

AP-TOF

18mm standard Time-of-Flight Detector



Applications

- ✓ Highest Performance, Fastest Timing Detectors for TOF Mass Spectrometry

Features

- ✓ Improved Mass Resolution
- ✓ Sub-nanosecond Pulse Widths
- ✓ 18mm Ø Collection
- ✓ Low Profile 50Ω Conical Anode
- ✓ Replaceable MCP cartridge

The PHOTONIS **Time-of-Flight Detector** offers previously unobtainable levels of mass resolution, dynamic range, and detection sensitivity for Time-of-Flight Mass Spectrometry.

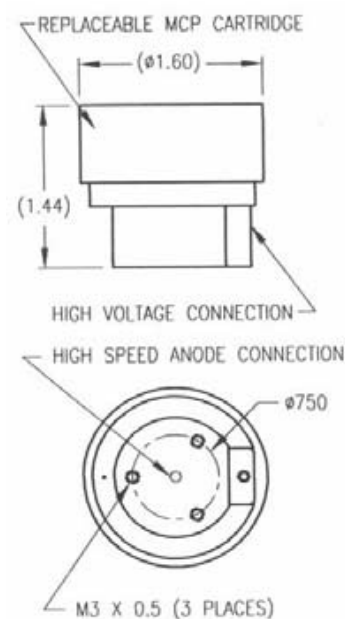
Whether you are currently working with or developing a new MALDI-TOF, ESI-TOF, or custom TOF Mass Spec, the **mass resolution** of your instrument is often determined by the detector. Benefiting from our exclusive small pore microchannel plate technology and a new low profile, 50 ohm impedance matched conical anode, PHOTONIS Time-of-Flight Detector provides sub-nanosecond pulse widths – nearly ten times faster than conventional detectors.

PHOTONIS exclusive small pore MCPs, with pores 5 microns in diameter, offer one of the highest channel densities of any MCP available. This channel density provides **dynamic range improvements** of ten times that of conventional microchannel plates. These MCPs also give the Time-of-Flight detector **superior sensitivity** and **excellent temporal resolution**. The flat input surface provides uniform ion conversion and the higher aspect ratio of the MCPs provides gains in excess of 5x10⁶.

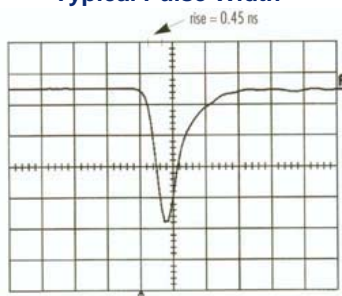
Installation is a snap with PHOTONIS replaceable MCP cartridge. Each cartridge includes a Chevron™ set of two Long-Life™ small pore Extended Dynamic Range MCPs, and a high transmission grid mounted in a rugged module. This module can be purchased separately and allows the operator to replace MCPs quickly and easily. High mass resolution, dynamic range improvements, and superior sensitivity, all from the world's largest supplier of standard, retrofit and custom detectors for mass spectrometry.

General Specifications		Unit
Microchannel Plate	Two Long-Life™ Extended Dynamic Range™ MCP	
Gain (minimum at 2400V)	1 x 10 ⁶	
Dark Count (maximum at 2400 V)	5	cps/cm ²
Resistance (reference)	66 - 400	MΩ
Detection Diameter	18	mm
Operating Temperature Range	-50 to 100	°C
Operating Pressure (maximum)	1.0 x 10 ⁻⁶	Torr
Vacuum Flange	4.5" and 6" conflat available	
Electrical Connections	High Voltage: Output Signal:	SHV available with flange BNC available with flange
DC Offset Voltage on Output Signal (maximum)	500	V

Detector Configuration (dimensions in inches except when specified)



Typical Pulse Width



79 sweeps:	average	low	high	sigma
width (A)	0.75 ns	0.61	0.78	0.02
rise (A)	0.45 ns	0.42	0.51	0.01

The information furnished is believed to be accurate and reliable, but is not guaranteed and is subject to change without notice. No liability is assumed by PHOTONIS for its use. Performance data represents typical characteristics as individual product performance may vary. Customers should verify that they have the most current PHOTONIS product information before placing orders. No claims or warranties are made as to the application of PHOTONIS products. Pictures may not be considered as contractually binding. This document may not be reproduced, in whole or in part, without the prior written consent of PHOTONIS.