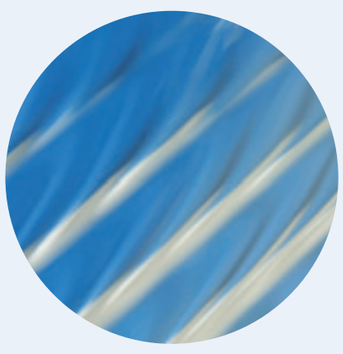
alft Inc.

ADVANCING INNOVATION & INDUSTRY THROUGH SOFT X-RAY SOLUTIONS



SOFT X-RAY APPLICATIONS

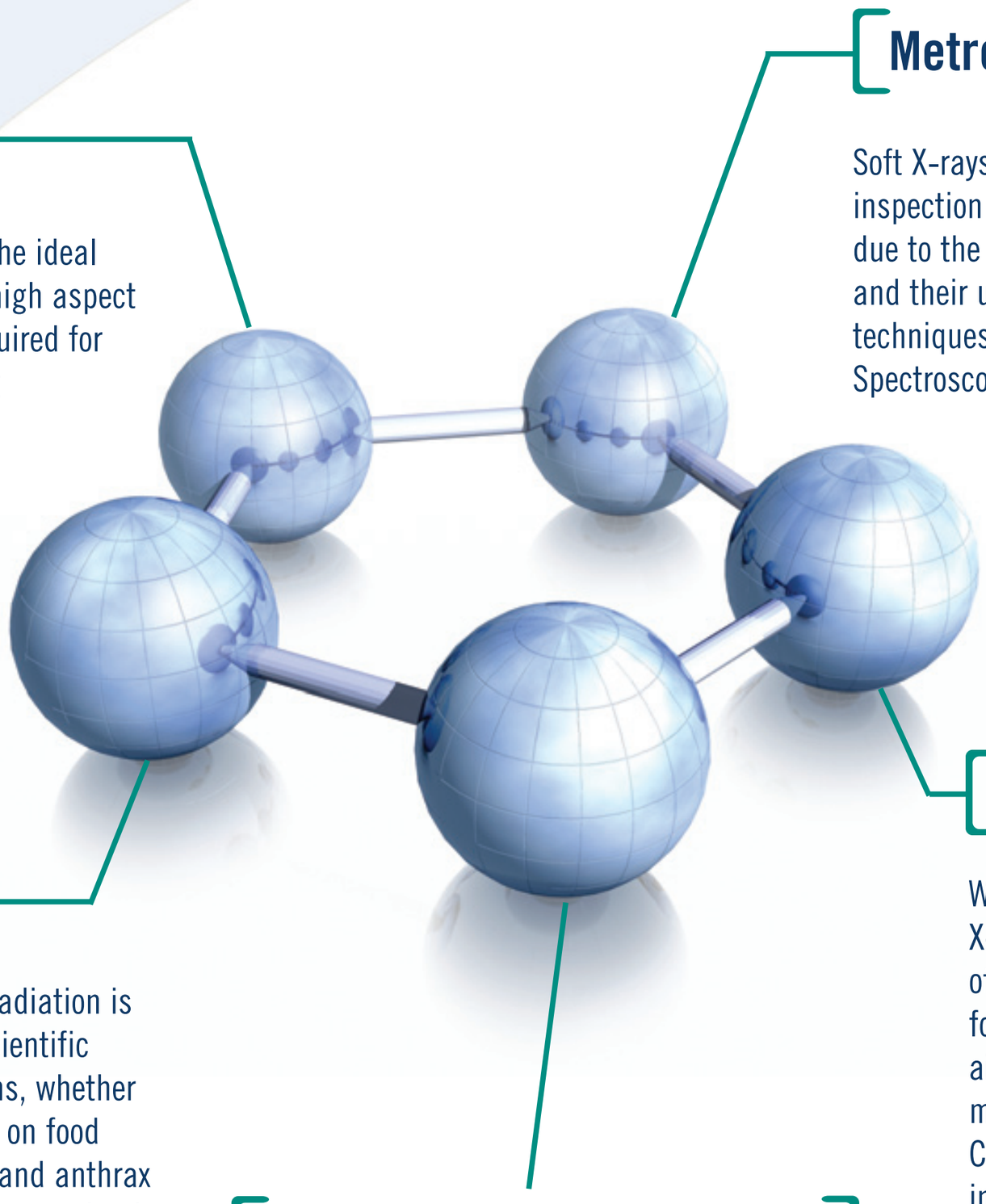
ADVANCING INDUSTRY THROUGH ALFT'S VACUUM SPARK SOFT X-RAY SOURCE

LIGA

Soft X-rays provide the ideal light source for the high aspect ratio lithography required for nano-manufacturing

Metrology

Soft X-rays are an ideal source for the inspection and studying of nanostructures due to the inherently small size of soft X-rays and their unique absorption properties. The techniques involved include Microscopy, Spectroscopy and Crystallography.



