

MCP

MCP ASSEMBLY

F4655-13

High time resolution TOF-MS detector

FEATURES

- Fast time response
- 4 μm channel diameter
- Small time jitter
- Compact and lightweight

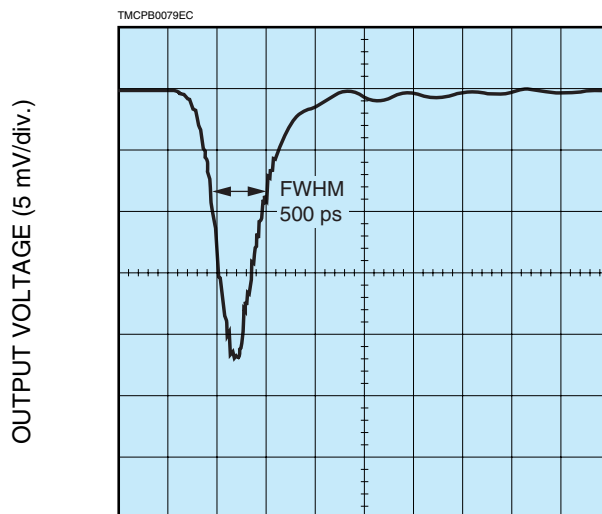


TMCPF0088

OVERVIEW

The F4655-13 is an ideal detector for high resolution TOF-MS (Time of Flight Mass Spectrometry) because of a two-stage MCP with 4 μm channel diameter. Our own advanced technology in optimizing MCP design allows obtaining an excellent output waveform with negligible ringing even when detecting very high speed signals. The dimensions are exactly the same as the F4655-10 MCP assembly, ensuring a compact configuration and easy handling.

Figure 1: Typical Output Waveform



RESPONSE TIME (500 ps/div.)

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SPECIFICATIONS

GENERAL

Parameter	Value	Unit
MCP Channel Diameter	4	μm
Bias Angle	12	degree
Effective Area	φ14.5	mm
Assembly Outer Size	φ38	mm
Assembly Height Size	31.9	mm
Number of MCPs	2	—

TYPICAL ELECTRICAL CHARACTERISTICS (Supply Voltage: 2 kV, Vacuum: 1.3×10^{-4} Pa, Operating Ambient Temperature: +25 °C)

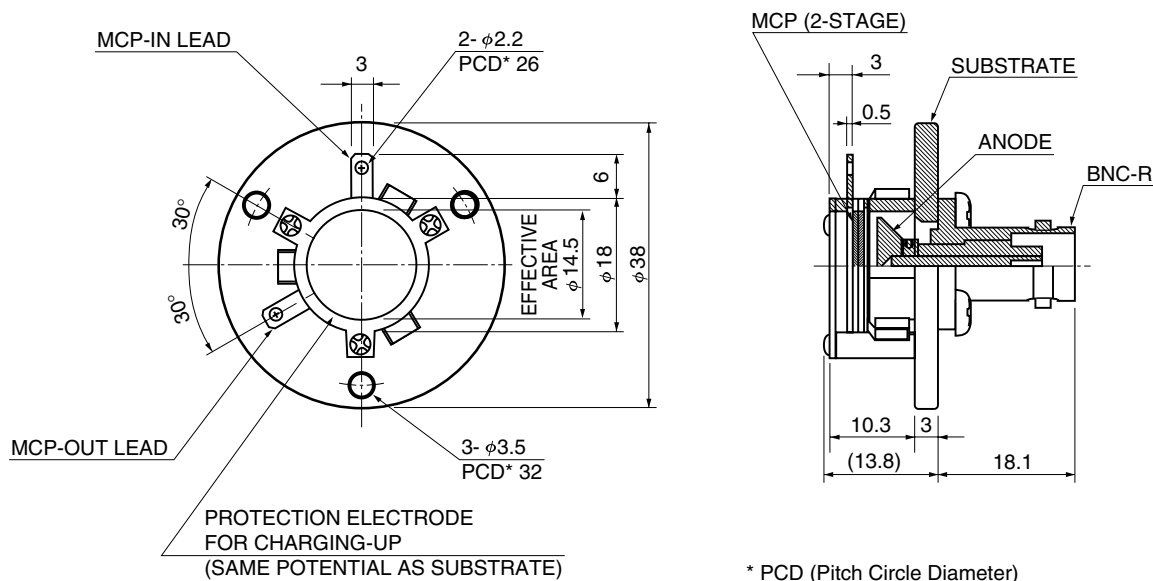
Parameter	Value	Unit
Gain (Min.)	1×10^6	—
Plate Resistance per MCP	10 to 100	MΩ
Dark Count (Max.)	5	$s^{-1} \cdot cm^{-2}$
Pulse Width (FWHM) (TYP.)	500	ps

RATINGS

Parameter	Value	Unit
MCP Supply Voltage (Max.)	2.0	kV
MCP-OUT to Anode Supply Voltage (Max.)	0.5	kV
MCP-IN Supply Voltage (Max.)	-2.5	kV
Operating Pressure Condition (Max.)	1.3×10^{-4} ^(A)	Pa

NOTE: (A) Below 1.3×10^{-4} Pa.

DIMENSIONAL OUTLINES (Unit: mm)



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TMCP1021E05
NOV. 2008 IP