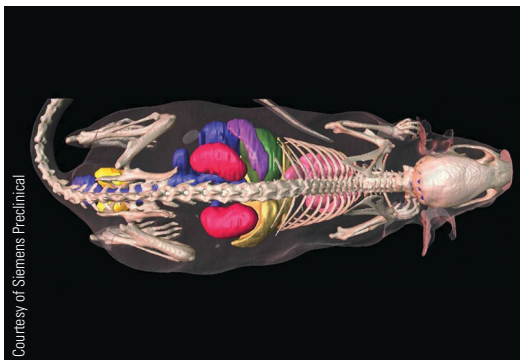


The Thermo Scientific X-Ray product line has been providing quality X-Ray sources to the industrial and medical imaging markets since 1978. Known and respected for innovation and superior microfocus technology, we are proud to introduce the next level of completely integrated wide beam 130kV X-Ray sources – the Thermo Scientific PXS10-WB-10 mm X-Ray source.

Thermo Scientific PXS10-WB-10 mm Wide Beam MicroFocus X-Ray Source 130kV

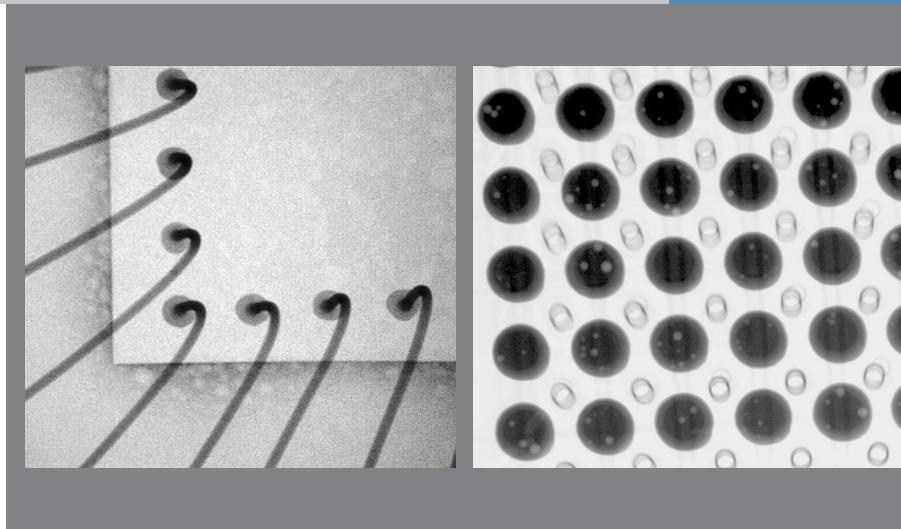


The high-performance Thermo Scientific PXS10-WB is ideal for electronics inspection, showing clear X-Ray images of IC wire bonds, ball grid arrays, and other components (right).



Micro CT image of a lab rat

Courtesy of Siemens Preclinical



Description. The Thermo Scientific PXS10-WB X-Ray source is a digitally controlled 130kV microfocus X-Ray source for use in high-resolution imaging applications. The small spot size and very high magnification, combined with stable high-intensity output, allow superior quality 2D and 3D images. The wide, uniform beam is especially suitable for automated inspection, where a large field of view is required for throughput. The X-Ray source combines the end window X-Ray tube, high-voltage power supply, and controller in one compact package powered from a 24 VDC source.

Applications. The high-performance Thermo Scientific PXS10-WB X-Ray source is the ideal choice for:

- Manual and automated inspection of printed circuit boards and electronic devices
- Nondestructive test requiring high-resolution imaging of metal and plastic parts
- Micro-CT imaging for industrial and life sciences applications

Benefits. Thermo Scientific PXS10-WB X-Ray sources offer many attractive benefits:

- Wide (115 degrees) round beam is especially suitable for automated inspection
- 10 mm spot to window spacing provides "best-in-class" high geometric magnification
- Small, round spot optimized over the range of operating voltage and power for distortion free images
- X-Ray tube, power supply, and control electronics in one compact package make system integration easy
- Tube head can be rotated +90° or -90° relative to position (see Figure 1)
- Auto-conditioning ramps source up slowly as required by the time the source has been off
- Digital interface allows user access to diagnostics and operating logs. Source can be operated with the supplied Windows® graphical user interface or using the included Product Interface Specification.