Irradiation

The range of soft X-ray radiation is at the cutting edge of scientific research and applications, whether it's neutralizing bacteria on food supplies, charging ricin and anthrax in air purification systems, or simply irradiating DNA.

Skin Therapy

With the strong absorptions of soft X-rays in the first 10-20 micrometers of the skin, soft X-rays can be used for the treatment of a range of skin ailments from skin rejuvenation and mild inflammations to skin cancer. Controlling the wavelength and intensity of the soft X-ray beam will allow one to remove blemishes, treat scars or tackle melanoma.

COMMERCIALIZE YOUR SOFT X-RAY APPLICATION

ADVANCING INNOVATION & INDUSTRY THROUGH SOFT X-RAY SOLUTIONS

VSX SOFT X-RAY SOURCE
KEY BENEFITS

KEY BENEFITS

1 COST OF OWNERSHIP

ALFT's VSX source is the most economical soft X-ray source on the market today.

2 FLEXIBILITY

By changing different parameters the VSX source is capable of delivering a complete soft X-ray spectrum.

3 PORTABLE

At under 500lbs and using less than 10 square feet of floor space, the VSX source is ideal for both industrial and laboratory environments. The VSX can easily be moved to the application when it is difficult to bring your 'work' to the source.

4 RELIABILITY

The VSX soft X-ray source is very reliable, providing continuous operation of high flux soft X-ray output. Whether for experimental use or as part of a commercial application, the VSX is the ideal choice to provide soft X-ray radiation.

5 EASE OF USE

The user interface of the VSX allows all levels of control; one button operation, remote control, or "engineering mode" for rigorous control of each parameter.

ABOUT ALFT INC.

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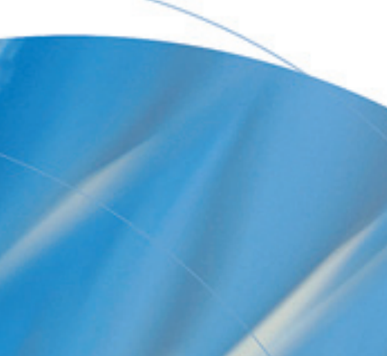
ALFT is a Canadian owned and operated company, located in Kanata, Ontario. ALFT utilizes patented vacuum spark technology to fuel the VSX Series of products. The VSX family builds on 18 years of research and development to provide the most advanced and cost-effective, commercially available soft X-ray sources. ALFT's soft X-ray sources facilitate and enable advancements in the research and development of new applications spanning a broad range of industries; including diagnostic and medical imaging, biotechnology, nanotechnology, microelectronics, micro-fabrication, genomics, proteomics, and environmental and life sciences.



ADVANCING INNOVATION & INDUSTRY THROUGH SOFT X-RAY SOLUTIONS

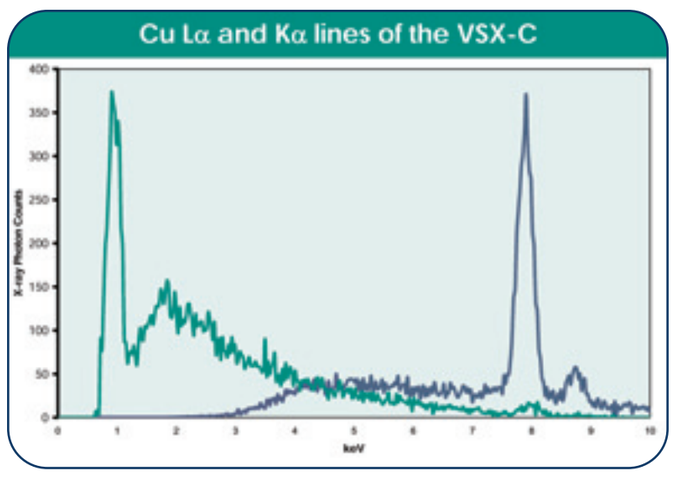
PRESENTING THE VSX-C SOFT X-RAY SOURCE

FEATURES AND SPECIFICATIONS

FEATURES:

- EXCELLENT OUTPUT STABILITY
- MULTIPORT SOURCE
- DEMONSTRATED RELIABILITY
- CONTINUOUS OPERATION

The **VSX-C** is a compact soft X-ray source that will fit into the smallest lab or application. This dedicated source is capable of producing 0.7 W radiation with user selectable peaks of 930 eV or 8.05keV in standard configuration. Additional energy levels are available on request.

