

60mm<sup>2</sup> Sealed Proportional Counter Window

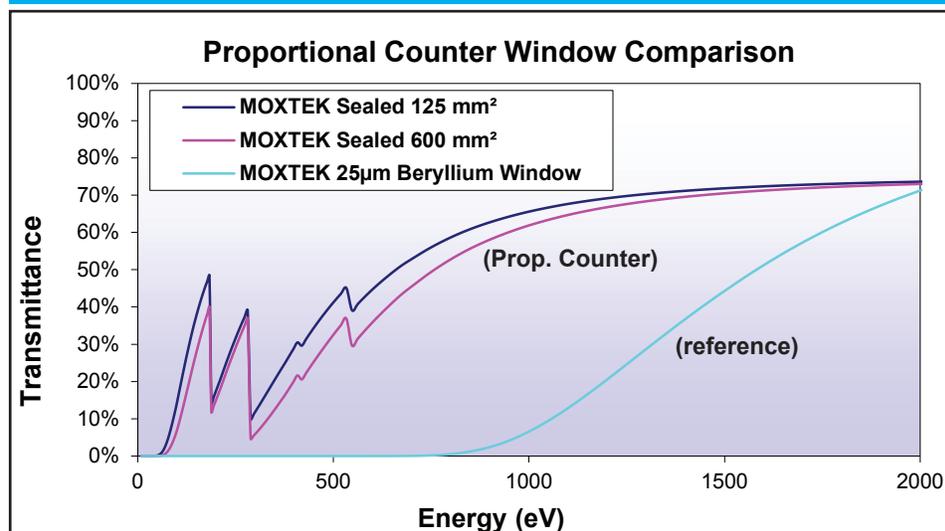
## Applications

- Benchtop WDXRF
  - Environmental
  - RoHS/ WEEE
- Floor standing WDXRF
- Portable WDXRF

Moxtek® sealed proportional counter windows allow high transmission of low-energy x-rays (including Boron). These windows are ideal for **sealed** proportional counter applications requiring light element sensitivity.

Features	Benefits
Ultra-thin polymer film	High transmission of low energy x-rays
Aluminum coating	Charge dissipation
	UV, IR, and visible light rejection
DuraCoat®	Corrosion resistant, hermetic seal
Silicon support structure	High mechanical strength, durable
High purity	Minimal spectral contamination
Uniform thickness	Consistent transmission across entire window

## Transmission Comparison of Proportional Counter Windows



## Window Composition

Moxtek proportional counter windows are composed of an ultra-thin layers of polymer, DuraCoat®, a charge dissipative aluminum coating, and a strong support structure composed of silicon and traces of molybdenum.

## Mechanical Strength

Moxtek proportional counter windows are supported by a rigid silicon grid. This patented design enables the window to withstand over 1.2atm of differential pressure. These windows have withstood over 100,000 cycles at this differential pressure without degradation in window performance. Pressure Limits: 1.2atm frontal pressure, 0.3atm backside pressure.



## Table 1 Performance Specifications

	Simultaneous Window (125mm <sup>2</sup> )	Sequential Window (600mm <sup>2</sup> )
<i>Active Area:</i>	5mm x 25mm	20mm x 30mm
<i>Outside Dimensions:</i>	33.4mm x 29mm	49.5mm x 42.0mm
<i>Window Grid Thickness:</i>	7.6mm	3.8mm
<i>Grid Open Area:</i>	76%	
<i>Maximum Temperature:</i>	85°C	
<i>Maximum Differential Pressure:</i>	1.25atm	
<i>Aluminum Coating Thickness:</i>	100Å ( ±15Å )	
<i>Leak Rate:</i>	3 x 10 <sup>-10</sup> mbar • L/s of helium	
<i>Chemical Resistance:</i>	Moisture, many solvents, acids, and bases	

## Cleaning

Moxtek proportional counter windows can be cleaned with DI water and solvents. Care must be taken when cleaning the window so damage does not occur. Never touch the window film with anything. Cleaning can be done by rinsing the window with the solvent. Apply the solvent without pressure and let the solvent run across the surface.

Moxtek recommends using high purity methanol or isopropyl alcohol as cleaning solvents. Particulates and other contaminants can damage the window membrane or leave behind unacceptable residues during the cleaning process.

## Mounting

Sealed Proportional Windows are supplied with the windows mounted into custom mounts. The preferred mount material is Invar<sup>®</sup> or Kovar<sup>®</sup>. If another material must be used, Moxtek will need to approve the material for compatibility based primarily on having an acceptable coefficient of thermal expansion (CTE), which needs to be similar to silicon.

Care should be taken to not flex the mount or damage to the window may occur. Please provide a drawing of the mount design to Moxtek.

*For warranty and ordering information, please visit [www.moxtek.com](http://www.moxtek.com). Moxtek can provide feedback to optimize the mount design.*



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