Thermo Scientific PXS10-WB Specifications

Parameter	16 Watt	40 Watt	65 Watt
Operating Voltage Range	50-130kV	50-130kV	50-130kV
Maximum Power	16 W, 50-130kV	40 W, 80-130kV	65 W, 130kV
Maximum Beam Current	0.320 mA	0.500 mA	0.500 mA
Spot Size:			
4 Watt	≤ 7μ, 50-130kV	≤ 8μ, 50-130kV	≤ 8μ, 50-130kV
8 Watt	≤ 10μ, 50-130kV	≤ 14μ, 50-130kV	≤ 14μ, 50-130kV
16 Watt	≤ 21μ, 50-130kV	≤ 24μ, 50-130kV	≤ 24μ, 50-130kV
32 Watt		≤ 48μ, 70-130kV	≤ 48μ, 70-130kV
40 Watt		≤ 60μ, 80-130kV	≤ 60μ, 80-130kV
65 Watt			≤ 100μ, 130kV
Spot Ellipticity	±20% @ 16 watts, 130kV (either axis referred to average)		
Cone of Illumination	115°, round beam, uniform profile in any direction		
Spot to Window Spacing	10 ± 0.5 mm		
Window Diameter (uncollimated)	Approximately 38 mm (1.5 in.)		
Window Material and Thickness	Beryllium: 0.51 mm (.020 in.)		
Target Material	Tungsten		
Ambient Temperature and Humidity	0 to 32 °C, 0-95% RH, up to 5,000 feet		
Method of Cooling	Internal fan. Adequate air circulation around unit must be provided.		
Shielding	X-Ray leakage behind the X-Ray tube is less than 0.5mR/hour, measured one inch away with Victoreen 190.		
Weight	Approximately 15.5 kg (34 lb.)		
Input Power	24-26 VDC, 6 amps		

CERTIFICATIONS

- CE Directives 73/23/EEC (Low Voltage) and 89/336/EEC (EMC). Includes EN 61010-1, EN 55011, EN 50081-1, EN 61000-4
- UL 61010-1, 2nd Edition, C AN/CSA-C22.2 No. 61010-1, 2nd Edition

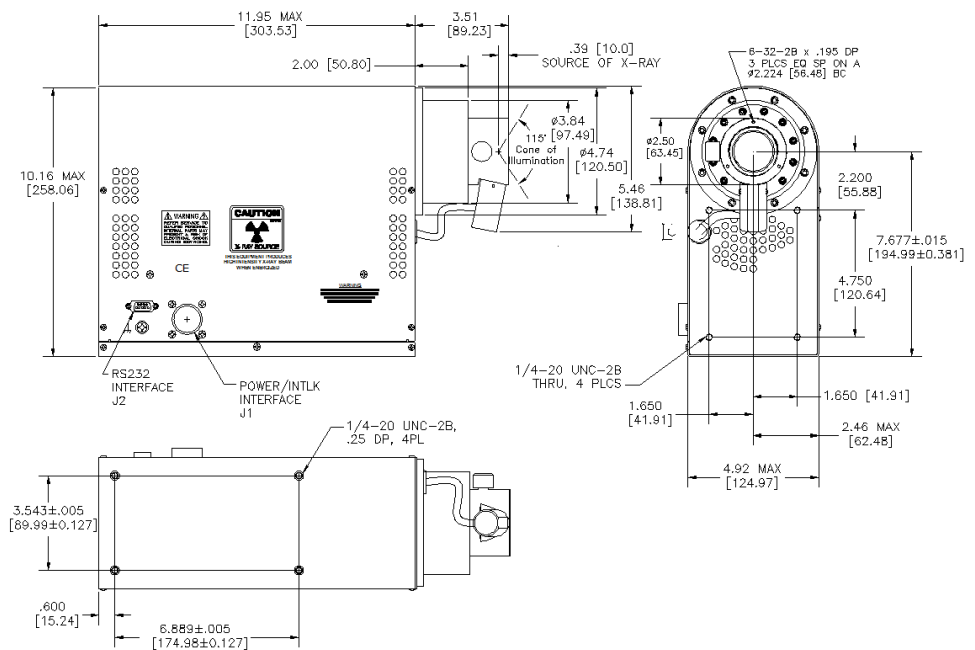


Figure 1. Outline drawing of Thermo Scientific PXS10-WB 10 mm high-resolution MicroFocus X-Ray Source

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320 El Pueblo Road, Scotts Valley, CA 95066
831-438-5940 ph 831-438-5892 fax

www.thermoscientific.com
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