

## Miniature Advanced Performance Detector

### Applications

- ✓ Fast timing detectors for field portable and hand-held instruments
- ✓ Leak detection, mass spectrometry, VUV spectrometry

### Features

- ✓ Very fast
- ✓ Compact
- ✓ High performance
- ✓ Bakeable to 300 °C
- ✓ High gain - low noise
- ✓ 5.5mm Ø collection
- ✓ Low profile design



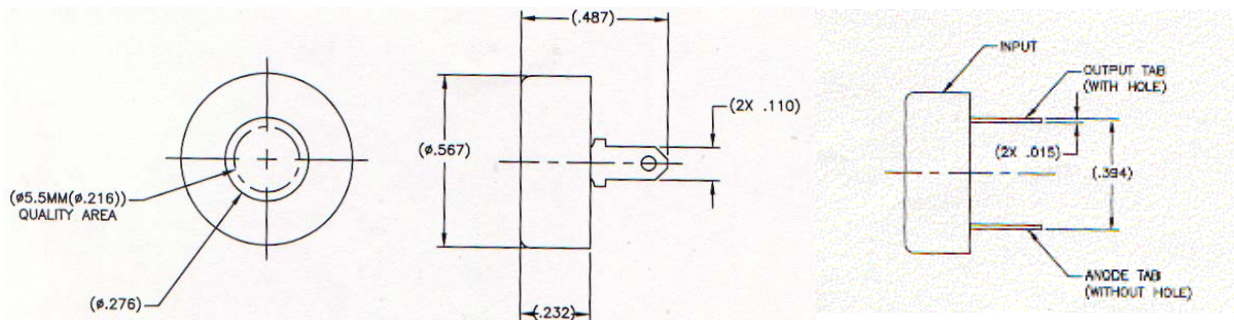
The PHOTONIS Microtron™ Miniature Advanced Performance Detector offers previously unobtainable levels of gain, dynamic range, and detection sensitivity in a compact, easy to use package. All this from the largest supplier of standard, retrofit and custom detectors for charged particle and electro-magnetic radiation detection.

The leading edge design of the Microtron™ detector allows operation up to 100°C and non-operational vacuum baking to 300°C. This high temperature capability can result in shorter chamber degassing cycles and ultra-quiet instrument operation. The highest performing Micro-channel Plates (MCPs) available, PHOTONIS' exclusive Long-Life™ MCPs with high channel density and Extended Dynamic Range™ (EDR), provide **dynamic range improvements** of up to ten times that of conventional microchannel plates. PHOTONIS MCPs also give the new Microtron™ Miniature detector **superior sensitivity in a very small package**. The flat input surface provides uniform ion conversion and the higher aspect ratio of the MCPs provides gains in excess of 10<sup>6</sup>.

General Specifications	Unit	
Microchannel Plate	Two (as a Chevron™) Long-Life™ Extended Dynamic Range™ MCP	
Gain (minimum at 2000V)	2 x 10 <sup>6</sup>	
Dark Count (maximum at 2400 V)	5	cps
Resistance (reference)	67 - 100	MΩ
Detection Diameter	5.5	mm
Operating Temperature Range	-50 to 100	°C
Bake Out Temperature (maximum)	300	°C
Operating Pressure (maximum)	1.0 x 10 <sup>-5</sup>	Torr
Maximum Operating Voltage	2000	VDC
Outside Diameter	14.2	mm
Overall Package Height Including Leads	12.4	mm

### Mechanical Configuration and Lead Assignments

(dimensions in inches except when specified)



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