

D SERIES

Microsize High Voltage Biasing Supply



The D Series of high voltage power supplies is designed to meet the needs of customers with low-profile applications. These ultra-compact modules are adapted to controlling photo detectors that require high-bias voltages and currents. D Series PCB-mount high-voltage power supplies feature a lightweight design, state-of-the-art surface-mount technology, and five-sided metal enclosures.

- 4 models from 0 to 1kV through 0 to 6kV
- 1, 2, 4 or 6 watts of output power
- 15 or 24 Volts DC Input
- Low profile and lightweight
- PCB flat mounting
- Adjustable from 0 to full output
- Tight line/load regulation
- Output current limit protection
- Low ripple (<0.02% peak to peak)
- Buffered voltage and current monitoring

Typical applications for the D Series include:

- | | |
|--------------------------------|-------------------------------|
| Avalanche Photo Diodes (APD) | Image Intensifiers (II) |
| Electrostatic Chuck (E-chuck) | Insulator Testing |
| E-Beam Lithography and Welding | Lithography |
| Focused Ion Beam (FIB) | Microchannel Plates (MCP) |
| Gas Chromatography | Photodiodes (PD) |
| Geiger Muller Tubes (GM Tubes) | Photomultiplier Tubes (PMT) |
| General Laboratory | Scanning Electron Microscopes |
| High Voltage Testing | Spectrometer |

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

PARAMETERS	SPECIFICATIONS
Input voltage Vin (pins 2 & 3)	15VDC ±1.5VDC or 24VDC ±2VDC, according to type
Input current	example for a 15VDC, output 6000V, 1mA model: inhibition mode: 27mA at no load & HV = 6000V 46mA, at full load < 630mA
HV output Vout (pin 8)	0 to 1000V through 0 to 6000V according to type
Polarity	fixed positive or negative
Programming (pins 4 & 6)	via external voltage source 0 to +5V ±0.1% at full scale, and input impedance = 94kΩ
Max. output current Iout	limited to 110% of nominal current
Load voltage regulation	±0.01% of full output voltage for no load to full load
Line voltage regulation	±0.01% of full output voltage over specified input voltage range
Residual ripple	< 0.02% peak-to-peak at full load
Temperature coefficient	100ppm/°C
Output HV monitoring (pin 7) {still operating in inhibition mode}	analog 0 to +5V buffered output signal, accuracy ±0.2% output impedance = 1kΩ temperature coefficient: 50ppm/°C for ≤ 4kV units, 100ppm/°C for 6kV units
Output current monitoring (pin 5) {still operating in inhibition mode}	analog 0 to +5V buffered output signal, accuracy ±2% output impedance = 1kΩ temperature coefficient: 100ppm/°C
Enable/Disable (pin 1)	to disable (opened remote interlock) or enable (closed remote interlock)
Operating temperature	-10°C to +50°C
Storage temperature	-10°C to +70°C
Safeguards	<ul style="list-style-type: none"> • protected against reverse Vin • auto inhibition if Tcase > 75°C • soft start feature : the start is guaranteed with no overshoot • HV setting internally limited to 5.3V

Specifications subject to change without notice.

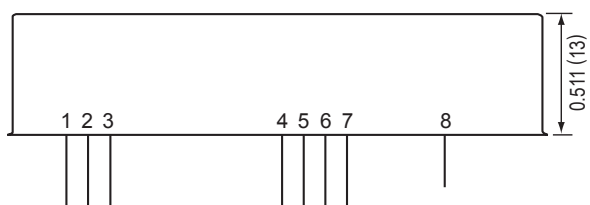


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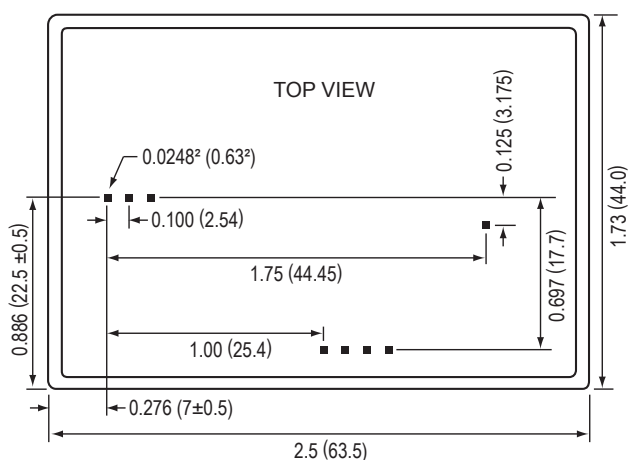
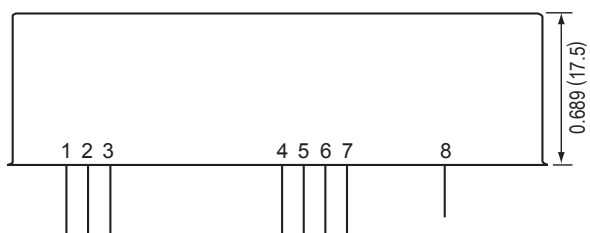
D SERIES

Microsize High Voltage Biasing Supply

1-4KV, 1-4W



1-4KV, 6W AND 1-6KV, 1-6W



CONNECTIONS	
PIN	FUNCTION
1	Enable/Disable
2	Power Ground
3	Positive Power Input
4	Signal Ground
5	Iout Monitor
6	Remote Adjust Input
7	Eout Monitor
8	HV Output

CONSTRUCTION

Tin Steel Plate, thickness 0.5mm
Insulation: fully potted in an epoxy resin

SIZE

Volume:
1-4kV, 1-4W: 8.55 in³ (140.13cc)
1-4kV, 6W and 1-6kV, 1-6W: 11.70 in³ (191.76cc)
Weight:
1-4kV, 1-4W: 2.54 oz (72g)
1-4kV, 6W and 1-6kV, 1-6W: 3.00 oz (85g)

TOLERANCE

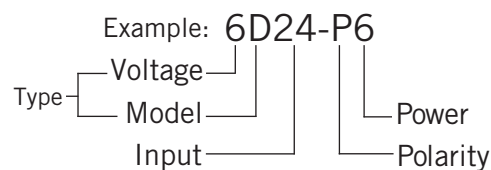
Overall $\pm 0.0118''$ (0.3)
Pin to pin $\pm 0.0039''$ (0.1)
Case to pin $\pm 0.0591''$ (1.5)

NOTES

Standard case length, width, and height specs are $\pm 0.050''$ (1.27)
Pin length > 0.24" (6), spacing 0.1" (2.54)

ORDERING INFORMATION

Type	0 to 1,000 VDC Output	1D
	0 to 2,000 VDC Output	2D
	0 to 4,000 VDC Output	4D
	0 to 6,000 VDC Output	6D
Input	15VDC Nominal	15
	24VDC Nominal	24
Power	Watts Output	1
	Watts Output	2
	Watts Output	4
	Watts Output	6
Case	Tin Steel Case	(Standard)
Polarity	Positive Output	-P
	Negative Output	-N



Rev. A 6/10



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



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