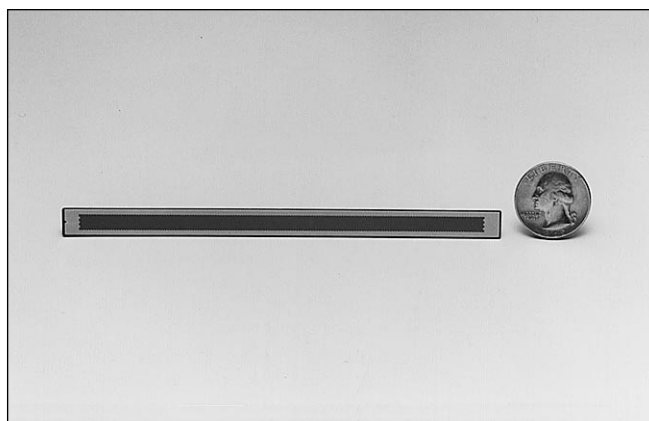


## Very Long (Effective Area: 127 × 4mm)

This new long-scale MCP allows for continuous detection of wide range position information without dead space correction. This new configuration promises reliable measurement, and is well suited for double-focusing mass spectrometers. Assembled configurations are also available upon request.

### FEATURES

- Long Scale (Effective Area: 127mm × 4mm)
- Simultaneous Multielement Measurement Possible
- Sensitive to Ions, Electrons, UV Radiation, Soft X-rays,  $\gamma$ -rays and High Energy Particles
- High Gain ( $1 \times 10^4$ )



TMCPF0064

### APPLICATIONS

- SIMS (Secondary Ions Mass Spectrometers)
- UV Spectrometers
- X-ray Spectrometers
- Electron Spectrometers

### GENERAL

Parameter	Description/Value	Unit
Outer Dimension	140 × 9	mm
Electrode Dimension	138 × 8	mm
Effective Area Dimension	127 × 4	mm
Thickness	0.48	mm
Channel Diameter	12	$\mu\text{m}$
Channel Pitch	15	$\mu\text{m}$
Bias Angle	8	$^\circ$
Open Area Ratio	60	%
Electrode Material	Inconel	—

### CHARACTERISTICS (at 1000V, $1.3 \times 10^{-4}$ Pa ( $1 \times 10^{-6}$ Torr), 25°C)

Parameter	Description/Value	Unit
Current Gain Min.	$1 \times 10^4$	—
Plate Resistance	10 to 100	$\text{M}\Omega$
Maximum Dark Current	$5 \times 10^{-13}$	$\text{A}/\text{cm}^2$
Maximum Linear Output Current	up to 7% of the strip current <sup>Ⓐ</sup>	—

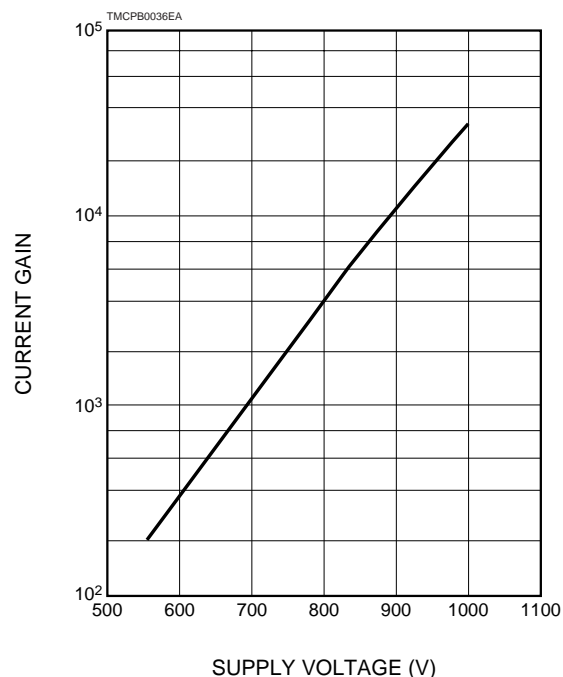
### MAXIMUM RATINGS (Absolute Values)

Parameter	Description/Value	Unit
Supply Voltage <sup>Ⓑ</sup>	1000	V
Ambient Temperature	-50 to +50	$^\circ\text{C}$

**NOTE:** Ⓐ: Strip current is current flowing through the channel walls, which supplies the current released from the channel walls. It is given by: Supply voltage / Plate resistance.

