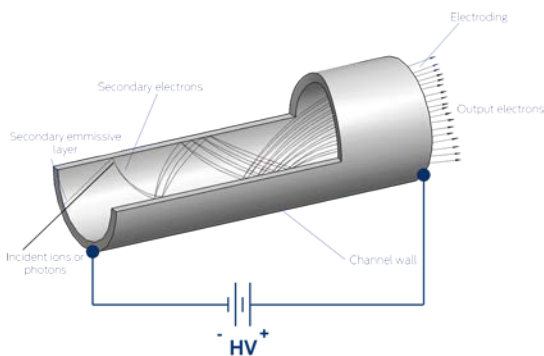


Why Choose Channeltron® Electron Multipliers?



Photonis is the original manufacturer of all Channeltron® electron multipliers for use in a variety of analytical instruments. Our Channeltron® technology provides the highest dynamic range and sensitivity to ensure that your instrument is performing as efficiently as possible. As demonstrated in Figure 1, Channeltrons® directly detect and amplify energetic photons and charged particles such as positive and negative ions, electrons and assorted molecular and subatomic particles. More than half of the world’s mass spectrometer manufacturers use our Channeltrons® in their instruments and here are a few reasons why:

Largest Selection Available

Photonis has over 150 standard and custom Channeltron® electron multipliers. A variety of leads, feed-throughs and mounting options are available for easy integration. Our [OEM replacement guide](#) details which Channeltron® is best suited for each instrument from the major manufacturers. If you don’t find what you are looking for in this guide, give us a call. Our knowledgeable staff will recommend the exact detector for your needs.

Highest Dynamic Range and Sensitivity

Our extended dynamic range Channeltron® detectors ensure a linear response beyond the limits of most analytical instruments. Additionally, the extended dynamic range has allowed us to enhance the lifetime of these detectors in order to improve detection efficiency at higher masses and overall instrument performance.

Photonis’ Channeltron® electron multipliers also provide superior sensitivity compared to other detectors available in the market today. Improvements in the conversion dynode technology have resulted in structures capable of operation at higher voltages and materials with improved ion-to-electron conversion yields for better sensitivity at higher masses.

In the Figure 2 below, we compared the linearity of our Magnum™ Channeltron® detector to that of two competing brands. As demonstrated, you will see the Magnum™ detector displays superior linearity over the same output.

Figure 2

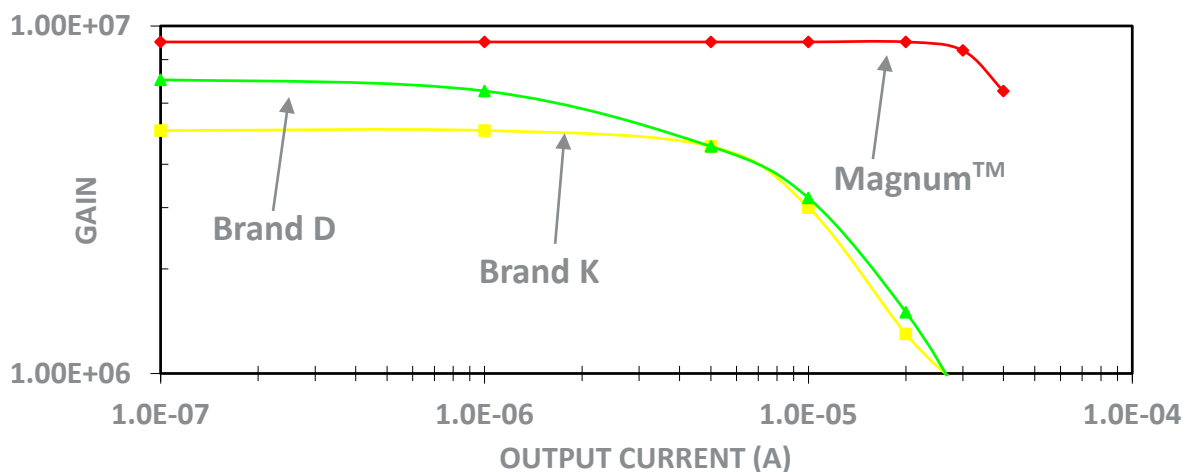
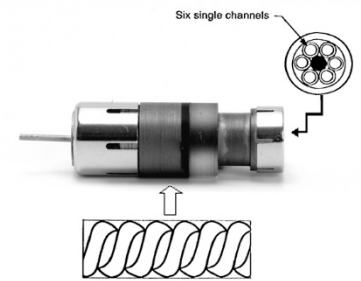


Figure 3



Long Lifetime

Channeltrons® are manufactured to endure the harsh conditions they can be subjected to within a mass spectrometer. If you have a poor vacuum environment and need your instrument to provide accurate analysis, our family of Spiraltron™, MegaSpiraltron™ and Magnum™ detectors will simultaneously provide the maximum output while reducing ion feedback and withstanding environmental conditions. In Figure 3 on the right, you can see how the six single channels provide gains of more than 100,000,000.

Consistent Quality

Our Channeltron® electron multipliers are all made by a dedicated manufacturing team with years of experience. Photonis is committed to providing the highest quality mass spectrometer detectors available which is why we also perform extensive testing on our Channeltrons®. Our facility in Sturbridge, MA recently received its ISO 9001:2015 certificate to further demonstrate our commitment to providing the highest quality products available.

Low Maintenance, Easy Replacement

Photonis can provide our Channeltron® family of products as complete assemblies in order to minimize the impact replacing these cartridges will have on your operation. Notably, if it is the stand-alone detector that you need, as the original manufacturer, Photonis can also provide that. A wide variety of standard replacement models are available in our [OEM replacement guide](#).

Customized to fit your needs

Photonis specializes in providing detectors which are uniquely suited to each mass spectrometer manufacturer. When you are evaluating your options for detectors, you will need to determine some key factors such as what you're trying to detect (positive/negative ions, electrons, UV photons, etc.), how much gain you need, and how much space you have in the instrument. By partnering with Photonis, you can customize just about everything from the coating, grid, type of anode, to the mount in order to ensure that the detector you receive will exceed your requirements.

[Contact us](#) today with your inquiry and our team of experts will work with you to make sure the detector you receive is exactly what you specify.