

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 Eout, 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!®

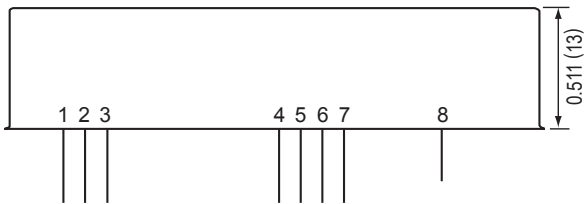
Higher Service, Higher Performance, Higher Reliability

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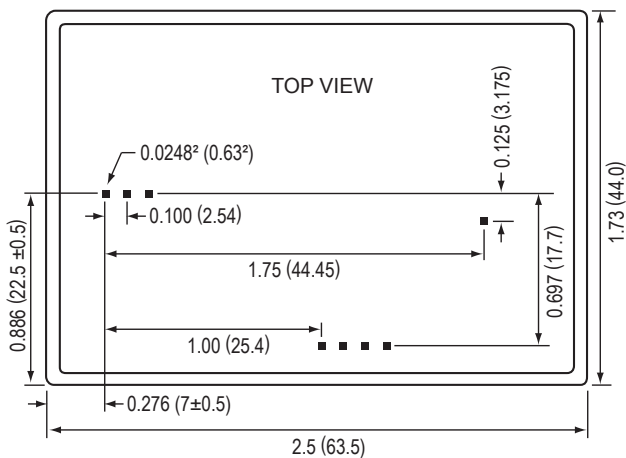
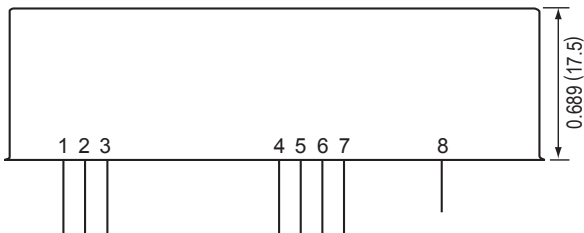
D SERIES

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: 2.21 in³ (36.2cc)
1-4kV, 6W and 1-6kV, 1-6W: 2.97 in³ (48.6cc)
Weight:
1-4kV, 1-4W: 2.54 oz (72g)
1-4kV, 6W and 1-6kV, 1-6W: 3.00 oz (85g)

TOLERANCE

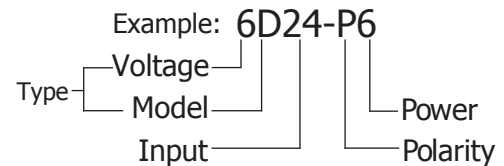
Overall ± 0.0118 " (0.3)
Pin to pin ± 0.0039 " (0.1)
Case to pin ± 0.0591 " (1.5)

NOTES

Standard case length, width, and height specs are ± 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



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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1800 Ocean Avenue, Ronkonkoma, NY 11779
Phone: 1-631-471-4444 Fax: 1-631-471-4696 www.ultravolt.com