

HAMAMATSU

HIGH VOLTAGE POWER SUPPLY UNIT C4900 SERIES

PATENT

The C4900 series are compact PC-board mountable high voltage power supplies, especially designed for photomultiplier tubes. The design offers better performance and improved fail-safe protection. The C4900 and -01 output negative polarity and the C4900-50 and -51 output positive polarity high voltages.

FEATURES

- Compact and Lightweight
- High stability
- Low Power Consumption
- Fast Response
- Wide Variable Output Range
- Ample Protective and Fail-safe Functions



SPECIFICATIONS

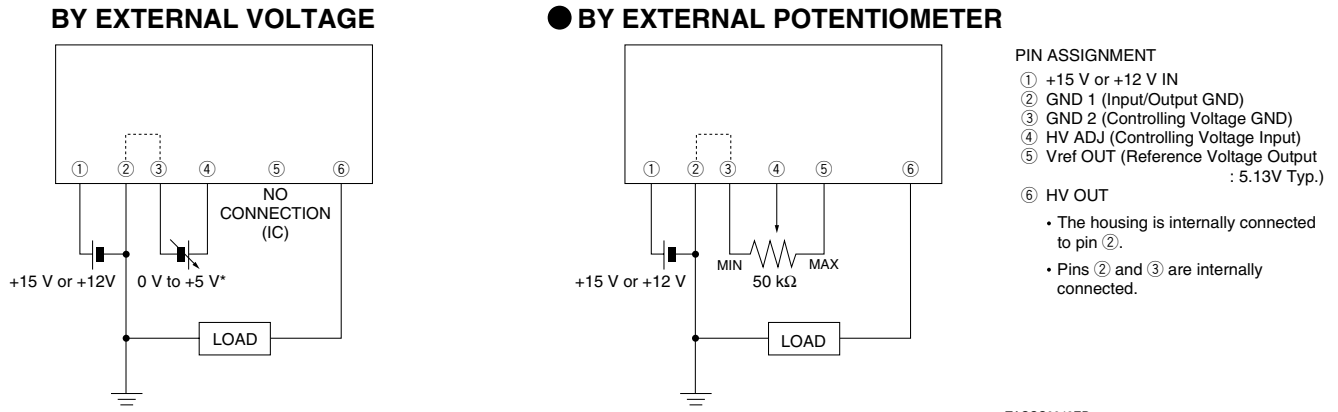
Parameter	C4900	C4900-01	C4900-50	C4900-51	Unit
Input Voltage Range	+15 ± 1	+12 ± 0.5	+15 ± 1	+12 ± 0.5	V
Input Current ^(a)	with no load	14	15	14	mA (Typ.)
	with full load	90	95	90	
Variable Output Range	0 to -1250		0 to +1250		V
Specification Guaranteed Output Voltage Range	-200 to -1250		+200 to +1250		V
Output Current ^(b)	0.6	0.5	0.6	0.5	mA (Max.)
Line Regulation against ±1 V or 0.5 V Change ^(b)	± 0.01				% (Typ.)
Load Regulation against 0 % to 100 % Load Change ^(a)	± 0.01				% (Typ.)
Ripple / Noise (p-p) ^(b)	0.007				% (Typ.)
Output Voltage Controlling Modes	By external controlling voltage (0 V to +5 V) or external potentiometer (50 kΩ ± 2.5 kΩ)				-
Controlling Voltage Input Impedance	80				kΩ (Typ.)
Reference Voltage Output	+5.13 (with 50 kΩ external potetiometer)				V (Typ.)
Output Voltage Setting (Absolute value)	(Controlling voltage × 250) ± 0.5 %				V (Typ.)
Output Voltage Rise Time (0 % → 99 %) ^(b)	50				ms (Typ.)
Temperature Coefficient ^(b)	± 0.01				%/°C (Typ.)
Operating Temperature Range ^(b)	0 to +50				°C
Storage Temperature Range	-20 to +70				°C
Dimensions (W × H × D)	46 × 24 × 12				mm
Weight	31				g
Protective Functions	Units protected against reversed power input, reversed/excessive controlling voltage input, continuous overloading/short circuit in output				-

^(a) At Maximum Output Voltage.

^(b) At Maximum Output Voltage and Current.

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Figure 1: Output Voltage Controlling



*The instability in the external controlling voltage should be minimized as it directly affects the output voltage quality.

Figure 2: Output Voltage Controlling Characteristic

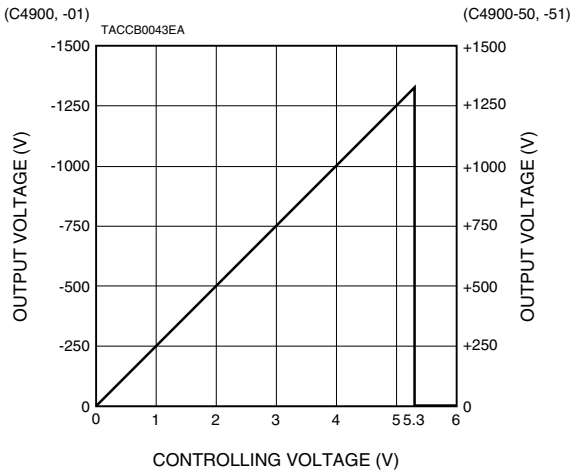
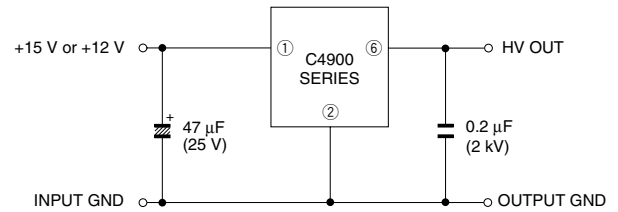


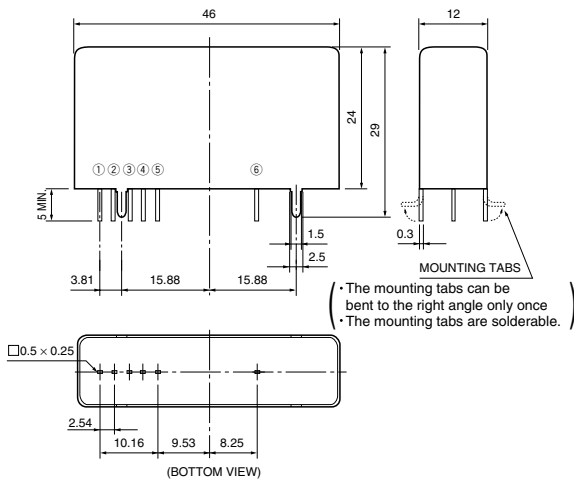
Figure 3: Example of Ripple/Noise Reduction Circuit



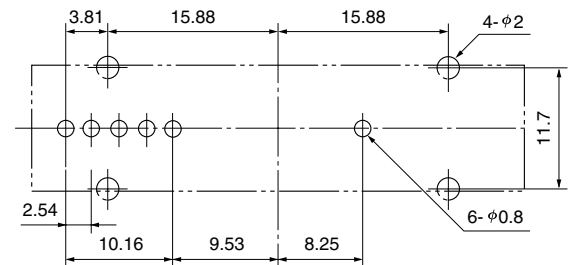
*The ripple/noise can be halved by adding capacitors as illustrated above.

TACCC0099EB

Figure 4: Dimensional Outline (Unit: mm)



Drilling Data for PC Board (Soldering Face)



TACCA0159EB

*PATENT: USA No.5548502, 5568343 JAPAN: No.2758552, 2784136 EUROPE: No.641066, 649222

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