

FASTPULSE TECHNOLOGY, INC.

LASERMETRICS® Division

220 Midland Avenue • Saddle Brook, NJ 07663

Tel: (973)478-5757 • Fax: (973)478-6115

WebSite • Fastpulse.com

MODEL 5250q - 20 kHz

LASER Q-SWITCH DRIVERS

- Repetition Rates up to 20 kHz
- < 5 nanosecond RiseTime
- Adjustable Output Voltage
- EMI/RFI Suppressed
- For RTP and BBO Pockels Cells
- OEM Configurations Available



5250q-20 Laser Q-switch Drivers are valuable for laser Q-switching and cavity dumping. The drivers are effective in both intracavity and extracavity applications where a fast rise time pulse is needed. Typical rise times are < 5 ns. The drivers provide the latest technology in reliable, solid state, high voltage switching design

5250q-20 Drivers are based on high speed, HV MOSFET switching circuits developed and refined at FastPulse Technology through decades of design and improving its Laser Pulse Gating Systems. The HV switching module is separated from the power supply to permit the module to be located close to the Pockels cell being driven. These systems are noted for noise-free operation, convenience and reliability.

By simply adjusting the front panel HV control on the power supply, the user can operate the driver over the full range of voltages - from ~500 volts to more than the quarter wave voltage for many RTP and BBO Pockels cell Q-switches. In addition, external HV control is available through a connector input that provides full output range control with a user supplied 0 to 10 Volt input voltage

The 5250q HV output can be configured to provide a zero level to HV output pulse or a 1/4 wave DC voltage to zero volts pulse by connecting the appropriate output wires and grounding lug.

Series 1147 Pockels cells utilize RTP (Rubidium Titanyl Phosphate), noted for its ability to produce optical switching without superimposing photoelastic ringing on the transmitted beam. RTP devices use two crystals, a configuration that provides excellent thermal compensation and stability with low operating voltages. Series 1147 devices are suitable for 1/4 wave operation over the full spectrum range of about 500 nm to 2100 nm.

Series 1150 BBO Pockels cells utilizing Beta Barium Borate crystals are currently available in aperture sizes of 3 to 6 mm diameters. BBO is noted for its very low piezoelectric response, ability to tolerate high average power and operate in the UV spectrum. Since BBO requires significantly higher voltages than RTP, aperture sizes are limited by available drive voltage and wavelength considerations. Multi-crystal Q-switches are available to reduce voltage requirements.

Contact our technical staff for guidance on appropriate devices.

CONTINUED OVER

SERIES 5250-20 Q-SWITCH DRIVERS

5250-20 Q-switch Drivers consist of a High Voltage Switching Module and a Power Supply. The HV Switching Module is packaged in a EMI shielded enclosure. Unshielded, open configurations for OEM and end user packaging are also available.

Contact our Engineering Sales Group for alternatives and options to match your application

NOMINAL SPECIFICATIONS

HV Output Pulse Range	500 V to 1600 V
Rise Time (10 to 90%):	<5 ns
Pulse Width:	~5 us
Repetition Rate, single shot to:	20 kHz
Jitter, Trigger to HV Output	<1 ns
Input-Output Delay Time:	<50 ns
Trigger Input Pulse:	TTL Levels (5 Volts max)
Voltage Control Input	0 to 10 V (200 V out for 1 V in)
Power Requirement:	100/115/230 VAC, 50/60 Hz, 70 watts
Dimensions, inches:	
HV Switching Module	4.75H X 3.25W X 1.4D inches
Power Supply	2.5H X 8.0W X 10.0L inches

