

# NEW

# COMPACT MCP ASSEMBLY HIGH VOLTAGE FLOATING OPERATION

## F13446-11



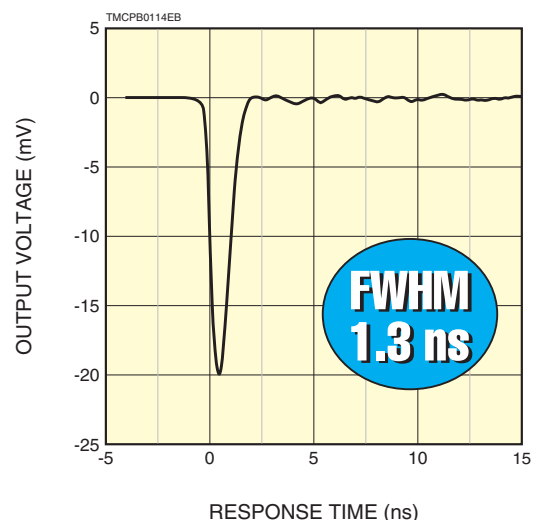
## FEATURES

- High voltage floating operation HV  $\pm 5$  kV
- Effective area  $\phi 27$  mm
- Time response 1.3 ns FWHM
- Robust MCP
- Compact and thin

## OVERVIEW

HAMAMATSU offers NEW compact MCP assembly. This assembly has enough time response characteristic for TOF (Time of Flight) measurement. In addition, HV electrode is able to set the potential from -5 kV to +5 kV. It will be useful to optimize for positive/negative ion or electron detection. Robust MCP in this assembly brings good reliability and low time jitter. In case of high sensitivity is required, large OAR (open area ratio) MCP (funnel type) is also available optionally. Custom modification is also available. Please inform us about your requirements.

## OUTPUT WAVEFORM (Typ.)



# SPECIFICATIONS

## GENERAL

Parameter	Value	Unit
MCP channel diameter	12	μm
Bias angle	12	degree
Effective area	φ27	mm
Number of MCPs	2	—

## ELECTRICAL CHARACTERISTICS (Vacuum: $1.3 \times 10^{-4}$ Pa, at +25 °C)

Parameter	Value	Unit
Gain (Min.) <sup>Ⓐ</sup>	$1 \times 10^6$	—
Resistance (Typ.) <sup>Ⓐ</sup>	15 to 60	MΩ
Dark count (Max.) <sup>Ⓐ</sup>	3	s <sup>-1</sup> .cm <sup>-2</sup>
Pulse width (FWHM) (Typ.)	1.3	ns

NOTE: ⒶHV-BIAS 2.1 kV

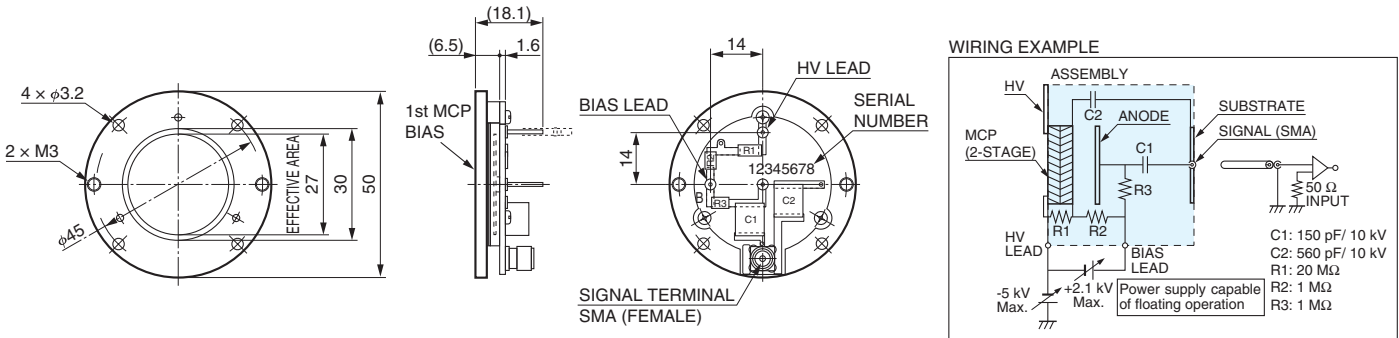
## MAXIMUM RATINGS

Parameter	Value	Unit
HV-BIAS	2.1	kV
BIAS-SIGNAL	7.1	
SIGNAL-SUBSTRATE	0.0	
Electric potential at each terminal	HV: +5.0/ -5.0 BIAS: +7.1/ -2.9 Signal: GND	kV
Operating vacuum condition	$1.3 \times 10^{-4}$ Ⓑ	Pa
Ambient temperature	0 to +50 °C	°C

NOTE: ⒷBetter vacuum than  $1.3 \times 10^{-4}$  Pa

ⒸNot allowed to be baked.

## DIMENSIONAL OUTLINES (Unit: mm)



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