

# GMA Series

## Miniature High Voltage DC/DC Converter Module 12 or 24 VDC Input / 100~3000 VDC Output

### DESCRIPTION

The Series GMA is a unique range of low cost, general-purpose high voltage DC to DC converters. Output voltages are available in the range 100V to 3kV depending on model. All units are configured for direct PCB mounting and are intended to be "designed in" to customers' equipment as a component.

**Operation:** The unregulated output is proportional to the input voltage. Alternatively external feedback control loops can be added to provide regulated outputs. The converters are vacuum encapsulated in an ABS case to ensure maximum reliability and safety. Standard GMA models are three pin devices which provide a common 0V for input and output. All models are available with a range of input and output voltages, with either positive or negative output.

**Special Versions:** Customers with particular requirements that are not satisfied by the standard range of GMA DC to DC converters are invited to discuss their applications with our technical sales team, who will be pleased to discuss the possibility of adapting a model from the standard range, or alternatively offer a custom design to meet your specific needs.

**Safety:** The high voltage power supplies described in this datasheet generate voltages which can be lethal. They should only be installed and used by personnel who have received the appropriate training and who are fully aware of the hazards that exist.



### SPECIFICATION

Input Voltage: 12V or 24V DC.

Max Output Power: 1.5W continuous minimum load resistance  $V_{nominal} / 2I_{nominal}$

Rated Output Voltages: 100V to 3kV nominal.

Output Polarity: Positive or negative to order.

Load Regulation: Typically less than 10% (for a zero to 1.5W Load Change) maximum 20%.

Line Regulation: Output is proportional to input over a 10% to 100% input range, with a variation of +10% of rated output voltage.

Ripple: 1% peak to peak (0.1% Screened case version).

Efficiency: Better than 50% at 1.5W load.

Oscillator Frequency: 25kHz to 200kHz depending on model.

Overload: Protected against intermittent flashover.

Operating Temperature: 0 to +40°C.

Options: S: Screen can of tin plate construction with its own pin reduces radiated noise and output ripple.

I: Isolated units give input to output isolation of up to 100V. This can allow for example, a sense resistor to be added for load current measurements. A capacitor may be added between the input 0V and output 0V to reduce common mode ripple.

Weight: 60g (2 oz) approx.

### Outputs and Ordering Information:

Model	Output Voltage
GMA*-100	100V
-200	200V
-300	300V
-500	500V
-1K	1kV
-1K5	1.5kV
-2K	2kV
-3K	3kV

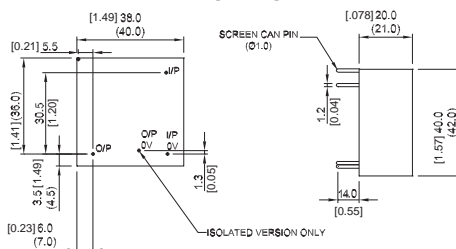
\*Add input voltage (12 or 24)

### Mechanical Specification:

All dimensions in mm [inches]

### Dimensions ( ) =

Screened Version:



### Ordering Example:



### FEATURES

- PCB Mounting
- Small size
- Outputs up to 3kV
- 1.5 Watt continuous
- Positive or negative outputs
- Output proportional to input
- No minimum load requirements
- Input polarity protected
- Open and short circuit protected
- CE Marked (LVD)

### APPLICATIONS

- Ink jet printing
- Electrostatic precipitation
- Geiger-Muller tubes
- Photomultiplier tubes
- Electron beam deflection and focussing
- General purpose

CE These component power supplies meet the requirements of EC Directive 73/23/EEC (LVD)



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