



## ST Series

### 3 Watts up to 25kV

- Output proportional to input
- Positive or negative output
- Vin: 0 – 15VDC
- Low noise sine-wave oscillator

The ST Series is a line of compact high voltage DC to DC converters which have been designed especially for electro-optic applications. These devices use the original design Royer sine-wave oscillator improved by Charles Lien in 1972. They are rugged, arc resistant, and virtually burn-out proof. Their high efficiency makes them suited for battery operated high voltage power supplies and equipment. The output voltage of the ST power supply is directly proportional to the input voltage. All ST power converters are reverse input voltage and short circuit protected.

#### TYPICAL APPLICATIONS

Electro Optics  
Electron Microscope  
Image Intensifiers  
Microchannel Plates  
Photo Multiplier Tubes (PMT)  
Pockell Cell

#### SPECIFICATIONS

**Input Voltage:**

0 – 15VDC Input

**Output Voltage:**

From 10,000VDC to 25,000 VDC  
See "model selection table"

**Output Polarity:**

Positive or negative depending on model

**Output Current:**

depends upon power level  
See "model selection table"

#### SPECIFICATIONS Continued

**Voltage Regulation**

20% No Load – Full Load (typical) Resistive load

**Ripple:**

1% maximum at full load

**Temperature Coefficient:**

200 ppm/ °C

**Stability:**

< 0.5% drift / hour after warm-up to operating temperature

**Operating Temperature:**

-55 °C to +100 °C case temperature

**Humidity:**

10% to 90% RH non-condensing

**Input Terminals:**

Teflon solder terminals

**Output Terminals:**

Flying HV lead with connector

**Input Current:**

3W Module: 60 mA (No load)  
3 W Module: 250 mA (Full load)

**Power Efficiency:**

70% typical

**Encapsulation:**

RTV potting

**Short Circuit Ability:**

Fold-back circuitry

**Switching Frequency:**

Typical 40-50kHz

## SPECIFICATIONS Continued

### Cooling:

Convection: 3W module = 15 ° C case temperature rise

### Dimensions:

4.0 L x 2.0 W x 0.85 H (101.6mm x 50.8mm x 21.6mm)

### Weight:

5.6 oz (156 grams)

### Encapsulation:

Elastomer potting

### Finish:

Black anodized aluminum case

### Terminations:

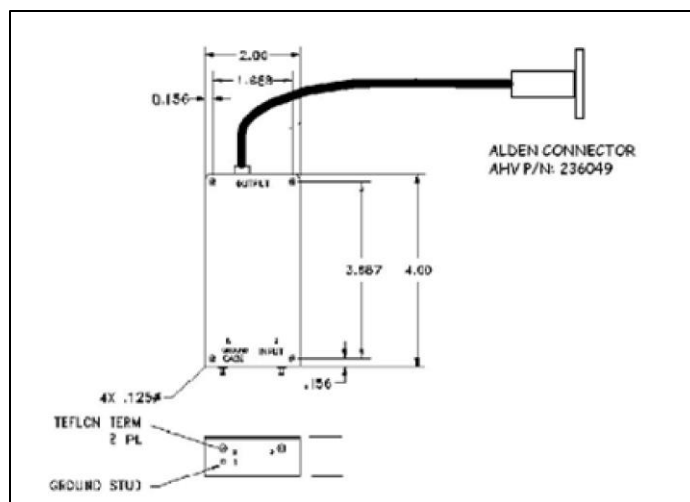
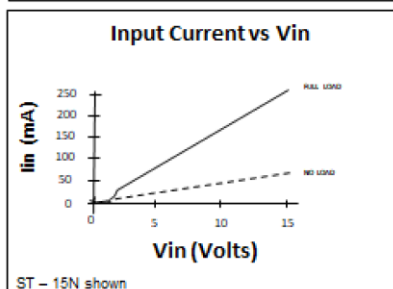
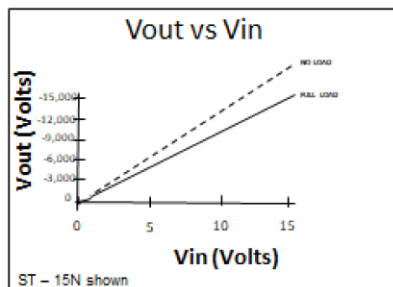
Teflon pins (6)

## MODEL SELECTION TABLE

Model	Voltage	Power Available
ST-10P	+10,000v	3w
ST-10N	-10,000v	3w
ST-15P	+15,000v	3w
ST-15N	-15,000v	3w
ST-20P	+20,000v	3w
ST-20N	-20,000v	3w
ST-25P	+25,000v	3w
ST-25N	-25,000v	3w

The above products are available in:  
12v, 24v, 28v or 48v input

## PERFORMANCE CHARTS



## Ordering Information:

# ST - XX P or N / Z

XX = Output voltage  
Z = Input voltage (blank if 15VDC)

### Example:

ST - 10N : Maximum output = -10,000V 15 VDC input  
ST - 25P / 24Vin: Maximum output = +25,000V 24VDC input

**HIGH VOLTAGE**  
for the  
**WORLD**

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