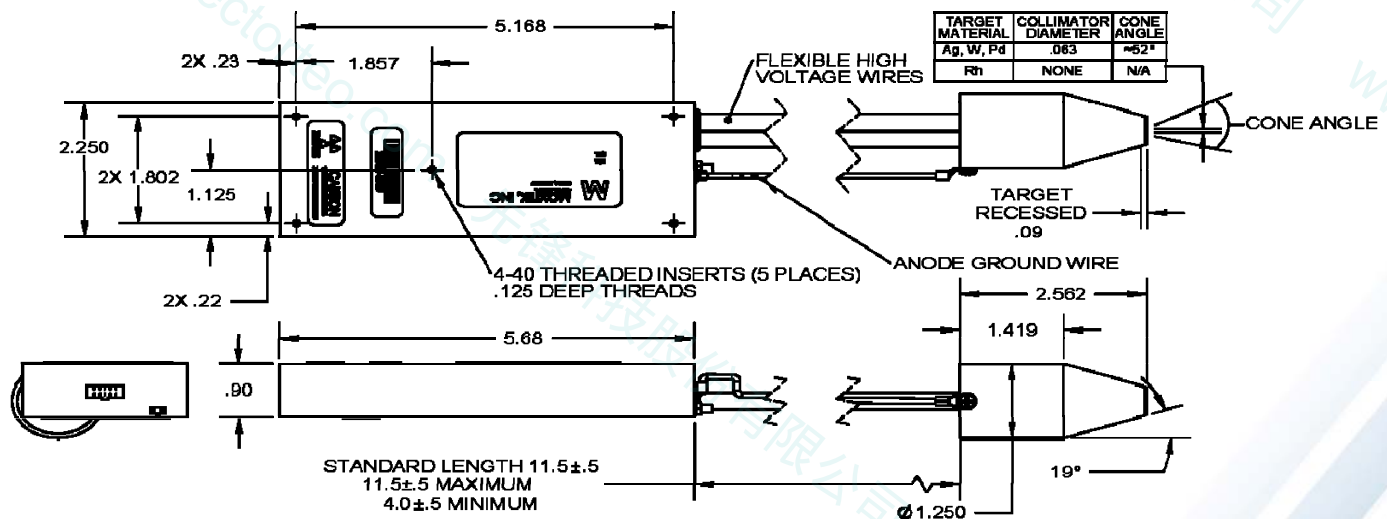
#### Tube Control Options

- TUB00051 FTC-200 Controller
- ASM00362 DB9 Cable
- ASM00364 2-pin IDC Cable

*Please contact MOXTEK for price and delivery information.*

*See Moxtek for Target thicknesses*

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