

Time-of-Flight Mass Spectrometer Detector Selection Guide



Performance

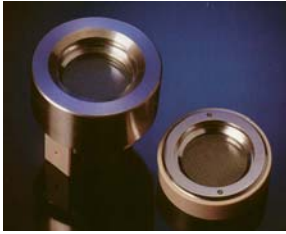
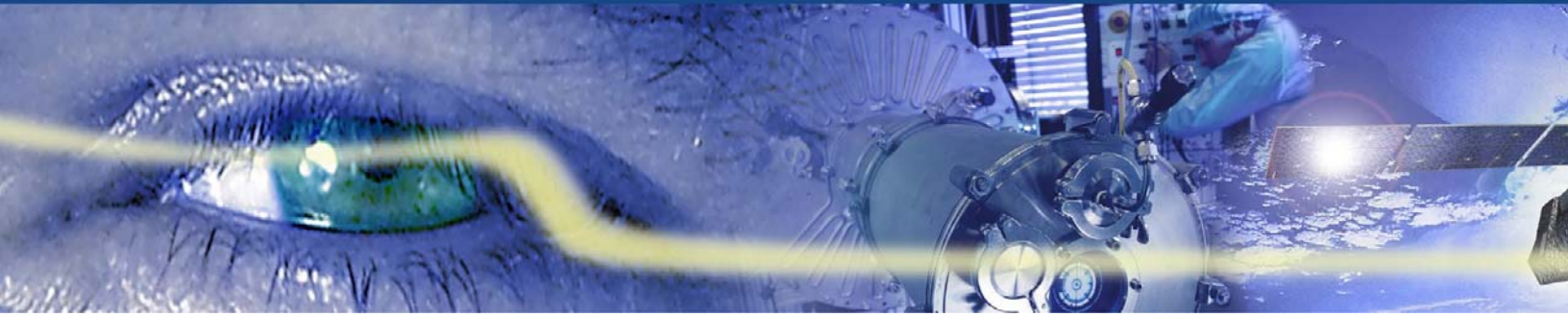
Quality

Value

From the leader in TOF Detectors

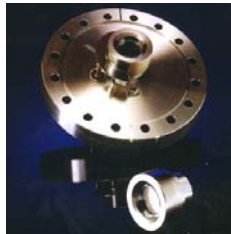
BURLE

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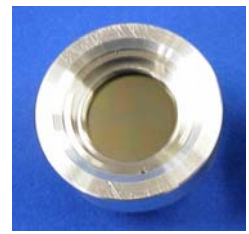
18 mm Ultra-Fast Time-of-Flight Detector

Provides the highest performance available in speed, mass resolution and dynamic range. Uses the smallest pore MCPs available (2-micron) with pulse widths many times faster than conventional detectors. It can provide significant improvements in instrument resolution. It includes a 50 ohm impedance matched anode and exclusive **Quick-Fit**[®] replacement cartridge. Also available mounted on a Conflat flange.



18 mm Advanced Performance TOF Detector

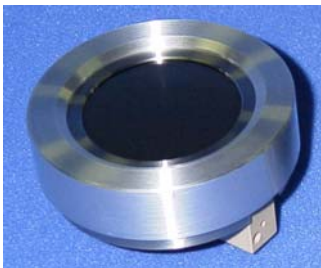
World's most popular TOF detector. This patented design features sub-nanosecond pulse widths and 50 ohm impedance matched anode for fast, clean output pulses. Also available in High-Temp and Conflat flange versions.



25 mm Advanced Performance TOF Detector

Offers twice the collection area of a standard 18 mm TOF and incorporates all of the same patented technology that **BURLE** is famous for. Features sub-nanosecond pulse widths and impedance matched anode for fast, clean output pulses. Also available on a Conflat flange.

All Advanced Performance TOF detectors provide BURLE's exclusive **Quick-Fit**[®] replacement cartridge, which makes field replacement of the MCPs a snap. They use 5-micron or 2-micron pore, **Extended Dynamic Range**[™] MCPs to provide superior sensitivity and unsurpassed dynamic range.



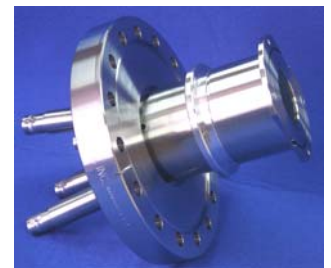
40 mm Advanced Performance TOF Detector

Provides the largest collection area of any TOF detector and incorporates all of the patented technology that makes **BURLE** the leading TOF detector manufacturer. Provides sub-nanosecond pulse widths and impedance matched anode for fast, clean output pulses. Also available mounted on a Conflat flange.



