

US SERIES

Microsize, Micropower High Voltage Power Supply

At only 0.35in³ (5.75cc), the highly-compact microsize US Series is specially designed to meet the needs of design engineers working with commercial, military, industrial, and research applications. These modules allow customers with critical size requirements access to voltages up to 500V.

- 4 models from 0 to 200V, 300V, 400V, or 500V
- 100 milliwatts of output power
- Tight line/load regulation
- Arc and short circuit protection
- 5 or 12 Volts DC Input
- TTL enable/disable
- Miniature and lightweight
- PCB flat mounting
- Temperature coefficient of 50ppm/°C
- Optional flying lead for HV output



- Low ripple (<20mV peak to peak)
- Low noise due to metal shielding
- 2.5V reference

Typical applications for the US Series include the following:

Bias Supplies	Fiber-optic Telecommunications
Avalanche Photo Diodes (APD)	Particle Physics
Silicon Photomultipliers (SiPM)	Laser Range Finders

Please contact UltraVolt's customer service department for an analysis of your requirements.

PARAMETER	SPECIFICATION			
Input voltage V_{in} (pins 1 & 2)	5VDC ± 0.5 VDC or 12 to 15VDC ± 0.5 VDC, according to type			
Input current	Inhibition mode: <5mA at full output voltage, full load:			
	<table> <tbody> <tr> <td><65mA for the 200V model</td> <td><60mA for the 300V model</td> <td><55mA for the 400V model</td> <td><50mA for the 500V model</td> </tr> </tbody> </table>	<65mA for the 200V model	<60mA for the 300V model	<55mA for the 400V model
<65mA for the 200V model	<60mA for the 300V model	<55mA for the 400V model	<50mA for the 500V model	
Polarity	Fixed positive or negative			
HV setting (pin 3)	Via external potentiometer, minimum resistance 10k Ω or Via external voltage source 0/2.5V $\pm 0.5\%$ at full scale, and input impedance >1M Ω			
Load voltage regulation	$\pm 0.01\%$ of full output voltage for no load to full load			
Line voltage regulation	$\pm 0.01\%$ of full output voltage over specified input voltage range			
Residual ripple	<20mV peak-to-peak at full output voltage and current <5mV peak-to-peak at 200V and 200 μ A			
Temperature coefficient	<50ppm/°C			
Output HV monitoring (pin 2)	0/2.5V signal Accuracy : $\pm 0.2\%$ Output impedance : 1k Ω			
Output reference voltage (pin 4 - optional)	2.5V $\pm 0.5\%$, TC:50ppm/°C, Max. output current : 1mA			
HV power ON/OFF (pin 5)	ON: 0 volt, connected to ground OFF: not connected Open collector compatible			
Operating temperature	-10°C to +50°C			
Storage temperature	-40°C to +70°C			
Safeguards	Output current internally limited Soft start feature: the start is guaranteed with no overshoot			

Specifications subject to change without notice.



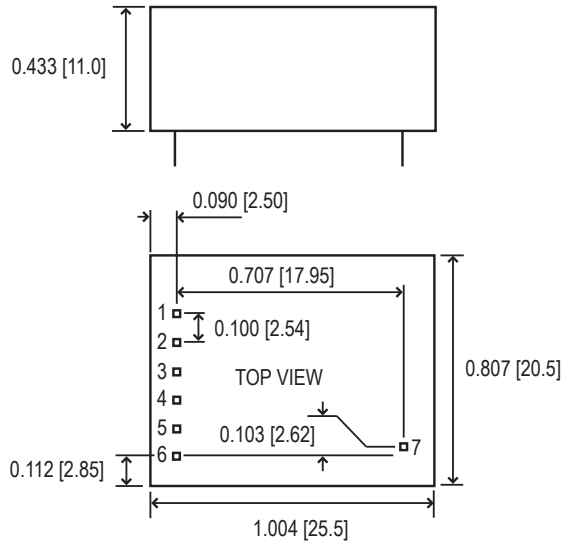
Making High Voltage Easier!®

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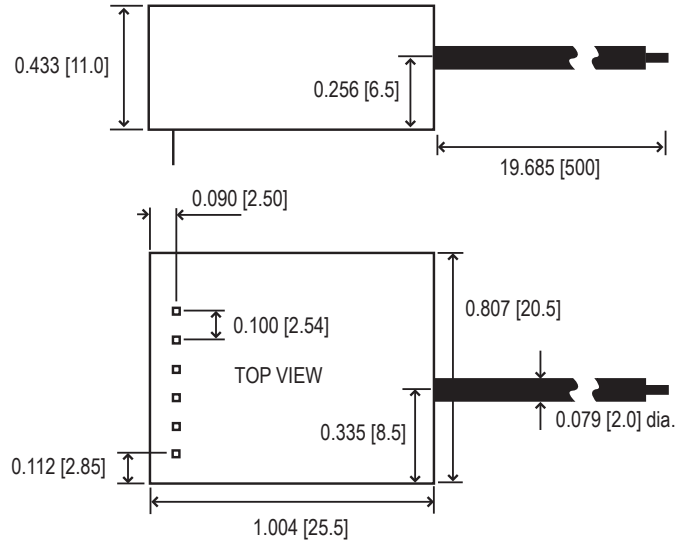
US SERIES

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STANDARD



WITH -W OPTION



CONSTRUCTION

Tin steel plate, thickness 0.02" (0.5)
Insulation: fully potted in an epoxy resin

SIZE

Volume: 0.351in³ (5.750cc)
Weight: 0.459oz (13g)

TOLERANCE

Overall ±0.0039" (0.1)
Pin to Pin ±0.0039" (0.1)
Case to Pin ±0.0197" (0.5)

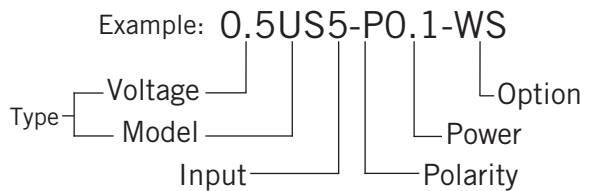
NOTES

Pin length > 0.078" (2), spacing 0.1" (2.54)
Optional lead: coaxial cable (RG178), diameter = 0.079" (2), length = 19.685" (500)

CONNECTIONS	
PIN	FUNCTION
1	Positive Power Input
2	Power Ground
3	Remote Adjust Input
4	+2.5VDC Reference Output
5	Enable/Disable
6	Eout Monitor
7	HV Output

Note: Mounting tabs must be connected to ground.

ORDERING INFORMATION		
Type	0 to 200 VDC Output	0.2US
	0 to 300 VDC Output	0.3US
	0 to 400 VDC Output	0.4US
	0 to 500 VDC Output	0.5US
Input	5VDC Nominal	5
	12VDC Nominal	12
Power	Watts Output	0.1
Case	Tin Steel Case	(Standard)
Polarity	Positive Output	-P
	Negative Output	-N
Option	Output voltage lead wire	-WS



RoHS COMPLIANT Non-RoHS compliant units are available. Please contact the factory for more information.

Popular accessories ordered with this product include the PCB-CONN-US.

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