Ⓑ: At a vacuum of  $1.3 \times 10^{-4}$  Pa ( $1 \times 10^{-6}$  Torr) or better.

Figure 1: Typical Current Gain



# LONG SCALE MICROCHANNEL PLATE F6492

Figure 2: Dimensional Outline (Unit: mm)

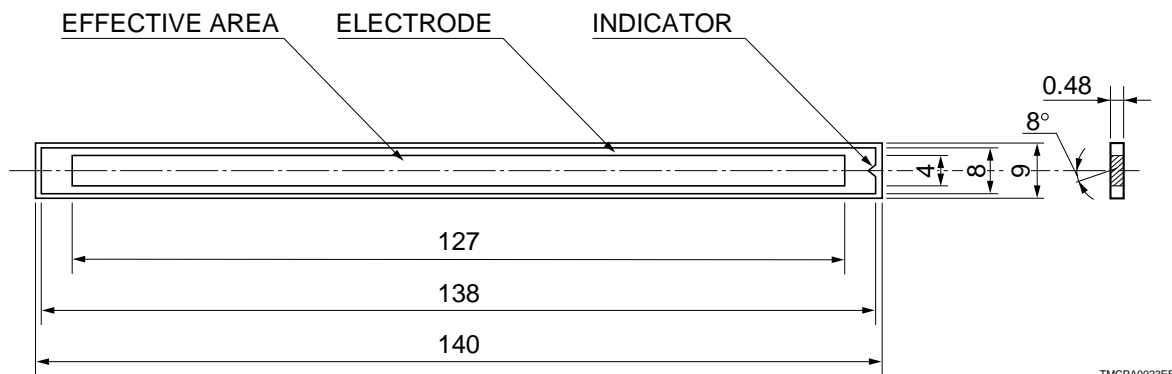
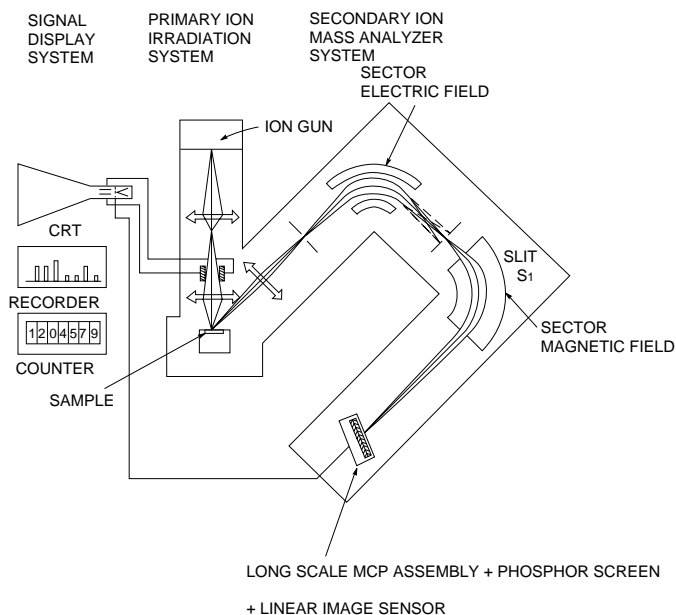


Figure 3: Application Example to SIMS<sup>1)</sup>



## PRECAUTIONS FOR USE

- Avoid touching the MCP or MCP assembly with bare hands.
- Handle the MCP only in a clean room since dust and humidity may adversely affect MCP characteristics.
- The MCP should be operated in vacuum below  $1.33 \times 10^{-4}$  Pa ( $1 \times 10^{-6}$  torr).
- The MCP should be kept in vacuum or dry nitrogen gas atmosphere during long periods of storage.
- When outgassing from the MCP occurs, baking the MCP at 350°C maximum in a vacuum system is recommended. In addition electron bombarding may be effective.

## REFERENCE

- 1) Japan Academic Promotion Society, 141th Committee on Micro Beam Analysis: "Micro beam analysis" Asakura Shoten, 293 (1985)

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