18 mm BiPolar TOF Detector

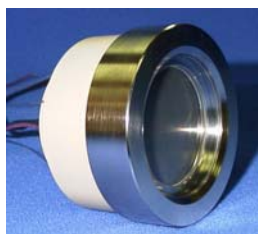
Patented detector with an MCP ion conversion surface that can be biased up to ± 10 kV to enhance the detection efficiency of high mass, positive or negative ions. Proprietary MCP coating further improves conversion efficiency. Output signal polarity is at ground potential by electro-optical isolation to protect your digitizer and simplify electronics. Exclusive **Quick-Fit**[®] cartridge makes MCP replacement a snap. Also available for mounting to the flight tube or a Conflat flange.



25 mm BiPolar TOF Detector

Provides increased collection area and all the patented features of the BURLE BiPolar TOF detectors. The detector is contained in a low-profile assembly integrating a high sensitivity MCP and electro-optical isolation. Fast rise times and narrow pulse widths make this an ideal high mass detector. Also available for mounting directly to the flight tube or a Conflat flange.

The Leader in TOF Detectors



40 mm BiPolar TOF Detector

Provides the largest collection area available and all the patented features of the BURLE BiPolar TOF detectors. Its low-profile integrates a high sensitivity MCP and electro-optical isolation. It provides fast rise times, narrow pulse widths and a huge collection area. Also available for mounting to the flight tube or a Conflat flange.



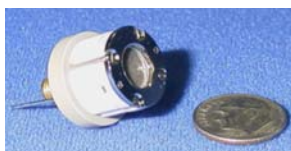
18 mm Off-Axis BiPolar TOF

Reduces the overall height of the 18mm BiPolar TOF detector, reflects the light at a right angle and brings the leads out the side and reduces the height from 68 to 35 mm. It also features an integral voltage divider which reduces the number of power supplies required from 4 to only 2, which saves costs. Consult **BURLE** for larger sizes.



18 mm Co-Axial BiPolar TOF Detector

This unique patent pending detector offers instrument manufacturers an option to reduce the size of vacuum systems by generating the ions behind the detector and launching them into a simplified reflectron lens, which can also save costs. Consult **BURLE** for larger sizes.



8 mm Miniature TOF Detector

Only 8 mm collection diameter which offers previously unobtainable levels of mass resolution, dynamic range, and detection sensitivity. It is ideal for field portable TOF Mass Spectrometers and provides the smallest package available anywhere. Also available on a Conflat flange.



MAGNUM Time-of-Flight Detector

Ultimate in low-cost TOF detectors and does not sacrifice performance or quality. Using the exclusive **BURLE Spiraltron™** technology, the detector offers excellent dynamic range, fast timing, and rugged packaging in addition to excellent value. Also available on a Conflat flange.

BURLE TOF Detector Overview

Detector	Active Ø	Rise Time (ps)	Pulse Width (ps)	Overall Height	Outside Dim	Operating Temp	Bake Temp	Quick-Fit® Cartridge	Flange Option
18mm AP TOF	18 mm	350	750	1.5"	1.6"	100°C	100°C	Available	4.5"/6"
18mm Ultra-Fast AP TOF	18 mm	200	400	1.5"	1.6"	100°C	100°C	Available	4.5"/6"
18mm HT AP TOF	18 mm	350	750	1.5"	1.6"	100°C	300°C	Available	4.5"/6"
25mm AP TOF	25 mm	300	650	1.7"	2.2"	100°C	100°C	Available	6"
40mm AP TOF	40 mm	300	650	2.7"	2.9"	100°C	100°C	Available	6"
18mm BiPolar TOF	18 mm	800	2200	1.7"	1.8"	50°C	50°C	Available	4.5"/6"
18mm Off-Axis BiPolar TOF	18 mm	380	1700	1.4	1.96	50°C	50°C	Available	4.5"/6"
18mm Co-Axial Bipolar TOF	18 mm	380	1700	1.4	2.1	50°C	50°C	Available	4.5"/6"
25mm BiPolar TOF	25 mm	380	1700	2.3"	2.6"	50°C	50°C	Available	6"
40mm BiPolar TOF	40 mm	380	1700	2.7"	2.9"	50°C	50°C	Available	6"
Mini-TOF	8 mm	350	750	0.54"	0.75"	100°C	100°C	Not available	1.33"
MAGNUM™ TOF	13 mm	800	1700	1.4"	0.77"	100°C	250°C	Not available	4.5"/6"

BURLE - The Leader in Advanced Performance Detection Technologies

BURLE Electro-Optics' Scientific Detector Products use the company's expertise in electron multiplication and precision manufacturing to create components for scientific and analytical instrumentation.

BURLE is the leader in ion, electron, and photon detection. These products have a proven record of delivering longer life, higher performance and increased sensitivity over a wide range of applications. BURLE supplies more Time-of-Flight detectors than all other manufacturers combined.

Consult BURLE for other sizes, features and configurations not listed.

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on the complete range of PHOTONIS Group Products.**

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