

MAGNUM® reflection x-ray sources with 40 kV cable



Standard version x-ray tube TUB00045



Reflection source with side window TUB00046

Moxtek® manufactures low-power, miniature x-ray sources for a variety of applications including hand-held and benchtop instruments. Moxtek sources are small, lightweight, and can be packaged into custom enclosures. The MAGNUM® x-ray source TUB00046 produces high output with a small spot size.

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 (TUB00046)	Good geometrical magnification and spatial resolution (TUB00046)

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	450 g (1 lb.)

Applications

X-ray imaging

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

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

Source characteristics		
	TUB0045	TUB00046
HV polarity	Grounded anode	
High voltage potential	-4 to -40 kV	
Beam current	0 to 0.10 mA	
Total power	4.0 watts (maximum)	
Focal spot size		Typical 300 µm
Stability	< 1.0% RSD	
Window	Beryllium, 0.25 mm thick	Beryllium, 0.127 mm thick
Input power	7 W (7–12 VDC)	
Available targets	Ag, W, Au, Pd, Ta, Rh	Cr, Cu, Mo, W
Standard warranty	One year	

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Standard package TUB00045

- MAGNUM® reflection target tube potted in an aluminum shield
- High voltage power supply
- High voltage wire length of 11.5 inches

Source controller options

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

Customizable options

- Variable high voltage wiring length (4.0 to 11.5 inches)
- Target materials

Ordering information TUB00045 standard

Part number	Anode type
TUB00045-AG1	Ag
TUB00045-W01	W
TUB00045-AU1	Au
TUB00045-PD1	Pd
TUB00045-TA1	Ta
TUB00045-RH2	Rh
Please contact us for price and delivery information.	

Standard package TUB00046

- Reflection target
- MAGNUM® reflection target tube potted in an aluminum shield
- High voltage power supply
- High voltage wire length of 11.5 inches

Source controller options

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

Customizable options

- Target materials

Ordering information TUB00046 with side window

Part number	Anode type
TUB00046-CR5	Cr
TUB00046-CU5	Cu
TUB00046-MO5	Mo
TUB00046-W05	W
Please contact us for price and delivery information.	