



- **HIGH STABILITY: 10PPM/HR**
- **ULTRA LOW NOISE 10PPM**
- **ULTRA LOW TEMPERATURE COEFFICIENT 10PPM/°C**
- **SIX-SIDED SHIELDED**
- **EXTERNAL POTENTIOMETER OR AN EXTERNAL VOLTAGE REFERENCE**
- **OEM CUSTOMIZATION AVAILABLE**

INTRODUCTION

Wisman's MCC series of high voltage 0.5~2W micro-modules that provide output voltages ranging from 100V to 3kV. MCC modules are compact six-sided shielded modules with ultra-low noise, high stability and ultra-low temperature coefficient. All models are provided with external potentiometer or an external voltage monitoring panel. This series modules have protection functions including over current protection, arc fault protection and short circuit protection.

TYPICAL APPLICATIONS

Mass spectrometry photomultiplier tubes (PMT), solid state detectors, Piezo crystal devices, ultrasonic transducers, microchannel plates (MCP), spectroscopy, scintillation counters, electron multiplier detectors, nuclear Instruments, electrophoresis, semiconductor testing, DNA sequencing, radiation counter, electron and ion beams, electrostatic chuck, high voltage, bias hipot testing, precision lenses, image intensifiers, semiconductor testing, chemical applications, laboratory applications, industrial application supplies.

MCC SELECTION TABLE

kV	mA	P(W)	MODEL	kV	mA	P(W)	MODEL	kV	mA	P(W)	MODEL
0.1	5	0.5	MCC0.1*0.5	0.5	1	0.5	MCC0.5*0.5	1.5	0.33	0.5	MCC1.5*0.5
	10	1	MCC0.1*1		2	1	MCC0.5*1		0.67	1	MCC1.5*1
	20	2	MCC0.1*2		4	2	MCC0.5*2		1.33	2	MCC1.5*2
0.2	2.5	0.5	MCC0.2*0.5	1	0.5	0.5	MCC1*0.5	2	0.25	0.5	MCC2*0.5
	5	1	MCC0.2*1		1	1	MCC1*1		0.5	1	MCC2*1
	10	2	MCC0.2*2		2	2	MCC1*2		1	2	MCC2*2
3	0.17	0.5	MCC3*0.5	3	0.33	1	MCC3*1	3	0.67	2	MCC3*2

MCC SELECTION EXAMPLE

MCC	3	*	2	VP	5	VM	5	LS	12
Series Number	Maximum Output Voltage (kV)	Option Output Polarity P: positive N: negative	Maximum Output Power (W)	Option Programming Voltage given	Option Programming Proportion 10:0~+10Vdc=0 to max. output 5:0~+5Vdc=0 to max. Output 2.5:0~+2.5Vdc=0 to max. output (only for +5Vdc input)	Option Monitor Voltage display	Option Monitor Proportion 10:0~+10Vdc=0 to max. output 5:0~+5Vdc=0 to max. Output 2.5:0~+2.5Vdc=0 to max. output (only for +5Vdc input)	Option Start Way Low level start	Option Input Voltage 24:+24Vdc input 15:+15Vdc input 12:+12Vdc input 5:+5Vdc input



MCC SPECIFICATIONS

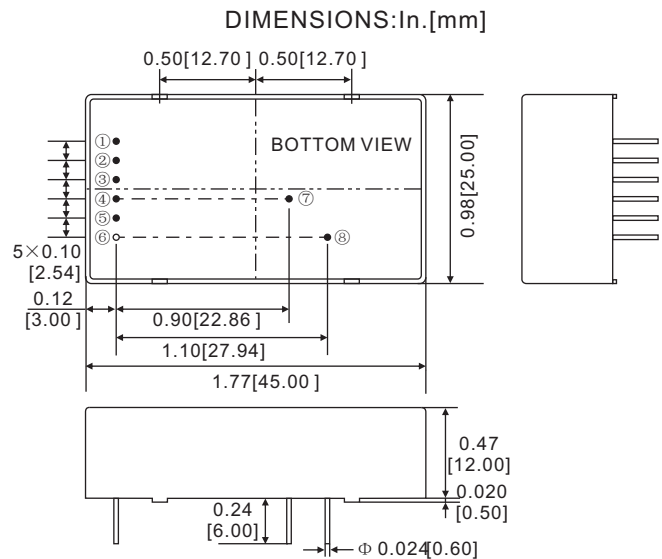
PARAMETER	DESCRIBE
Input Voltage	+12Vdc±2%, input current ≤350mA. +24Vdc±2%, +15Vdc±2%, +5Vdc±2% input available
Output	0.1kV, 0.2kV, 0.5kV, 1kV, 1.5kV, 2kV, 3k available.
Stability	0.001%/hr after a 30 minute warm-up period.
Temperature Coefficient	<10ppm/°C.
Ripple	0.001% p-p of maximum output voltage.
Voltage Programming	By external 20kΩ potentiometer or external voltage control(Vp-in)0~+5 Vdc. Zin = 100kΩ.
Voltage Monitor	0~+5Vdc=0 to 100% output. Zout = 20kΩ. Accuracy = ±1%.
Voltage Line Regulation	±0.001% (input voltage change ±2%).
Voltage Load Regulation	±0.01% (no load to full load change).
Operating Temperature	0°C~+50°C.
Storage Temperature	-40°C~+85°C.
Humidity	0%~90% RH, non-condensing.
Cooling	Convection cooled.
Dimensions	0.47" H x 0.98" W x 1.77" D (12.00mm x 25.00mm x 45.00mm).
Weight	25g.

A
MICRO-MODULES

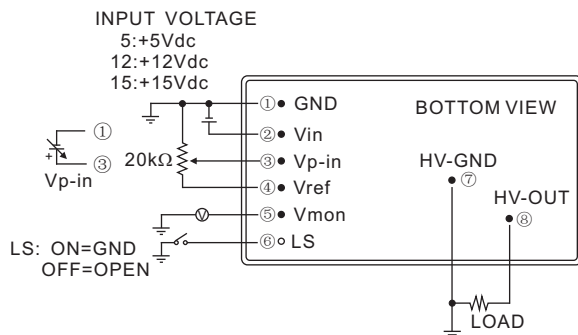
MCC PIN INFORMCCTION

PIN	DESCRIPTION
1	Power Ground
2	Input voltage +12Vdc±2%, Option +24Vdc±2%, +15Vdc±2%, +5Vdc±2%
3	Voltage Programming, 0~+5Vdc=0~100% rated output, Zin=100kΩ
4	+5Vdc Reference
5	Voltage monitor, 0~+5Vdc=0~100% rated output, Zout=20kΩ
6	LS: GND=ON, OPEN=OFF (OPTION)
7	HV Gnd
8	HV Output

MCC DIMENSIONS



MCC CONNECTION DIAGRAM



- Pin ① and ⑦ and case are internally connected, and should be always grounded.
- External potentiometer of T.C ≤ 100ppm/°C, PC ≥ 1/4W is recommended. The instability in the external controlling voltage should be minimised as it directly affects the output voltage quality.
- ⑥ are for option.

MCC CHARACTERISTICS OF OUTPUT VOLTAGE SETTING

