Glass X-ray Tube
1000 Series

Technical Datasheet

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

High flux and spot size stability make our X-ray tubes an ideal solution for demanding applications, such as those requiring continuous operation. The 90507 and other 1000 series tubes are uniquely designed with a very small isostatically focused spot for high resolution applications, such as mini C-Arm fluoroscopy. The robust electron gun assembly has been constructed for optimal use in integrated X-ray sources, where heat dissipation is an issue. Long tube life is achieved by ultra-high vacuum maintained with the Oxford Instruments unique Pin Flash getter. This tube operates in bi-polar mode.

Benefits

- Exceptional image quality
- Stable X-ray output delivers high precision measurements
- Small, stable spot delivers distortion-free measurements
- RoHS compliant design

Applications

- CT imaging for life sciences and industrial inspection
- Densitometry
- Thickness gauging
- Phase contrast imaging
- Medical 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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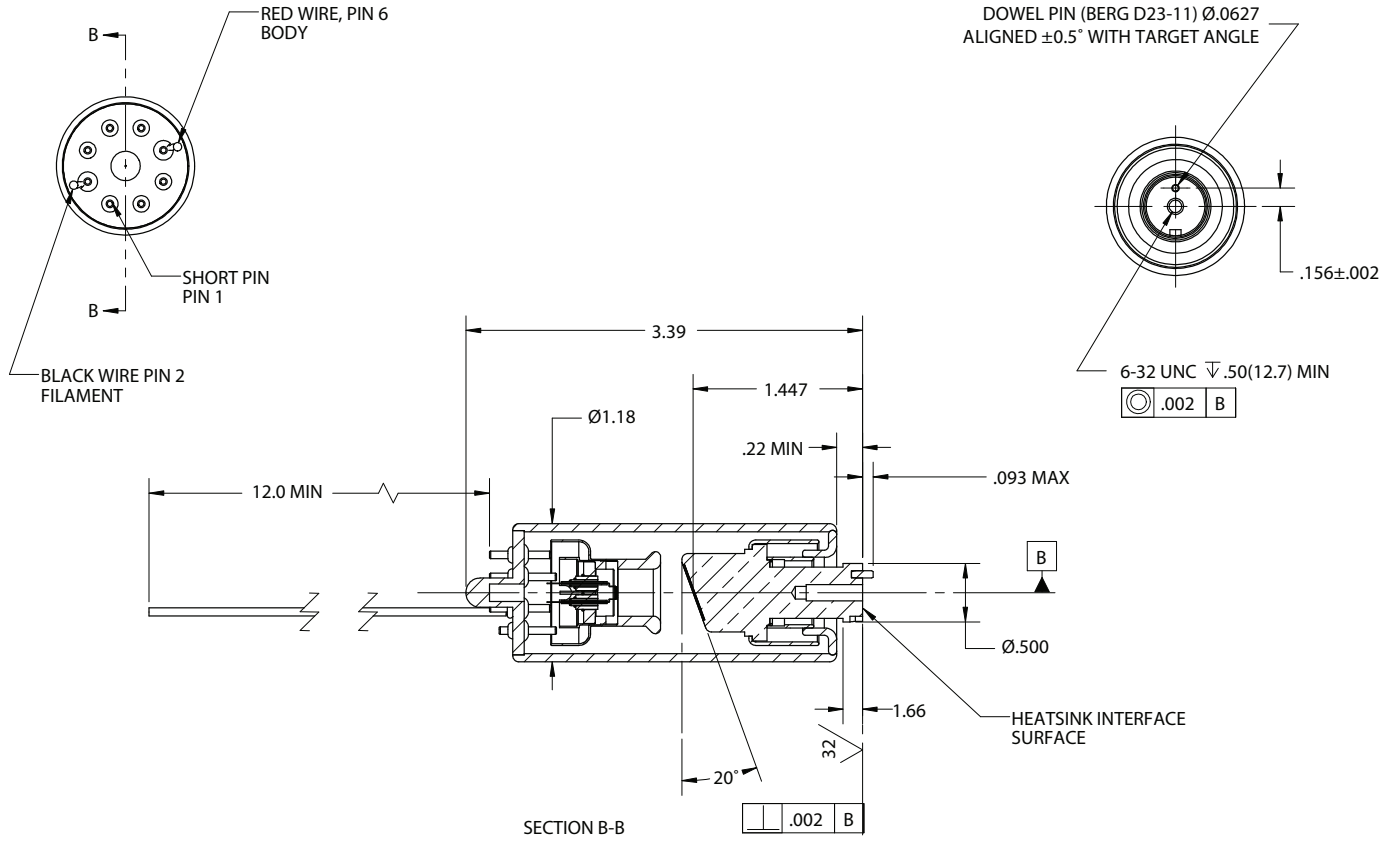

Notes

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 - 65	0.5	32.5	1.7	90 Max.
90507	8218	W	40 - 80	0.5	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 xray.oxinst.com or xray-sales@oxinst.com for more information.

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