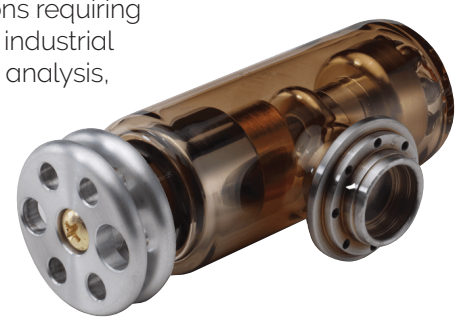
Glass X-ray Tube

1500 Series | Technical Datasheet

50kV, 50W unpackaged X-ray tube designed for applications where high flux density and continuous operation are important.

The 1500 Series X-ray tube delivers high stability and intensity for applications requiring exceptional resolution, including medical imaging, XRF, and a wide range of industrial inspection and non-destructive testing tasks such as PCB assembly, battery analysis, and component inspection.



For added convenience, the 1500 Series can also be supplied in a stainless steel, lead-lined package filled with dielectric oil, providing superior X-ray shielding and heat dissipation. This configuration mirrors the design of our popular Jupiter 5000 Series, complete with high-voltage and filament connectors for true plug-and-play integration.

Available in multiple spot sizes, target materials, and configurations, the 1500 Series offers the flexibility to meet diverse application and budget requirements.

Benefits

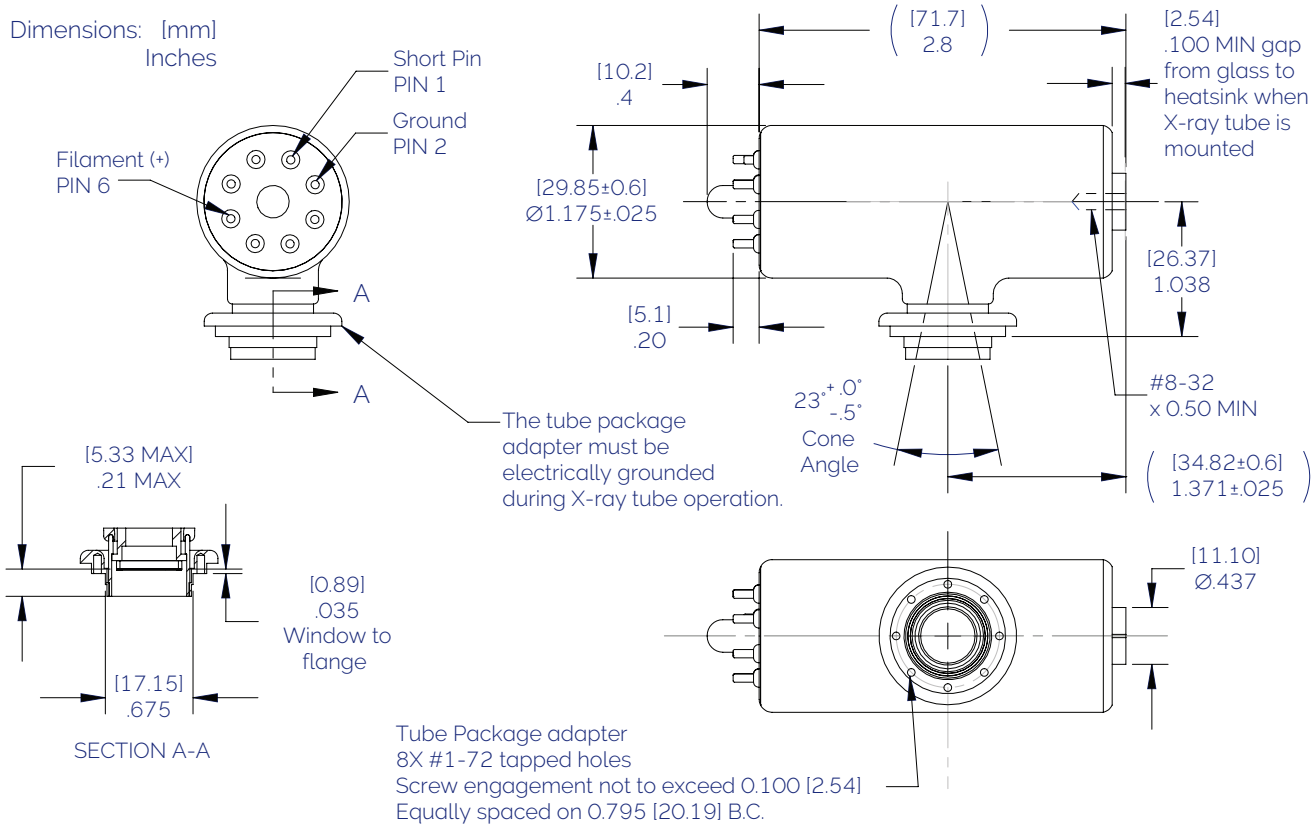
- Continuous operation
- Stable X-ray output delivers high-precision measurements
- Made in USA

Applications

- Analytical XRF
- Coating thickness gauging
- Electronics inspection
- Phase-contrast imaging
- Pre-clinical imaging

Specifications:	
Operating Voltage Range:	50kV max. Lower kV cutoff varies by product. See product ordering table.
Maximum Power:	50W (except 90046, 90098)
Maximum Beam Current:	1.0mA (except 90046, 90098)
Maximum Filament Current:	1.70A (except 90046, 90098)
Filament Voltage:	2.0V (Nominal) (except 90046, 90098)
Target Material:	All
Spot Size:	See product ordering table.
Spot to Window Spacing (FOD):	30.8 mm ± 1mm (1.2") (except 90046, 90098)
Window Material and Thickness:	Be @ 127µm
Flux & Current Stability:	0.2% over 4-hour period
Duty Cycle:	Continuous
Ambient Temperature Conditions:	Operating: 0°C to 40°C
Humidity:	Storage: -10°C to 50°C 0-95% RH up to 5,000ft
Method of Cooling:	Must not exceed 80°C oil temperature. Customer provides enclosure and cooling.
X-ray Shielding:	Customer must provide enclosure with adequate shielding. Tube emits X-rays in all directions.
Dimensions:	81mm L X 47mm W (3.2" L X 1.8" W)
Weight:	119g

OXFORD INSTRUMENTS



Product Ordering Table

Part Number	Outline Drawing	Target	Operating Range (kV)	Max Anode Current (mA)	Max Anode Power (W)	Max Filament Current (A)	Spot Size (µm)**
90011	8194	Rh	10 - 50	1.0	50	1.7	150 Max.
90068	8188	Mo	10 - 50	1.0	50	1.7	150 Max.
90069	8188	Cu	10 - 50	1.0	50	1.7	150 Max.
90077	8188	Rh	10 - 50	1.0	50	1.7	150 Max.
90083	8188	W	10 - 50	1.0	50	1.7	150 Max.
90099	8189	W	10 - 50	1.0	50	1.7	70 Max.

Note: Part number specific copies of outline drawings and product specification sheets are available.
**Max. = Maximum, Typ. = Typical, Nom. = Nominal (per IEC60336,NEMA XR5-1999)

visit https://xray.oxinst.com for more information

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