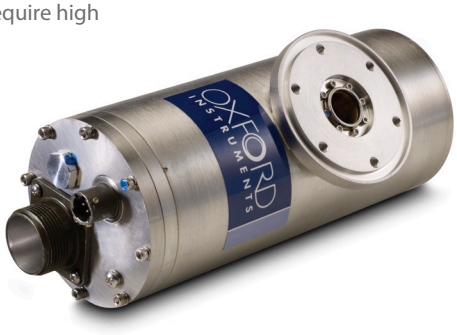
Radiation Shielded X-ray Tube
Jupiter 5000 Series

Technical Datasheet

The Jupiter 5000 Series is a 50kV, 50W packaged X-ray tube designed for applications where high flux density and continuous operation are important.

Utilizing our highly stable and high intensity X-ray tube technology, the Jupiter 5000 Series is ideal for medical imaging applications and most industrial inspection and non-destructive testing applications that require high resolution, including PCB assembly, battery, plastic, metal and mechanical parts inspection.



The 5000 Series features a stainless steel, lead-lined package that is filled with dielectric oil, which enables the unit to provide maximum X-ray shielding and heat dissipation. The design includes high voltage and filament connectors, making it ideal for plug and play operation.

The Jupiter 5000 Series is available in a wide range of spot sizes, targets and price points to meet your needs.

Benefits

- Wide operating range enables optimal image contrast
- Stable X-ray output delivers high-precision measurements
- Low attenuation beryllium window ensures high transmission of low energy X-rays
- Fully shielded compact package eliminates X-ray leakage and easily integrates into your system

Applications

- Medical Imaging
- Printed circuit board and electronic device inspection
- Non-destructive testing of plastic, metal and mechanical parts
- Thickness gauging
- Analytical XRF

Specifications	
Operating Voltage Range:	10-50kV
Maximum Power:	50W
Maximum Beam Current:	1.0mA
Focal spot size:	P/N 93089: 50µm P/N 93095: 55µm
Maximum Filament Current:	1.7A
Filament Voltage:	2.0V (nominal)
Focus to Object Distance (FOD):	See diagram next page
Window material and thickness:	Be @ 127µm
Cone of illumination (unobstructed):	23°
Window diameter (unobstructed):	11.43mm (.450")
Target material:	See product ordering table next page
Target angle:	12°
Stability:	0.2% 4 hours
Polarity:	Grounded cathode
Maximum operating temperature:	55°C on case surface
Ambient operating temperature:	0°C to 40°C
Cooling method	Forced air @ 150cfm
Shielding:	0.25mR/hr @ 2" (except at HV connection)
Dimensions:	180mm L x Ø70mm (7.09" L x Ø2.76")
Weight:	1.82kg (4lbs)
Storage Conditions:	-10°C to 55°C Barometric Pressure: 50-106kPa; Humidity: 10-90% (no condensation) Condensation on Be window will cause window corrosion, vacuum loss and X-ray tube failure

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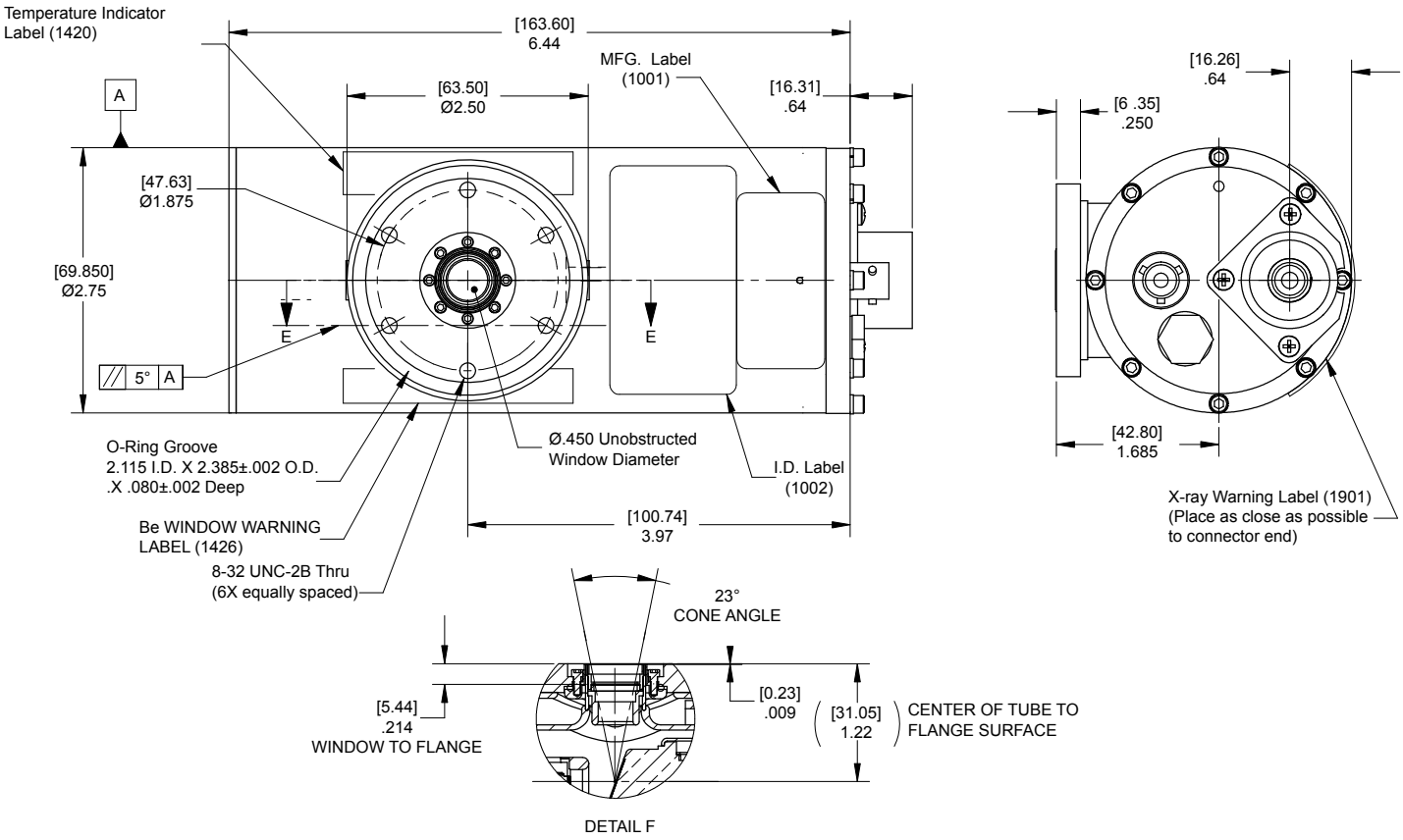

Notes

1. USE AN AS568A-139 O-RING IN MOUNTING PLATE GROOVE IF REQUIRED
2. DIMENSIONS ARE IN INCHES. DIMENSIONS [] ARE IN MM

Product Ordering Table		
Target Material	Voltage	Power
W (93089)	10-50kV	50W
Mo (93095)	10-50kV	50W

visit www.oxford-instruments.com/xt or xray-sales@oxinst.com for more information

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