Q-DRIVE™ OEM POCKELS CELL DRIVER
OEM Driver for KDP Pockels Cells in Q-switched Lasers

PRODUCT DATASHEET

The Gooch & Housego OEM Q-Drive™ is a cost effective, high performance Pockels cell driver for incorporation into Q-switched laser systems.

The driver is packaged on a compact 100x83 mm (4x3¼”) circuit board. The driver is fully self-contained with the power supply and all control circuitry, needing only 24 VDC and a trigger signal to operate.

Designed for reliability with low component stress and worst-case design margins, the driver meets specifications from -40°C to +70°C. It works with loads to 50 pF.

G&H can supply the driver in different form factors for high volume applications. For more information please see the Design-In Manual.

Features
- 4-7 ns, 1.5-4.5 kV, 1Hz-4.5 kHz performance (see graph on following page)
- 50 ohm isolated trigger
- Voltage monitor
- Status LEDs for power, high voltage and trigger
- Remote on/off and voltage setpoint
- Bipolar balanced output
- 24 VDC input power
- Laboratory version available

Benefits
- Low power dissipation, less heat
- Remote control ready
- Compact footprint
- Easy integration

Applications
- Medical and dermatological laser systems
- Imaging
- Engraving
- Metal cutting
- Microfabrication
- Rangefinding
- Holography
### Specifications

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<th>Units</th>
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<td><strong>OUTPUT PULSE PARAMETERS</strong></td>
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<tr>
<td>Pulse top</td>
<td>4 kV output, 6 pF cell capacitance</td>
<td>150 (nom)</td>
<td>ns</td>
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<tr>
<td>Decay time constant</td>
<td>4 kV output, 6 pF cell capacitance</td>
<td>5 (nom)</td>
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<tr>
<td>Pulse voltage</td>
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<tr>
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<td></td>
<td>pF</td>
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<tr>
<td><strong>POWER REQUIREMENTS</strong></td>
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<tr>
<td>24 VDC</td>
<td>Power limit before output fold-back</td>
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<td>130</td>
<td>mA</td>
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<tr>
<td><strong>TRIGGER</strong></td>
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<td>2</td>
<td>8</td>
<td>V</td>
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<td>Input impedance</td>
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<td>48</td>
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<td>ohms</td>
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<td>Pulse width</td>
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<td>200</td>
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<tr>
<td>Jitter, trigger to output</td>
<td>2 ns trigger rise time, Tektronix 11801</td>
<td>20 (nom)</td>
<td>ps RMS</td>
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<td><strong>ENVIRONMENTAL</strong></td>
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<td>Temperature</td>
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<td>-20</td>
<td>50</td>
<td>°C</td>
</tr>
</tbody>
</table>

#### Typical performance

![Typical performance graph](image)

#### Complimentary +/- outputs

![Complimentary +/- outputs graph](image)

#### Risetime - 4 kV, 10 pF

![Risetime graph](image)

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For further information

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Q-DRIVE™ 551 LABORATORY POCKELS CELL DRIVE

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As part of our policy of continuous product improvement, we reserve the right to change specifications at any time.