

1.5 Watt

- Output Voltages from 300V to 2kV
- Output Voltage Proportional to Input
- Low Ripple, <0.075%
- Input to Output Isolation
- Metal EMI/RFI Shield, 1200V model
- No Minimum Load
- 3 Year Warranty



The L Series are high voltage DC to DC converters that provide up to 2000 VDC in a compact PC mount package. The isolated output is directly proportional to the input. Either output may be grounded to generate positive or negative high voltage. Excellent filtering techniques and a low noise sine-wave oscillator provide clean, reliable DC to HV DC conversion with low ripple, noise, and EMI/RFI.

Dimensions:

L Series:

2.50 x 1.5 x 0.85" (63.5 x 38.1 x 0.85mm)

Key Applications:

- Mass Spectrometry
- Photomultiplier Tubes
- Avalanche Photo Diodes
- Microchannel Plates

Models & Ratings

Output Voltage	Output Current	Ripple	Model Number
0 to 300 V	5 mA	0.075%	L03B-R
0 to 500 V	3 mA	0.075%	L05B-R
0 to 1200V	1.25 mA	0.025%	L12BAB
0 to 1500 V	1.0 mA	0.030%	L15B
0 to 1500 V	1.0 mA	0.030%	L15B-R
0 to 2000V	0.75 mA	0.025%	L20B

Electrical Specifications

Characteristic	Minimum	Typical	Maximum	Units	Notes & Conditions
Input Voltage	2		12	VDC	
Input Current, No Load			150	mA	
Input Current, Full Load			300	mA	
Minimum load	No minimum load required				
Regulation	Unregulated, Output is proportional to Input. Unloaded output voltage is typically 10% higher than unloaded.				

Notes

1. Maximum rated output current is available at maximum rated output voltage and derates linearly as input voltage is decreased.
2. Output voltage is load dependent. Under light or no-load conditions, reduce the input voltage so maximum rated output voltage is not exceeded.
3. Specifications after 30 minute warm-up, full load, at 25°C unless otherwise indicated.
4. Proper thermal management techniques are required to maintain safe case temperature at maximum power output.
5. All orderable part numbers are listed above. R suffix is used as a RoHS indicator for legacy models.

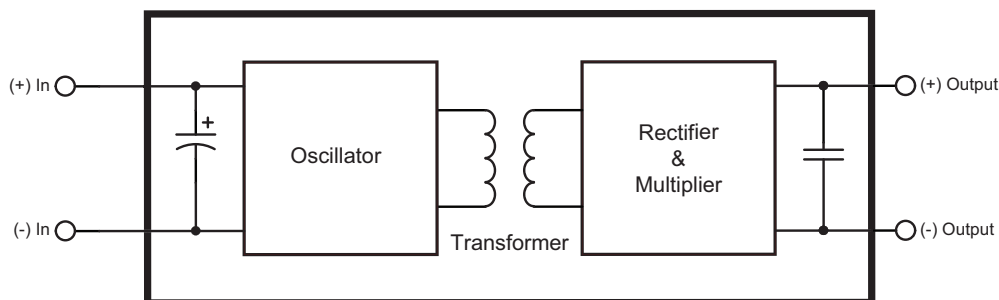
Environmental

Characteristic	Minimum	Typical	Maximum	Units	Notes & Conditions
Operating Temperature (case)	-10		+60	°C	
Storage Temperature	-20		+90	°C	
Humidity			95	%RH	Non-condensing
Cooling					Natural Convection

General

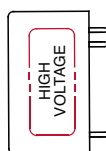
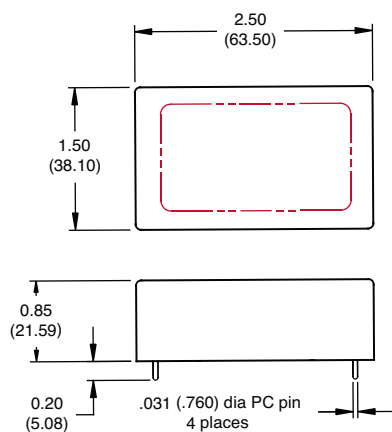
Characteristic	Minimum	Typical	Maximum	Units	Notes & Conditions
Isolation: Input to Output			3,500	V	< ± 3500 Bias
Construction	Case material is Diallyl Phthalate (DAP). UL 94 V-0 rated solid vacuum encapsulation.				
Mean Time Between Failure	2.31			MHrs	Bellcore TR 332

