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BIPOLAR & ADVANCED PERFORMANCE TOF-Apr1118



Advanced Performance
and BiPolar Time of Flight Detectors

SUPERIOR
PRECISE
ANALYSIS



Validate your analysis

Photonis manufactures the world's fastest Time of Flight detectors which support portable, UltraFast™ and BiPolar solutions. Our detectors provide unmatched temporal resolution and superior mass sensitivity. More TOF-MS instrument designers choose to work with Photonis than anyone else because of our ability to customize our detectors. Photonis' TOF detectors are available in a range of sizes and configurations to perfectly suit your needs.

BiPolar Time of Flight Detectors

BiPolar TOF Detectors



Photonis' BiPolar Time of Flight detectors enhance detection efficiency of both positive and negative high mass ions. These detectors each have an ion conversion surface that can be biased up to $\pm 10\text{KV}$ and is available in 18, 25, and 40mm active area.

CoAxial BiPolar TOF Detectors

The CoAxial BiPolar Time of Flight detector provides the opportunity to reduce vacuum system size by generating ions behind the detector and sending them into a simplified reflectron lens. This detector features an 18mm active area.



Off-Axis BiPolar TOF Detectors



If space and size are a main factor in the design of your analytical instrument, you may consider Photonis' Off-Axis BiPolar TOF detector. These detectors only require 25mm cylindrical space and are manufactured to support non-linear configurations by mounting a PMT at a right angle to the scintillator. It features a pulse width of less than 2 nanoseconds with high output current.

High Mass BiPolar TOF Detectors

Comprised of a LongLife™ MCP, high-speed scintillator and a PMT, this detector is ideal for MALDI-TOF instruments. The High Mass BiPolar detector features a 250mm² collection area which allows for higher sensitivities without the need for higher post-acceleration voltage. Additionally, its compact shape and simplified detection system support many high mass operating modes without the need to manipulate the detector through the ion beam.



Advanced Performance Time of Flight Detectors

UltraFast™ TOF Detectors



Our UltraFast™ TOF detectors feature a unique 2µm pore MountingPad™ microchannel plate and are available with either an 18 or 25mm active area. Whether you need a custom or standard flange size, Photonis designs each detector to exceed specifications.

Gen2 UltraFast™ TOF Detectors

Offering twice the speed as our standard UltraFast™ detectors, our Gen2 UltraFast™ TOF detectors provide nearly symmetrical pulse rise and fall times. Each one of these detectors is equipped with one of our TruFlite™ microchannel plates to reduce time jitter and increase detection efficiency. The Gen2 detectors are available with an 18mm input area, front-mount flange and an SMA output for easy installation.



Miniature TOF Detectors



Miniature Time of Flight detectors are optimized for portable mass spectrometers with an active area of 8mm. Photonis has designed these detectors to provide the best temporal resolution while taking into consideration space and size constraints. Each Miniature TOF detector is equipped with two LongLife™ MCPs configured in a chevron shape.

High Temperature TOF Detectors

Photonis designed the High Temperature Time of Flight detector to effectively provide superior temporal and spatial resolution while withstanding operational temperature of up to 150°C and bake temperatures of 300°C.



Did you know...

Photonis manufactures a variety of replacement assemblies for analytical instruments. Each of our extensive OEM replacement assemblies are designed to be an exact replacement for the original and will fit into the existing optics frame. Contact us today to find out which detector will fit your instrument.