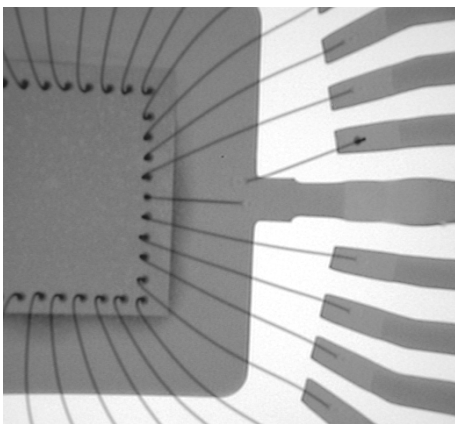


The Thermo Scientific X-Ray product line has been providing quality X-Ray sources to the industrial and medical imaging markets since 1978. Known and respected for innovation and superior microfocus technology, we are proud to now introduce the next level of completely integrated minifocus X-Ray sources – the Thermo Scientific PXS11 high-resolution MiniFocus X-Ray source.

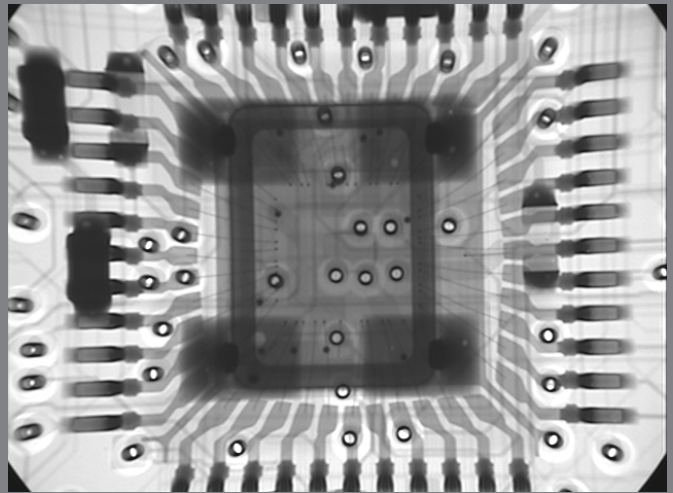
Thermo Scientific PXS11 High-Resolution MiniFocus X-Ray Source 50-80kV



Thermo Scientific PXS11 X-Ray sources feature an integrated design with X-Ray tube, power supply, and control electronics in one package. Printed circuit board with IC shown at right.



IC lead frame with wire sweep



Description. The Thermo Scientific PXS11 X-Ray source is a minifocus X-Ray source for use in high-resolution imaging applications. The small spot size, combined with stable high-intensity output, allow superior quality 2D and 3D images. The X-Ray source combines the side window X-Ray tube, high-voltage power supply, and controller in one compact package powered from a 28 VDC source.

Applications. The Thermo Scientific PXS11 X-Ray source is the ideal choice for:

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

Benefits. Thermo Scientific PXS11 X-Ray sources offer many attractive benefits:

- Small, round spot optimized over the range of operating voltage and power for distortion free images
- 30 micron and 45 micron spot models for high-resolution imaging
- X-Ray tube, power supply, and control electronics in one compact package make system integration easy
- Simple, robust design for ease of installation and long life
- Fault signals and LED indicators provide status at all times

Thermo Scientific PXS11 Specifications

Parameter	PXS11-5025	PXS11-150-75	PXS11-8020
Operating Voltage Range	10-50kV	40-75kV	40-80kV
Maximum Power	25W at 50kV	11W at 75kV	20W at 80kV
Maximum Beam Current	0.500 mA, 43-50kV	0.150 mA, 50-75kV	0.250 mA, 50-80kV
Spot Size	65 μ at 50kV	45 μ at 75kV	30 μ at 80kV
Spot Ellipticity (all models)	< 20% typical		
Cone of Illumination	34° x 49°		
Spot to Window Spacing (FOD)	8.9 mm (0.35 in.)		
Window Diameter	Approximately 11.4 mm (0.45 in.) with frame		
Window Material and Thickness	Beryllium: 0.13 mm (.005 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 is sufficient for ambient temperature up to 30°C ambient and up to 16W with 50% duty cycle operation. Above 30°C ambient, or for continuous operation above 12W, cooling air must be directed at the unit.		
Shielding	Shielding is sufficient to ensure that when beam is contained, x-ray leakage is less than 1 mR/hour measured 1 meter away from the housing when operated at 75 kV, 0.15mA.		
Weight	Approximately 4 kg (11 lb.)		
Input Power	28-30 VDC, 3 amps		

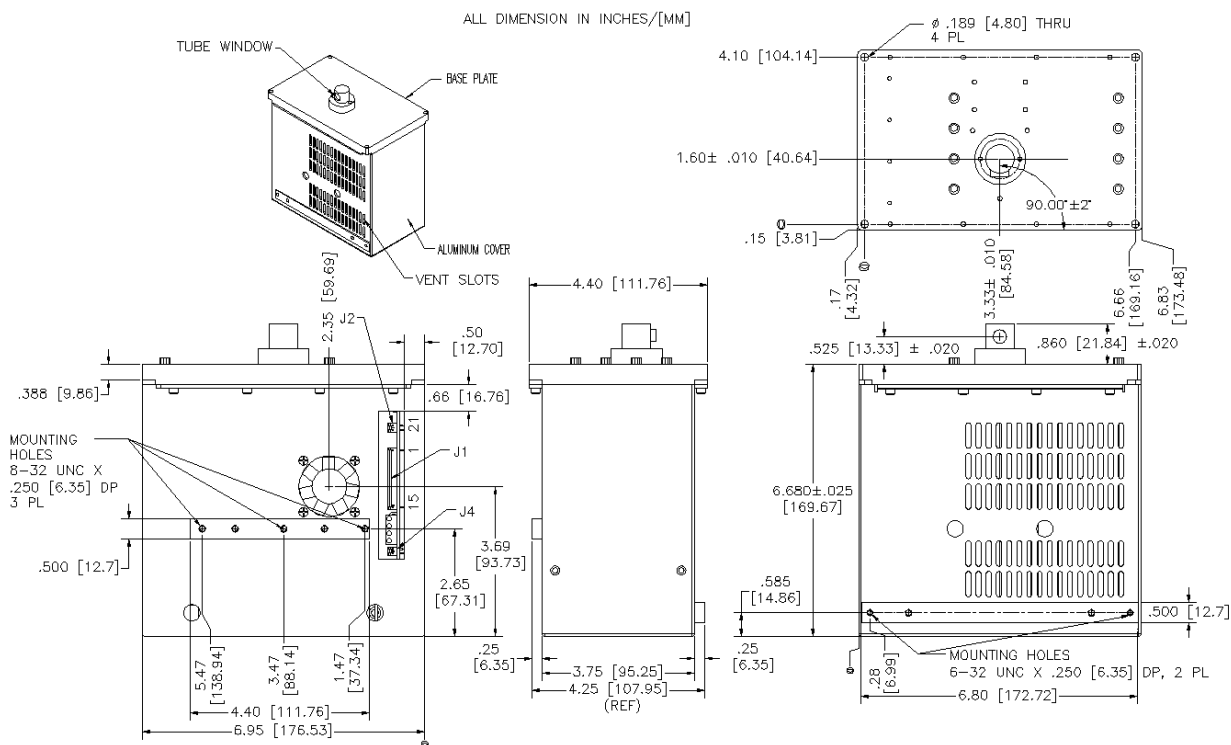


Figure 1. Outline drawing of Thermo Scientific PXS11 high-resolution MiniFocus X-Ray Source