

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																UNITS
Input voltage V_{in} (pins 2 & 3)	15VDC $\pm 1.5V$ or 24VDC $\pm 2V$, according to type																VDC
Input current	Example for a 15VDC, output 6000V, 1mA model: inhibition mode: 27mA at no load & HV = 6000V 46mA, at full load < 630mA																-
Polarity	fixed positive or negative																-
Output Voltage	0 to 1000				0 to 2000				0 to 4000				0 to 6000				VDC
Output Power	1	2	4	6	1	2	4	6	1	2	4	6	1	2	4	6	W
Output Current	1	2	4	6	0.5	1	2	3	0.25	0.5	1	1.5	0.17	0.33	0.67	1	mA
Programming (pins 4 & 6)	Via external voltage source 0 to +5V $\pm 0.1\%$ at full scale, and input impedance = 94k Ω																-
Max. output current I_{out}	Limited to 110% of nominal current																-
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	< 0.02% peak-to-peak at full load																-
Temperature coefficient	100																PPM/ $^{\circ}C$
Output HV monitoring (pin 7) {still operating in inhibition mode}	Analog 0 to +5V buffered output signal, accuracy $\pm 0.2\%$ Output impedance = 1k Ω Temperature coefficient: 50ppm/ $^{\circ}C$ for $\leq 4kV$ units, 100ppm/ $^{\circ}C$ for 6kV units																-
Output current monitoring (pin 5) {still operating in inhibition mode}	Analog 0 to +5V buffered output signal, accuracy $\pm 2\%$ Output impedance = 1k Ω Temperature coefficient: 100ppm/ $^{\circ}C$																-
HV ON/OFF (pin 1)	To disable (opened remote interlock) or enable (closed remote interlock)																-
Operating temperature	-10 to +65, Full load, Max E_{out} , Case Temp																$^{\circ}C$
Storage temperature	-10 to +70																$^{\circ}C$
Safeguards	<ul style="list-style-type: none"> • Protected against reverse V_{in} • Auto inhibition if $T_{case} > 75^{\circ}C$ • Soft start feature: the start is guaranteed with no overshoot • HV setting internally limited to 5.3V 																-

Specifications subject to change without notice.



Making High Voltage Easier!®

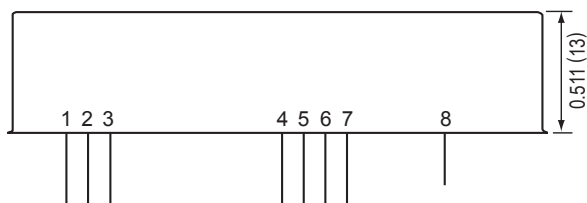
Higher Service, Higher Performance, Higher Reliability

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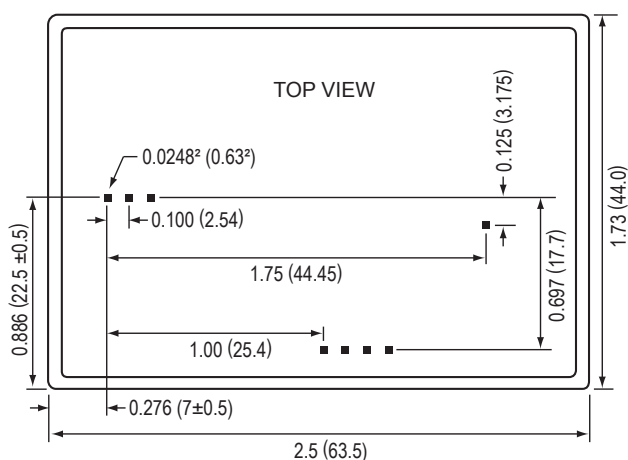
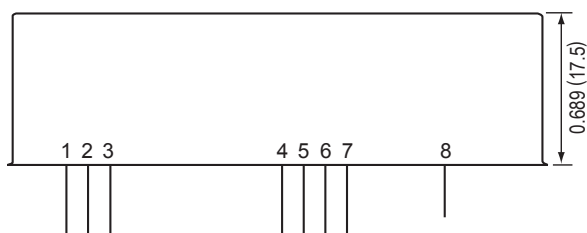
D SERIES

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

Example: 6D24-P6
Type — Voltage — Model — Input — Power — Polarity



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

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*The D Series is not available in all territories. Please contact an UltraVolt Applications Engineer for details concerning sales in your area.



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