

51005 Replacement Cartridge For The Advanced Performance Time-Of-Flight Detector

- **High Performance, Small Pore Microchannel Plate Chevron Cartridge**
- **Standard and Bakable (300°C) Versions Available**
- **Sub-nanosecond pulse widths**
- **18mm collection diameter**
- **Complete with High Transmission Grid.**

The Burle **Advanced Performance Time-of-Flight Replacement Cartridge** enables the end user to easily refurbish an Advanced Performance Time-Of-Flight Detector without having to return the detector to the factory, thus virtually eliminating expensive instrument down time.

These specially designed replacement cartridges can be installed with little technical expertise. Keyed alignment pins and high reliability contacts ensure proper electrical connections and a successful installation every time.

Burle's exclusive small pore (five micron diameter) Microchannel Plates (MCPs) offer one of the highest channel densities of any MCP in the world. This channel density provides **dynamic range improvements** of ten times that of conventional microchannel plates. The new microchannel plate technology extends the dynamic range far beyond previously attainable levels.



These MCPs also give the new Advanced Performance Time-of-Flight Replacement Cartridge **superior sensitivity and the best temporal resolution available anywhere**. The flat input surface provides uniform ion conversion and the higher aspect ratio of the MCPs provides gains in excess of 10^7 .

Also available is the new bakable design (-002), enabling the detector to be quickly degassed for maximum sensitivity.

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. The replacement cartridge is pre-tested to assure quality and is delivered with an individual test data sheet.

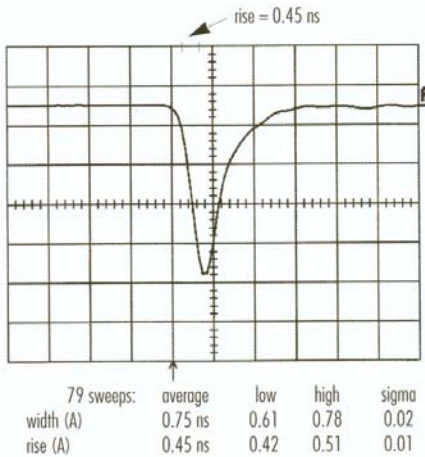
BURLE

51005 ADVANCED PERFORMANCE TIME-OF-FLIGHT DETECTOR Replacement Cartridge

SPECIFICATIONS

Application:	Replacement Cartridge for bakable (-002) and Non-bakable (-001) Advanced Performance Time of Flight Detector
Microchannel Plate:	Long-Life™ Extended Dynamic Range
Gain (Minimum):	1×10^7 at 2400V
Dark Count (Maximum):	5 counts/second/cm ² at 2400 Volts
Resistance (Reference):	66-400 Megohms
Detection Diameter:	18mm
Operating Temperature Range:	-50° to 150°C (51005-002) -50° to 50°C (51005-001)
Bake out temperature (Maximum)	300°C (51005-002) 50°C (51005-001)
Operating Pressure (Maximum)	1.0×10^{-6} Torr

TYPICAL PULSE WIDTH MEASUREMENTS



Detector and Cartridge Assembly



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For additional information in the U.S.A. and Canada, telephone +1-800-648-1800 and for international calls, use +1-508-347-4000, or FAX request to +1-508-347-3849. BURLE Electro-Optics., Sturbridge Business Park, P.O. Box 1159, Sturbridge, MA 01566-1159 USA