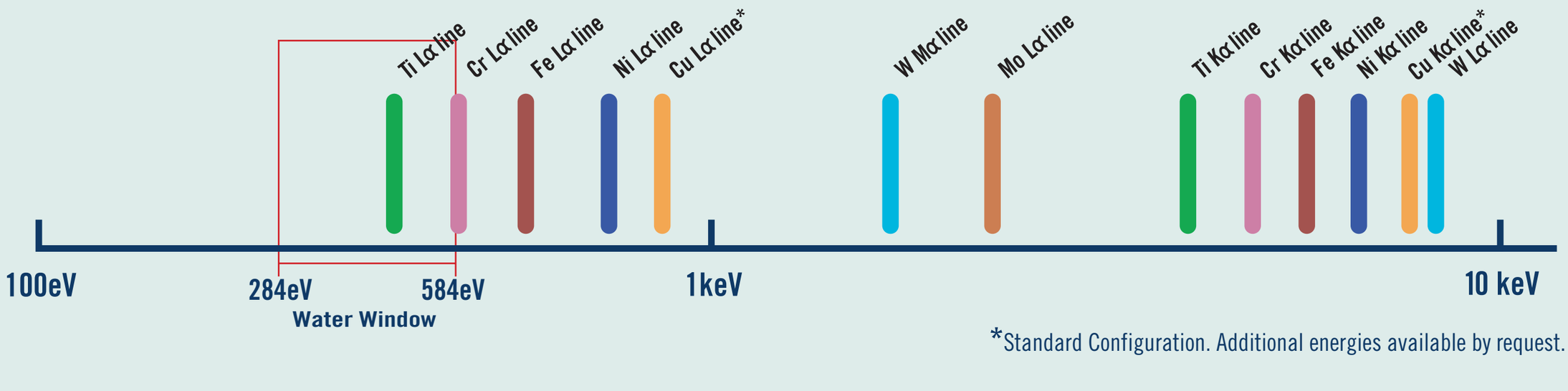


PRODUCT SPECIFICATIONS

Release 3.0

MODEL: VSX-C	TECHNICAL SPECIFICATIONS	
ITEM	NOMINAL	NOTES
1. RADIATION		
1.1. Source power, in 4π steradian	0.7 W	All energy and power levels at the source, before filter window
1.2. Photon energy (peak)	930 eV and 8.05keV	Cu Lα See spectrum for other energies
1.3. Flux	$7x10^{13}$ Photons/cm^2/sec	With focusing polycapillary optics
2. BEAM		Can be coupled to a vacuum chamber or transmitted through a beryllium window
2.1. Beam Height	1.4 m	Standard Beam Height
2.2. Number of ports available	3	Two 2 1/2" Conflat Vacuum fittings Removable 9 1/2" door
2.3. Distance from source window	10 cm	
2.4. Spot size through optional focusing optics	50μm	Using polycapillary optics to capture light from divergent source
3. OPERATIONAL		
3.1. Continuos Operational Lifetime	>40 Hours	Approximately one hour to replace consumable parts
3.2. Safety	CSA Certified	
3.3. Radiation Levels	Negligible	With ports capped
4. FACILITY REQUIREMENTS		
4.1. Power	208 VAC. 3 phase. 35 A 110 VAC. Single Phase. 15 A	
4.2. Cooling	Chilled water supply. 20ºC	
4.3. Gas supply	20 psi clean nitrogen	
4.4. Network	standard ethernet plug (RJ45)	
5. MECHANICAL		
5.1. Dimensions: L x W x H	48" x 32" x 70"	
5.2. Weight	500 lbs.	
5.3. Mounting	Vibration Isolation Feet	Integrated wheels for easy movement
6. CONTROLS		
6.1. User Interface	Web-Based	Remotely controlled via any web browser on network
6.2. Operation Modes	Fully Automatic Manual	One button operation Full user control
6.3. Safety Interlocks	Two Available	
6.4. Soft X-Ray Active	Normally Open Switch	Used to signal external systems when X-Ray output is active

VSX Soft X-ray Spectrum



*Standard Configuration. Additional energies available by request.

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