Block Diagram

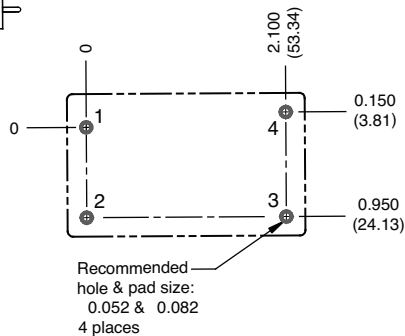


Mechanical details

TOP VIEW



RECOMMENDED PCB LAYOUT TOP VIEW



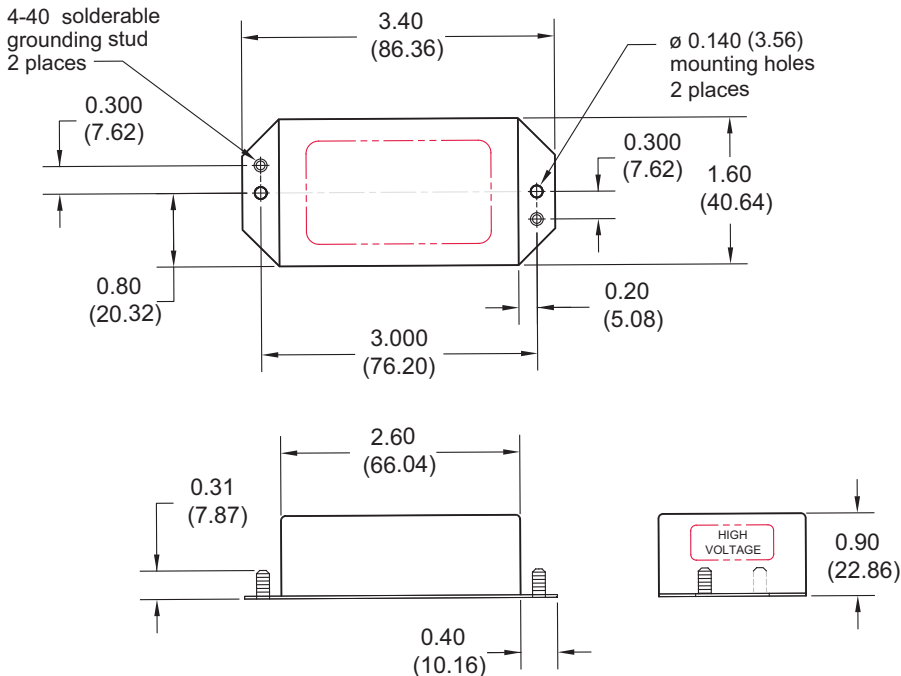
Pin #	Function
1	(+) Input
2	(-) Input
3	(-) HV Output
4	(+) HV Output

Notes

- All dimensions are in inches (mm)
- Weight 3oz (85g)

- Tolerance: $X.XX \pm 0.02$ (0.51)
- Pin Tolerance: ± 0.005 (0.127)

External Shield



NOTE: External Shield provided on model L12BAB, Black Anodized Aluminum. Case ground is not internally connected to (-) input, user must connect to ground.

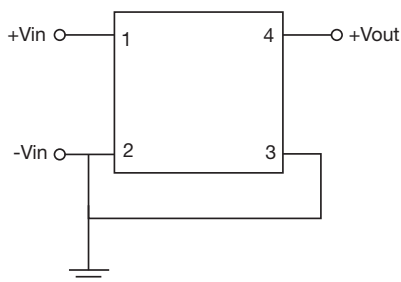
Notes

1. All dimensions are in inches (mm)
2. Weight 3oz (85g)

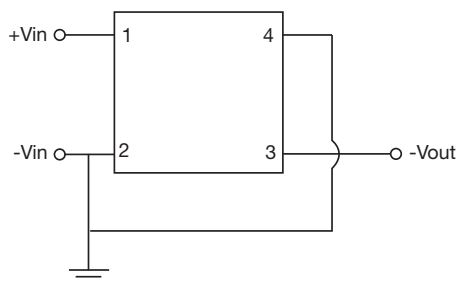
3. Tolerance: X.XX±0.02 (0.51)
4. Pin Tolerance: ±0.005 (0.127)

Application Notes

Positive Output



Negative Output



Output Voltage vs. Input Voltage

