

The Oxford Instruments 3000 Series X-ray tube has been developed for high flux stability and long life, making it ideal for continuous operation.

A low cost answer for high spectral purity radiation, the 3000 Series is encapsulated in silicone rubber and features a grounded cathode and low attenuation Beryllium window.

| Features | Benefits |
|-----------------------------------------|-------------------------------------------------------------------------|
| Continuous operation | High sensitivity and high precision measurement |
| Beryllium window | Higher flux of low-energy X-rays, especially from target L series lines |
| Compact, insulated light-weight package | Configuration allows flexible installation |



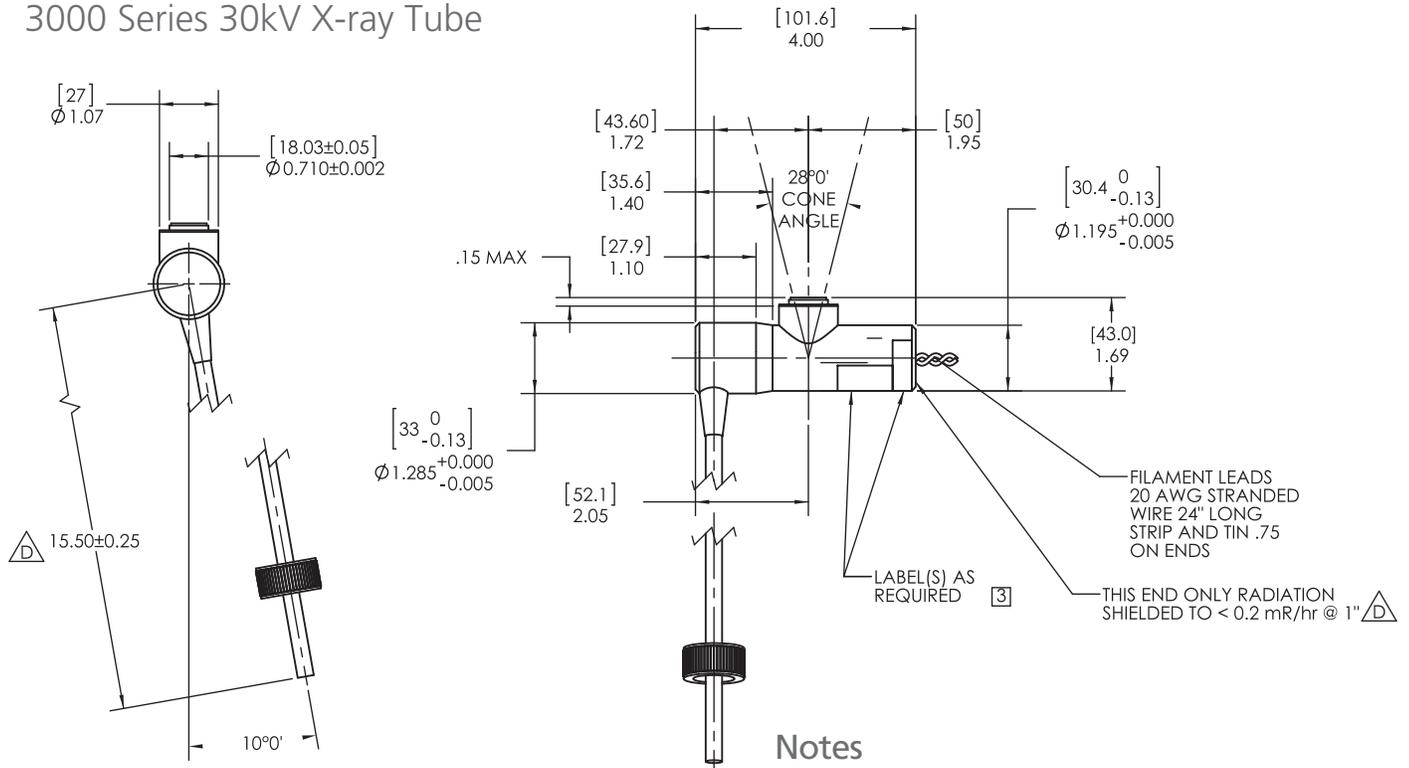
Applications

- Analytical (XRF)
- Particle Analysis
- Thickness Gauging
- Soft X-ray Radiography
- Spectroscopy
- Stress Analysis

| Specifications | |
|------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Operating Voltage Range: | 4-40kV depending on product. |
| Maximum power: | See product ordering table. |
| Maximum beam current: | See product ordering table. |
| Maximum filament current: | 1.3 - 2.0A depending on product. |
| Filament voltage: | 1.75V (nominal) |
| Focal spot size: | 1.0mm (nominal) |
| Focus to Object Distance (FOD): | 28.2mm (1.1") |
| Target material: | See product ordering table. |
| Window material and thickness: | Be @ 127µm |
| Unobstructed cone of illumination: | 28° |
| Unobstructed window diameter: | 10.4mm (.41") |
| Shielding: | Unshielded |
| Weight: | 260g typical |
| Cooling method: | Forced air: 150CFM @ 100mm (4.0") and appropriate heat sink recommended for full power |
| Maximum operating temp: | 50°C at potting surface |
| Ambient operating temp: | 0°C to 40°C |
| Storage conditions: | -40°C to 70°C* |
| | *Note: Barometric Pressure: 50-106kPa Humidity: 10-90% (no condensation) Condensation on Be window will cause window corrosion, vacuum loss, and X-ray tube failure |



3000 Series 30kV X-ray Tube



Notes

1. WARNING: THIS TUBE IS NOT RADIATION SHIELDED.
2. DIMENSIONS ARE IN INCHES. DIMENSIONS [] ARE IN MM.

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)** |
|-------------|-----------------|--------|----------------------|------------------------|---------------------|--------------------------|-------------------------------|
| 90004 | 8145 | W | 4 - 30 | 0.5 | 15 | 1.3 | 1000 Typ. |
| 90020 | 8052 | Ti | 4 - 30 | 0.5 | 15 | 1.3 | 1000 Typ. |
| 90036 | 8053 | W | 4 - 30 | 0.3 | 9 | 1.3 | 1000 Typ. |
| 90042 | 8195 | Mo | 4 - 30 | 0.5 | 15 | 1.3 | 1000 Typ. |
| 90053 | 8204 | Mo | 4 - 15 | 1.0 | 15 | 1.3 | 1000 Typ. |
| 90057 | 8156 | Au | 4 - 30 | 0.5 | 15 | 1.3 | 1000 Typ. |
| 90116 | 8053 | W | 4 - 30 | 0.2 | 6 | 1.3 | 1000 Typ. |
| 90118 | 8052 | Fe | 4 - 10 | 1.5 | 15 | 1.3 | 1000 Typ. |
| 90145 | 8054 | Pd | 4 - 40 | 0.3 | 9 | 2.0 | 1000 Typ. |
| 90146 | 8057 | W | 5 - 13.6 | 2.0 | 27.2 | 2.0 | 1000 Typ. |
| 90151 | 8063 | Rh | 4 - 30 | 0.3 | 9 | 2.0 | 1000 Typ. |
| 90152 | 8063 | Ag | 4 - 30 | 0.3 | 9 | 2.0 | 1000 Typ. |
| 90153 | 8063 | Mo | 4 - 30 | 0.3 | 9 | 2.0 | 1000 Typ. |

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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