

Glass X-ray Tube

1000 Series | Technical Datasheet

Oxford Instruments' glass X-ray tubes are recognized for their performance and long life.

The 1000 Series delivers exceptional flux and spot size stability, making it ideal for demanding, continuous-operation applications. Engineered with a uniquely small, isostatically focused spot, it provides outstanding resolution for advanced imaging tasks such as mini C-Arm fluoroscopy.

Its robust electron gun assembly is optimized for integrated X-ray sources where heat management is critical, ensuring reliable performance in compact system designs. The 90507 operates in bi-polar mode for maximum versatility.



Benefits

- Continuous operation
- Wide operating range enables optimal image contrast
- Exceptional image quality
- Wide field of view
- Made in USA

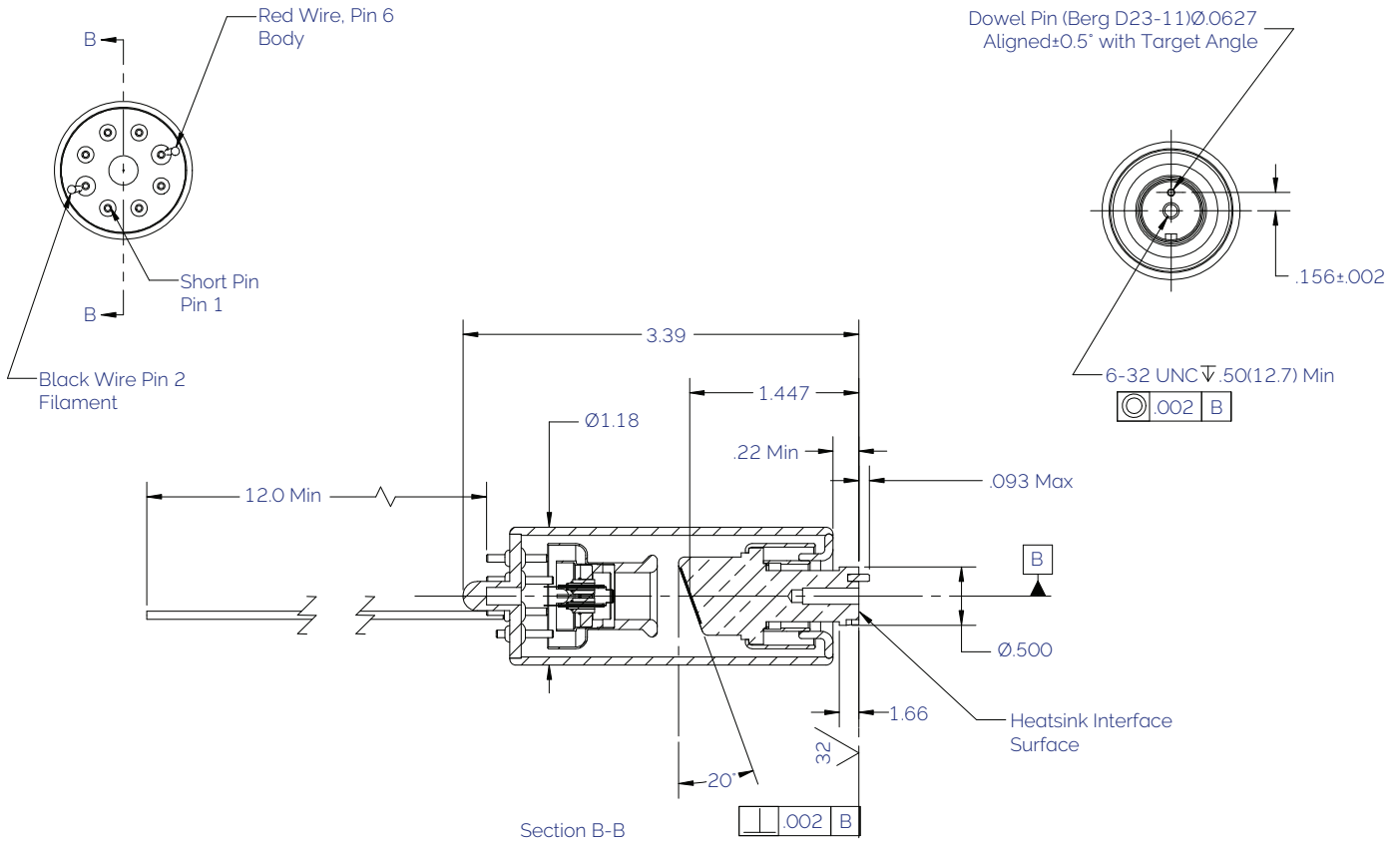
Applications

- Particle analysis
- Bone Densitometry
- Mini C-arm fluoroscopy
- Pre-clinical imaging
- Small animal imaging

Specifications:

Operating Voltage Range:	90507, 90501: 40-80kV (bi-polar operation: -40kV cathode, +40kV anode) 90502: 40 - 65kV
Maximum Power:	See product ordering table.
Maximum Beam Current:	See product ordering table.
Maximum Filament Current:	1.7A
Filament Voltage:	2.0V (nominal)
Focus to Object Distance (FOD):	14.2mm (0.56") (nominal)
Window Material and Thickness:	Glass—1.40mm ± 0.15
Target Material:	W
Target Angle:	20°
Maximum Oil Temperature:	80°C
Cooling Method:	Oil
Weight:	114g (0.25 lbs)
Storage Conditions:	-10°C to 55°C Barometric Pressure: 50-106kPa; Humidity: 10-90% (no condensation)

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Notes

1. Dimensions are in inches.
2. This X-ray tube is designed to operate in an oil filled high voltage enclosure. Do not allow the oil to exceed 80°C. Proper operation of the X-ray tube requires cooling oil to circulate freely around the X-ray tube envelope.
3. This X-ray tube produces X-rays in all directions. As such, it must only be operated in a radiation-shielded enclosure.
4. Tubes to be shipped with two teflon-coated copper wire leads, 1 8 AWG X 12.0 MIN, soldered to pins #6 and #2.

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)**
90501	8218	W	40 - 80	0.7	56	1.7	100 Max.
90502	8218	W	40 - 80	0.5	32.5	1.7	90 Max.
90507	8218	W	40 - 80	0.3	40	1.7	33 Nom.

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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