

The Apogee 5500 Series is a 50kV, 50W packaged X-ray tube designed for applications where high flux density and continuous operation are important.

Utilizing our high stability, high intensity X-ray tube technology coupled with grid-controlled variable focus enables our Apogee design to produce very small focal spots; this makes the Apogee 5500 Series ideal for most industrial inspection and non-destructive testing applications that require high resolution, including PCB assembly, battery, plastic, metal and mechanical parts inspection. Flexible and reliable, this unit is also well suited for use with X-ray optics.

The Apogee 5500 Series is configured in a compact stainless steel, lead-lined package 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.



### 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

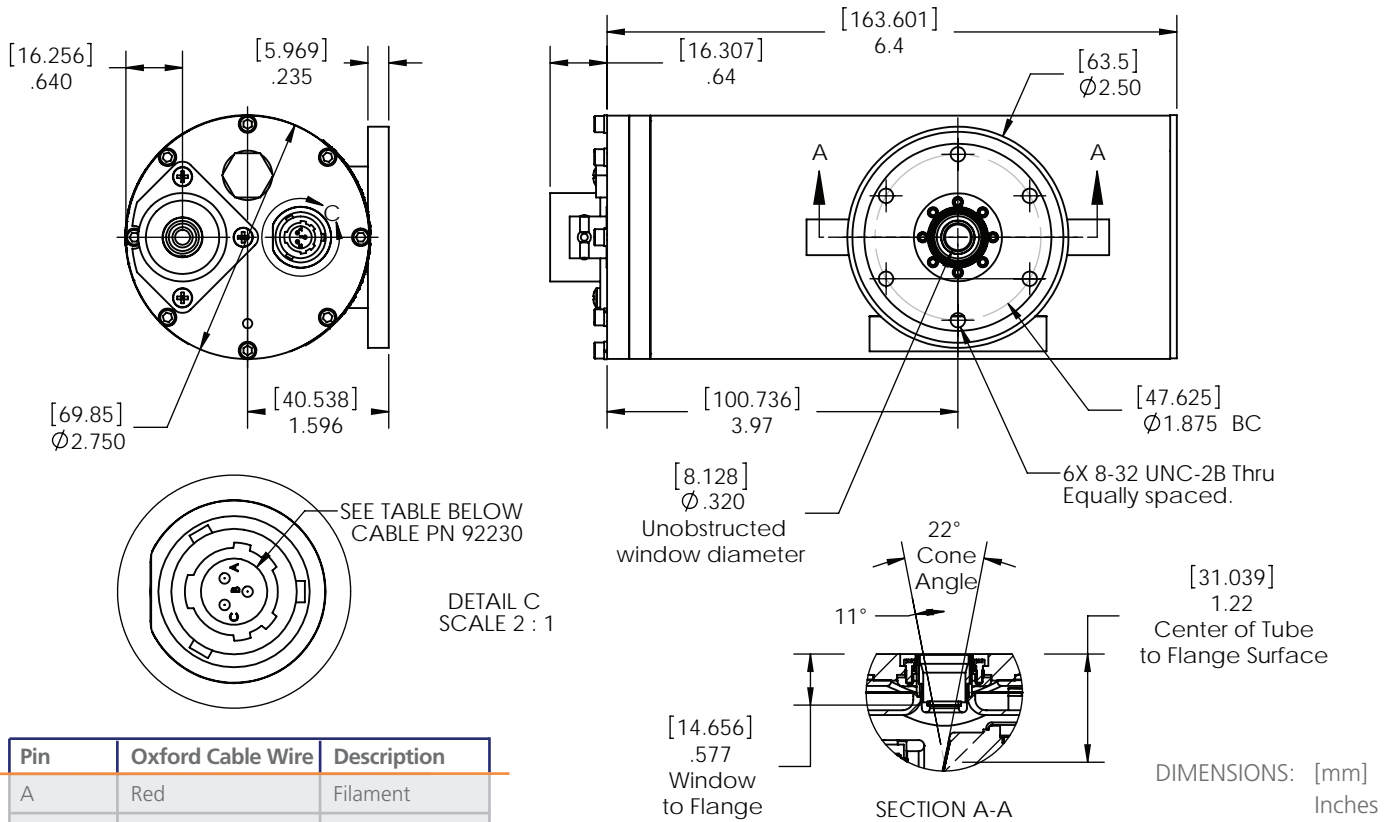
### Applications

- Medical Imaging
- Inspection of printed circuit boards and electronic devices
- Non-destructive testing of plastic, metal and mechanical parts
- Thickness gauging
- Analytical XRF

Specifications	
Operating Voltage Range:	10-50kV (except 9300005)
Maximum Power:	50W (except 93504)
Maximum Beam Current:	1.0mA
Grid Voltage:	0-100V (Oxford Shasta Power Supply recommended)
Maximum Filament Current:	1.7A
Filament Voltage:	2.0V (Nominal)
Target Material:	See product ordering table on next page.
Focal Spot Size:	35µm *nominal per IEC60336, NEMA XR5-1992 (R1999)
Cone of Illumination:	22°
Spot to Window Spacing (FOD):	31.05mm ±1mm
Target Angle:	12°
Window Material and Thickness:	Be @ 127µm
Flux and Current Stability:	≤0.2% over 4-hour period
Ambient Temperature Conditions:	Operating: 0 to 40°C / Storage: -10°C to 50°C
Humidity:	0-95% RH up to 5,000 feet
