Q-DRIVE BENCHTOP

Laboratory Driver for KD*P Pockels Cells in Q-switched Lasers

Q-DRIVE™ PRODUCT DATASHEET

The G&H Q-Drive Benchtop is designed for use in product development, teaching and research laboratories. The unit is ideal for evaluating G&H's OEM driver technology as both drivers share the same electronic design.

Housed in a compact 100x125x50 mm (4x5x2") aluminum case, the driver has a full suite of controls, indicators and remote control features. It operates from an external 24 VDC source (power adapter included).

A unique feature of the driver is its differential bipolar output – reducing voltage to ground and shock hazard, an important feature in a laboratory environment. Leads to the Pockels cell leave from the back of the case, keeping them away from hands at the front panel. The driver outputs are short-circuit proof.

The driver is designed for reliability with low component stresses, the highest quality components and the use of US Navy derating standards.

An OEM version with the same electrical performance is available for inclusion in the laser product.

Features

- 4-7 ns, 1.5-4.5 kV, 1 Hz-4.5 kHz performance
- 50 ohm isolated trigger
- Front panel controls for high voltage setpoint and power
- DB-9 connector with: voltage monitor, remote setpoint, voltage on/off
- Status LEDs for power, high voltage and trigger

Benefits

- Front panel or remote control
- Short-circuit protected output
- Easy integration of OEM version
- EMI shielding enclosure

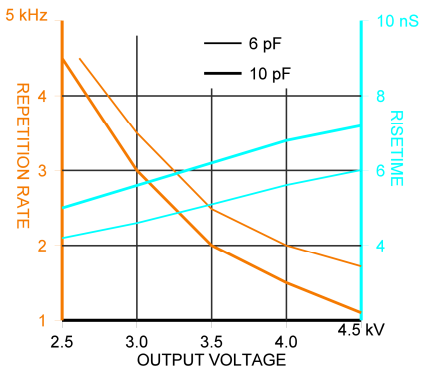
Applications

- Ideal for development of Q-switched lasers for:
  - Medical and dermatology
  - Imaging
  - Engraving
  - Metal cutting
  - Microfabrication
  - Rangefinding
  - Holography

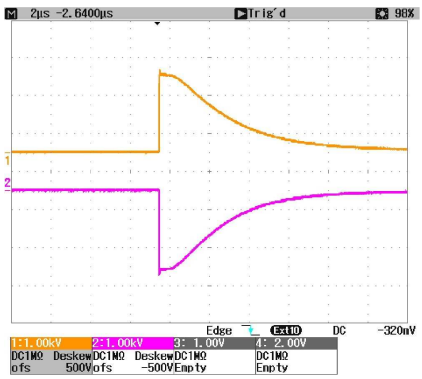
Specifications

Parameter	Conditions	Min	Max	Units
OUTPUT PULSE PARAMETERS				
Pulse top	4 kV output, 6 pF cell capacitance		150 (nom)	ns
Decay time constant	4 kV output, 6 pF cell capacitance		5 (nom)	ns
Pulse voltage	Limits of adjustment	1.5	4.5	kV
Load capacitance			30	pF
POWER REQUIREMENTS				
24 VDC	Power limit before output fold-back		180	mA
TRIGGER				
Trigger voltage		2	8	V
Input impedance		48	52	ohms
Pulse width		200		ns
Jitter, trigger to output	2 ns trigger rise time, Tektronix 11801		20 (nom)	ps RMS
ENVIRONMENTAL				
Temperature		-20	50	°C

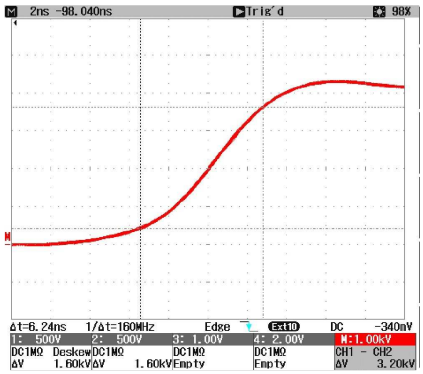
Typical performance



Complimentary +/- outputs



Risetime - 4 kV, 10 pF



For further information

E: sales@gandh.com

gandh.com