



SOLID-STATE POCKELS CELL DRIVER

- ADJUSTABLE OUTPUT TO -3.5kV
- ≤ 10ns RISETIME, 4ms RECOVERY TIME
- RUGGED SOLID-STATE DESIGN
- SELF-CONTAINED +15V POWER SUPPLY
- COMPACT SURFACE MOUNT DESIGN
- OPTO-ISOLATED OR TTL TRIGGER OPTIONS



DESCRIPTION:

The **829 Series** Pockels cell drivers are designed for continuous pulsed applications, such as controlled Q-switching of lasers. Solid-state MOSFET technology is used, giving excellent trigger noise immunity and a smooth output waveform. This technique eliminates common problems associated with krytron, avalanche and transformer drivers. Amplitude is continuously variable by adjusting the internal high voltage power supply. Pulse amplitudes to -3.5kV are available. Long recovery time eliminates need for normal mode supply.

SPECIFICATIONS:

Trigger Input	TTL/CMOS compatible, positive logic, >2.5V, high impedance, internally limited to +5V via 1kΩ load (829-1) Opto-Isolated, active high current of 10mA (829-2)
Pulsewidth	5μs to 1ms
Repetition Rate	Up to 50pps
Power	+15VDC ± 0.5V at 20mA to 100mA depending on PRF and output voltage
Temperature	0° to 70° C
Connectors	
Input	4 pin connector
Output	12" flying leads

Output	
Voltage	-500V to -3.5kV
Load	Tested with 47pF
Risetime	≤ 10ns
Recovery	4 ± 1ms (90% to 10%)
Pulsewidth	1μs to 300μs at 90% (4.7pF, 100MΩ load)
Voltage Control	Internal multi-turn trimpot External (add -EXT to part number.) When using external mode: 4V control yields 0V output 8.2V control yields -3.5kV output
Monitor	HV monitor lead to monitor HV prior to pulse (add -HV to part number)
Size	3.73" x 1.25" x 0.65"
Weight	1.8 oz.

Caution:
Mounting hardware must be Non-Conductive.
Nylon hardware is provided.

Specifications subject to change without notice. Consult factory for applications in which optical cavity could be sensitive to bonding chemicals.

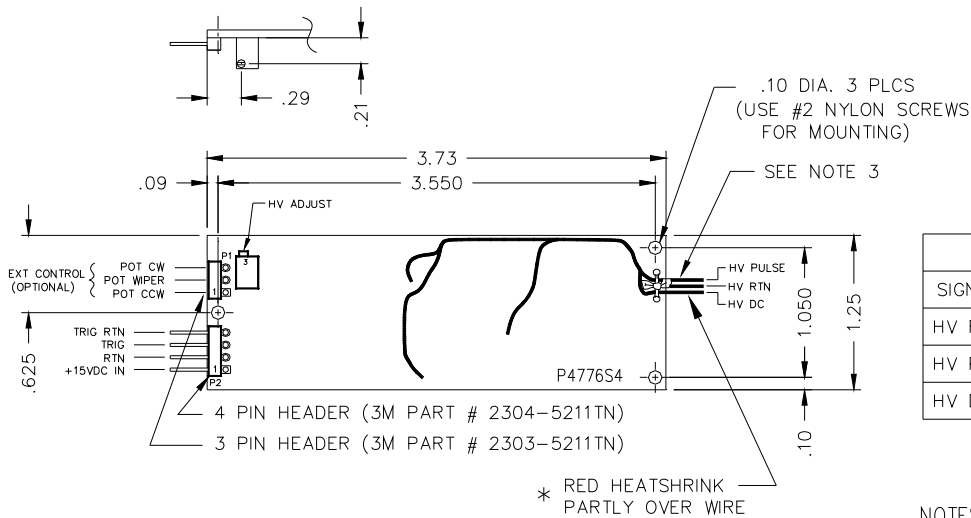


APPLICATIONS:

Driving E-O Switches for Q-Switching Solid-State Lasers, High Voltage Pulser

		MODEL NUMBER	
		OUTPUT SWING	
		0 to -3.5kV	
INPUT VOLTAGE	+15V ± 0.5V	829-1	829-2
TRIGGER		TTL	OPTO-ISOLATED

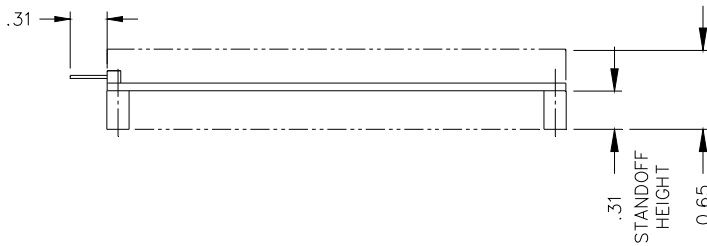
Typical Part Number: 829-1-HV = Input Voltage: +15V ± 0.5V
 Output Voltage: -500V to -3.5kV
 Trigger: TTL
 Voltage Control: Internal multi-turn trimpot
 HV Monitor: HV monitor lead provided to set HV prior to pulsing.



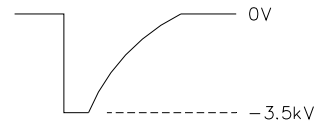
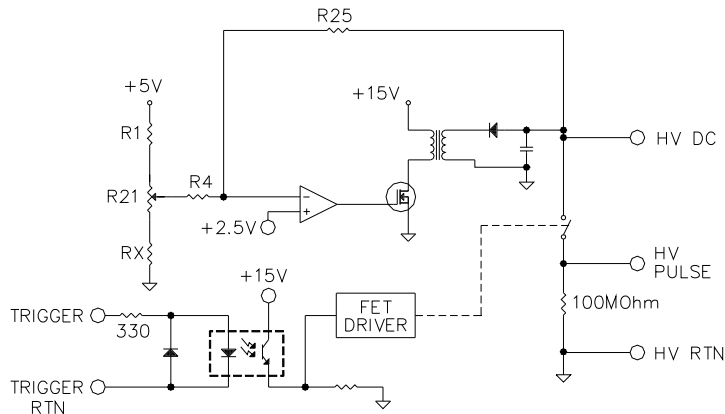
OUTPUT	
SIGNAL NAME	COLOR
HV RTN	BLACK
HV PULSE	WHITE
HV DC	WHT/RED *

NOTES: UNLESS OTHERWISE SPECIFIED

1. DIMENSIONS ARE IN INCHES.
2. TOL: .XX ± .03, .XXX ± .010
3. WIRE LENGTH IS 12" +/- 2"
4. .312 LONG MOUNTING SPACERS AND .50 LONG NYLON SCREWS SUPPLIED WITH UNIT.



829-2 EQUIVALENT SIMPLIFIED CIRCUIT



CAUTION: Mounting hardware must be Non-Conductive. Nylon hardware is provided.