Cooling:	150 CFM forced air recommended. Longest lifetimes are achieved by keeping case temperature as low as possible in operation. Maximum temperature: 55°C. Contact sales@oxinst.com to discuss your specific cooling applications.
Shielding:	0.25mR/hr @ 2" (except HV connection through HV cable)
Dimensions:	180mm L X Ø 70mm (7.09" L X Ø2.76")
Weight:	2.26kg (5.0 lbs)



# Apogee 5500 Series Radiation Shielded X-ray Tube



Pin	Oxford Cable Wire	Description
A	Red	Filament
B	Black	Filament Return
C	Clear	Grid Bias
Backshell	Eyelet	Ground

## Product Ordering Table

See also matched Shasta power supply and/or matching cables part numbers on page 34.

Part Number	Outline Drawing	Target	Operating Range (kV)	Max Anode Current (mA)	Max Anode Power (W)	Max Filament Current (A)	Spot Size (µm)**
93500*	8243	Cu	10 - 50	1.0	50	1.7	35 Nom.
93501*	8243	W	10 - 50	1.0	50	1.7	35 Nom.
93502*	8243	Mo	10 - 50	1.0	50	1.7	35 Nom.
93504*	8243	Rh	10 - 50	1.0	20	1.7	35 Nom.
93508*	8243	Cu	10 - 50	1.0	50	1.7	35 Nom.
93510*	8243	Cu	10 - 50	1.0	50	1.7	35 Nom.
93511*	8243	Mo	10 - 50	1.0	50	1.7	35 Nom.
9300005	8243	Mo	10 - 55	1.0	50	1.7	35 Nom.

Note: Part number specific copies of outline drawings and product specification sheets are available.

\*Includes a thermal switch which adds an additional level of protection to the cooling system safeguards.

\*\*Max. = Maximum, Typ. = Typical, Nom. = Nominal (per IEC60336, NEMA XR5-1999)

Visit [xray.oxinst.com](http://xray.oxinst.com) or [xray-sales@oxinst.com](mailto:xray-sales@oxinst.com) for more information.

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The Business of Science®



X-ray Technology  
360 El Pueblo Road  
Scotts Valley, CA 95066, USA

Phone: +1 (831) 439-9729  
Fax: +1 (831) 439-6050  
Email: [xray-sales@oxinst.com](mailto:xray-sales@oxinst.com)