

# R200™ OEM POCKELS CELL DRIVER

For Pockels Cell Laser Pulse Selection

## PRODUCT DATASHEET

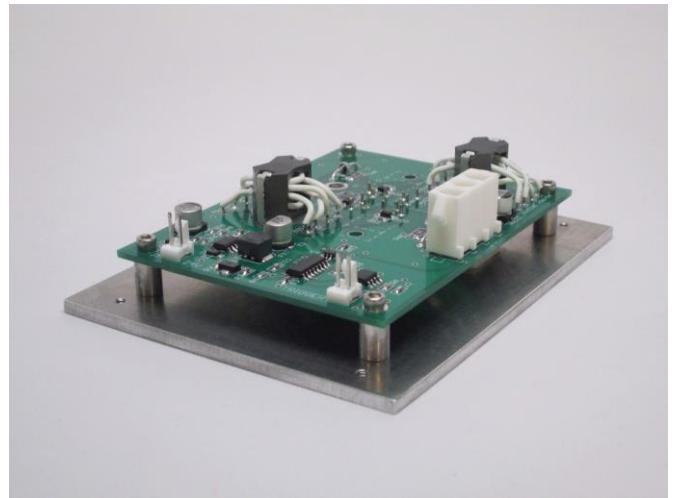
The Gooch & Housego R200™ is a compact OEM Pockels cell driver for inclusion in regenerative amplifiers and other pulse selection applications in solid state laser systems.

The unit drives Pockels cells at 1/4 wave producing pulses at up to 2.5 kV and up to 200 kHz, with burst mode capability to 1 MHz. The driver produces a top-hat waveform with fast rising and falling edges.

Heat load and space requirements are kept at a minimum due to the use of external power supplies. The trigger input is also electrically isolated from the power supplies for safety.

The compact 115x90x30 mm (4.5x3.5x1.2") circuit board is supplied on an aluminum plate for convection cooling, which can also be attached to a cold plate for water cooling.

The R200 can also be supplied as a turn-key integrated 19" rack system for benchtop use.



### Key Features

- 4-7 ns rise and fall time
- 0-2.5 kV output voltage
- 0-200 kHz repetition rate
- 250 ns-3  $\mu$ s pulse widths
- Bipolar balanced output

### Benefits

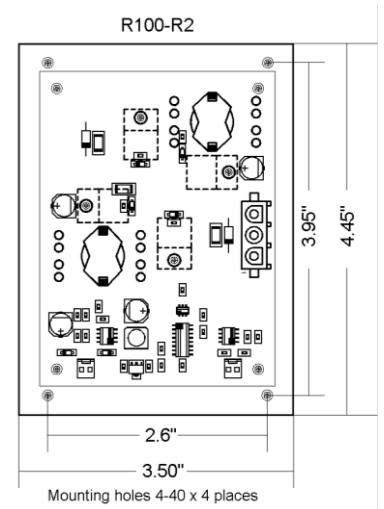
- Available as a turn-key system with enclosure
- High performance at a low cost
- Can be air or water cooled
- Compact footprint

### Applications

- Metal cutting
- Welding
- Glass and sapphire cutting
- Spectroscopy

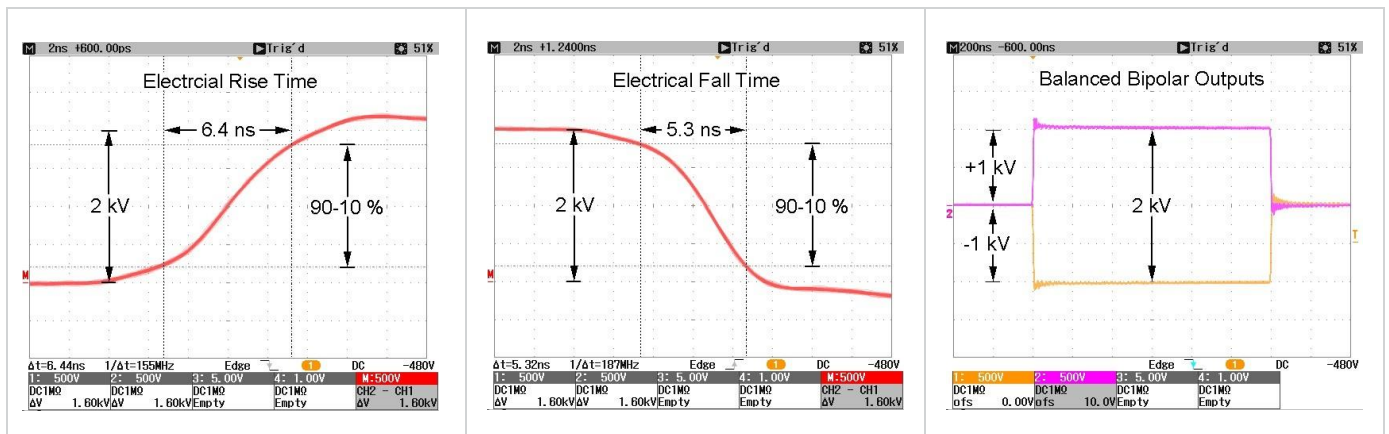
## Specifications

Parameter	Conditions	Min	Max	Units
<b>OUTPUT PULSE PARAMETERS</b>				
Pulse repetition rate	Convection cooled	0	40	kHz
	Water cooled 1.5 L/min.	40	200	kHz
Pulse voltage	External HV: $\pm 625$ VDC in for 2.5kV out	0	2.5	kV
Pulse width	Same as trigger input	250	3,000	ns
Rise, fall times	2.0 kV, 6 pF		6.0	ns
	2.0 kV, 40 pF max load		9.5	ns
<b>POWER REQUIREMENTS</b>				
Input voltage, current	24 VDC ( $\pm 2$ VDC)		200	mA
High voltage, current	2.5 kV out, $\pm 625$ VDC in, 200 kHz, 6 pF		55	mA
<b>TRIGGER</b>				
Trigger amplitude	Nom. 5 V, 50 $\Omega$ Input Impedance	4	10	V
Trigger to output delay	5 V trigger		40	ns
Trigger pulse width	Sets output pulse width	250	3,000	ns
Jitter, trigger to output	2 ns trigger rise time, Tektronix 11801		20 nom	ps RMS
<b>ENVIRONMENTAL</b>				
Mounting surface			50	$^{\circ}$ C



Dimensions of the driver board with integral mounting plate.

Mounting plate should be attached to a thermally conductive surface for cooling or to a cold plate for water cooling.



For further information

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## R200 OEM BBO POKELS CELL DRIVER