

40kV MAGNUM® Reflection Source

Moxtek® manufactures low-power, miniature x-ray sources for a variety of applications including handheld and benchtop instruments. Moxtek sources are small, lightweight, and can be packaged into custom enclosures. Reflection x-ray sources offer higher output with a smaller spot size compared to transmission sources.

Features	Benefits
Small, compact design	Close coupling of tube to detector or sample
Lightweight	Portable, easy to integrate
Stable output	High precision of measurements, low detection limits
Low power consumption	Long battery life
Low spectral contamination	High precision of analysis
High x-ray output	Short sampling time
Small spot size and short spot-to-object distance	Good geometrical magnification and spatial resolution

## Applications

### Materials Characterization and Identification (XRF)

- Metal and alloy sorting
- Mining and geology
- Environmental analysis
- Lead in paint
- Regulatory (RoHS/WEEE)
- Art and archeometry
- R&D

### X-ray Imaging

- Medical R&D, small animal imaging
- Security
- Radiographic inspection

## Mechanical Specifications

*Tube Type:* Metal-ceramic

*Cathode Type:* Tungsten filament

*Operating Temperature:* -10 to +50 °C

*Storage Temperature:* -40 to +60 °C

*Cooling:* Conduction

*Weight:* 1 lb. (450g)

*Available Targets:* Cr, Cu, Mo, W

## Source Characteristics

*HV Polarity:* Grounded anode

*High Voltage Potential:* -4 to -40kV

*Beam Current:* 0 to 0.10mA

*Total Power:* 4.0 watts (maximum)

*Focal Spot Size:* Typical 300µm

*Stability:* < 1.0% RSD

*Window:* Beryllium, 0.127mm thick

*Input power:* 7W (7-12 VDC)

*Standard Warranty:* 1 year or 2000 operating hours

## Ordering Information

### Part Number Anode Type

TUB00046-CR5	Cr
TUB00046-CU5	Cu
TUB00046-MO5	Mo
TUB00046-WO5	W

Please contact Moxtek for price and delivery information.

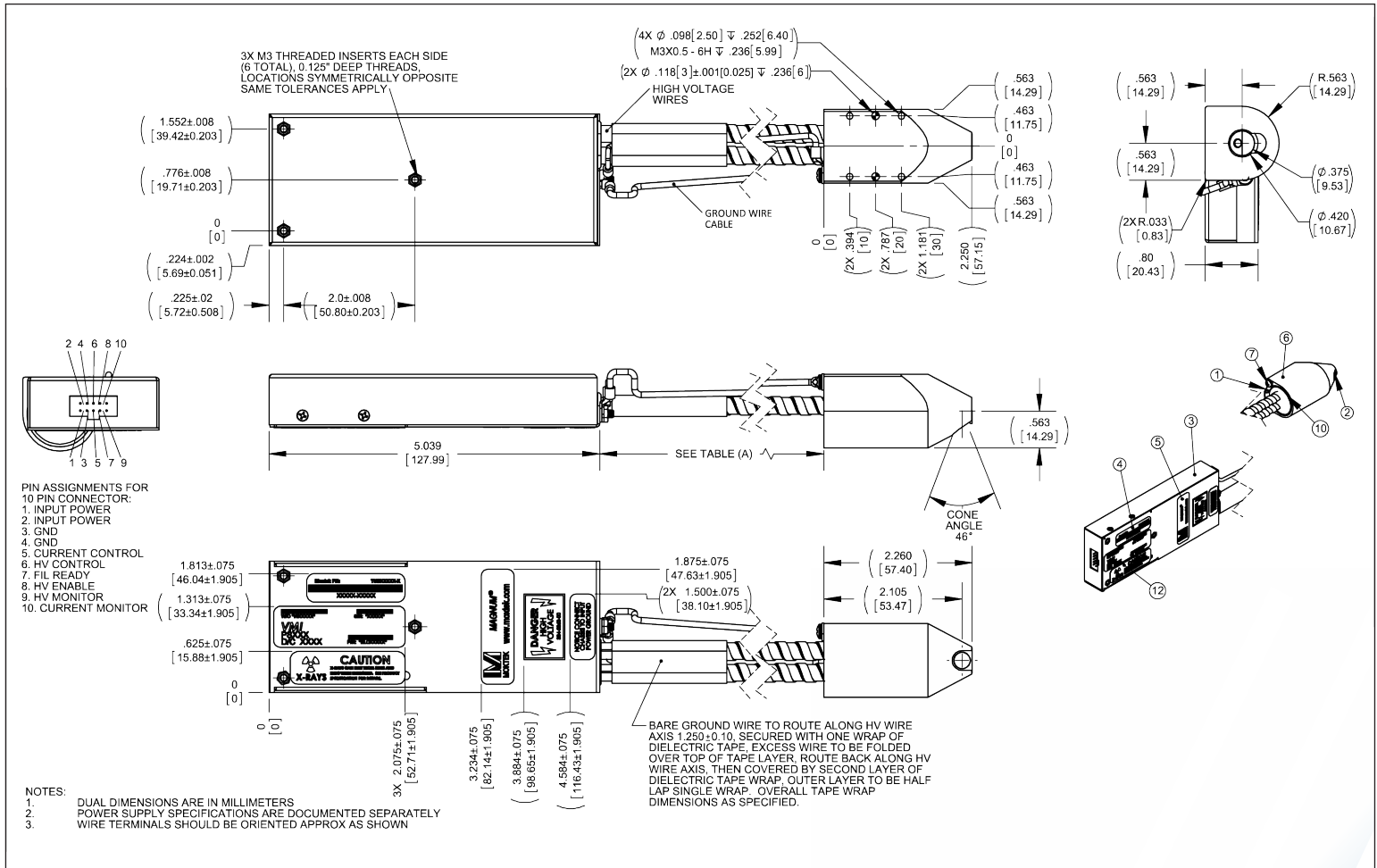
### Standard Package

- Reflection Target
- MAGNUM® tube potted in a aluminum shield
- High voltage power supply
- Standard high voltage wiring length of 292mm, (11.5 inches)

### Source Controller Options

- FTC-200 Controller. Source can also operate using analog DC voltage signals

## 40kV MAGNUM® Reflection Source Mechanical Drawing



Measurements are in inches

### WARNING

X-rays are emitted from the sides and ends of this product when energized. Moxtek takes actions to reduce the exposure rate from X-rays emitted from the sides through the use of various shielding agents inherent to this product design. It is the buyer's responsibility to ensure adequate protection is provided in the testing and manufacturing of the final product and that users are adequately shielded from incidental exposure.

This product contains a beryllium window. The inhalation of fumes or dust from beryllium metal (or its compounds) are hazardous. Corrosion may occur on the beryllium window during use, these should not be scraped off, machined, or removed. Disposal of the tube unit should conform to federal, state, and local regulations governing beryllium.



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