

Developed for applications that require high resolution over a wide-angle field of view, the Pinnacles 50kV Microfocus X-ray source features high flux output.

Its compact design is fully radiation shielded and insulated with an integrated high voltage cable located on the side of the tube for easy connection.

The Shasta μ F power supply has been optimized to power the Pinnacles 50kV Microfocus X-ray tube.



Benefits

- Wide operating range enables optimal image contrast
- Wide field of view
- Fully shielded package eliminates X-ray leakage and easily integrates into your system
- Integrated high voltage cable
- Paired power supply for plug and play operation

Applications

- Medical imaging
- Printed circuit board and electronic device inspection
- Nondestructive testing of plastic, metal and mechanical parts

Specifications	
Operating voltage range:	10-50kV
Maximum power:	12W
Maximum beam current:	1.0mA
Focal spot size:	10 μ m (50kV, 12W) line pair resolution using JIMA RT RC-02 ⁽⁴⁾
Focus to Object Distance (FOD):	35.18mm (1.385")
Target material:	W
Target angle:	45°
Cone of illumination (unobstructed):	40.5° \pm 0.5°
Window material and thickness:	Be, 254 μ m
Window diameter (unobstructed):	16.88mm (.66")
Maximum operating temperature:	50°C at potting surface
Ambient operating temperature:	0°C to 40°C; 0-95% RH up to 5,000ft
Cooling method:	Forced air @ 150cfm at 100mm (4.0") recommended
Shielding:	Fully shielded. X-ray leakage < 1.0 μ Sv.hr-1 at 10cm
Weight:	\approx 1.37kg (3 lbs)
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

Shasta μ F Power Supply 9700007

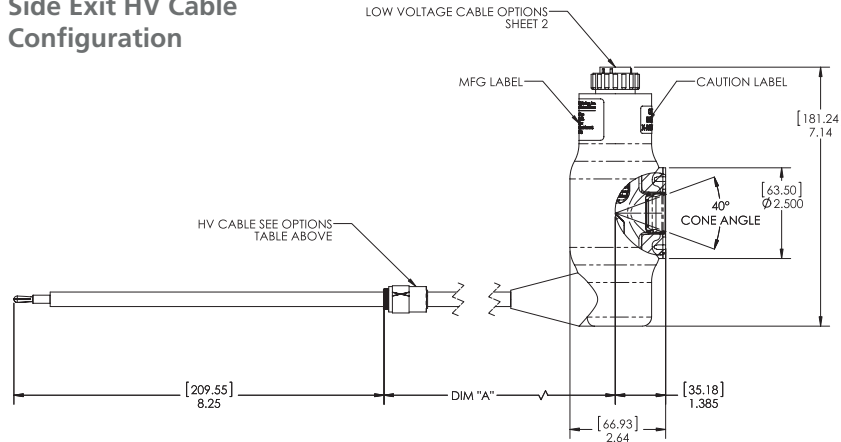
- Industry-standard 24V Input
- High voltage, cathode, and grid controls
- Intuitive analog control interface
- Focusing grid adjustment for optimum spot size
- Designed to meet UL, CE, TUV, and RoHS Directive 2011/65/EU



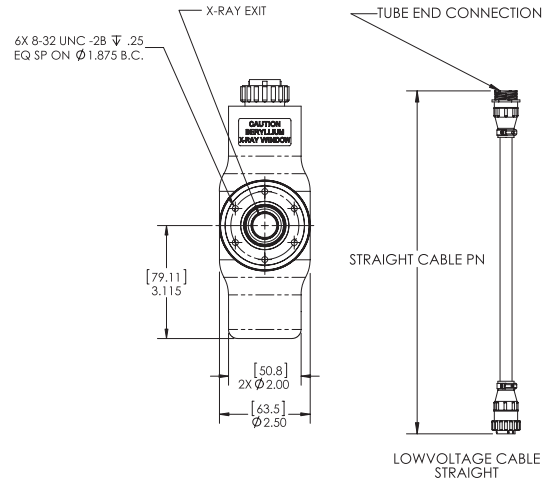
The Business of Science®

Pinnacles 50kV Microfocus X-ray Source

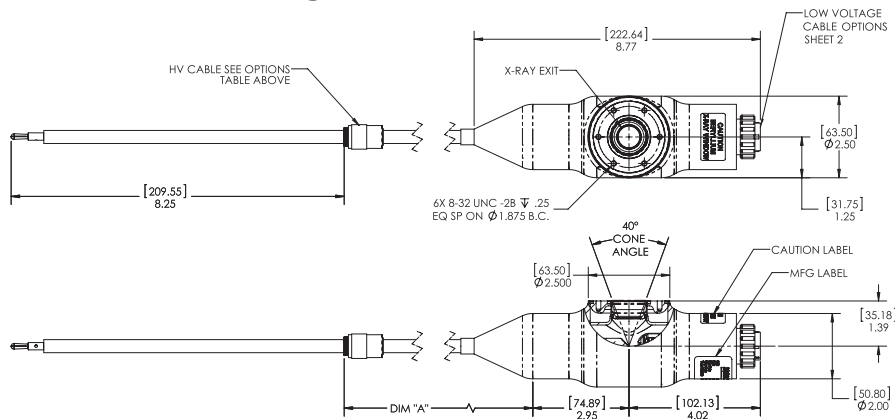
Side Exit HV Cable Configuration



LV Cable Options



End Exit HV Cable Configuration



LOW VOLTAGE STRAIGHT CABLE PN	LV CABLE LENGTH
9290021	32 in
9290022	39in (1m)
9290023	79in (2m)
9290024	118in (3m)

NOTES

1. This tube is fully radiation shielded to 50kV/12W except 40° X-Ray cone.
2. The HV cable is permanently potted to the X-ray tube.
3. Dimensions: Inches [mm]
4. Line pair resolution is defined as achieving a 50% ratio between the line pair intensity modulation and background intensity.

Product Ordering Table

Must be operated with Shasta µF power supply.

Part Number	Outline Drawing	Cable Orientation	HV Cable Length DIM "A"	Target	Operating Range (kV)	Max Anode Current (mA)	Max Anode Power (W)	Spot Size (µm)**
9400001	8400001	Side Exit	39 in (1m)	W	10 - 50	1.0	12	10 Nom.
9400003	8400002	End Exit	39 in (1m)	W	10 - 50	1.0	12	10 Nom.
9400014	8400002	End Exit	79 in (2m)	W	10 - 50	1.0	12	10 Nom.
9400015	8400002	End Exit	118 in (3m)	W	10 - 50	1.0	12	10 Nom.
9400017	8400001	Side Exit	79 in (2m)	W	10 - 50	1.0	12	10 Nom.
9400018	8400001	Side Exit	118 in (3m)	W	10 - 50	1.0	12	10 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.

This publication is the copyright of Oxford Instruments plc and provides outline information only, which (unless agreed by the company in writing) may not be used, applied or reproduced for any purpose or form part of any order or contract or regarded as the representation relating to the products or services concerned. Oxford Instruments' policy is one of continued improvement. The company reserves the right to alter, without notice the specification, design or conditions of supply of any product or service. Oxford Instruments acknowledges all trademarks and registrations.

© Oxford Instruments plc, 2020. All rights reserved. Document reference: Part no: DS067 - July 13, 2020



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