

June 16, 2025, Vilnius, Lithuania

Pockels Cell PCD Drivers Line by EKSPALA: Compact, High-Speed, and High MTBF

EKSPALA introduces the latest generation of its PCD Series Pockels Cell Drivers, offering a compact and high-speed solution for controlling high-voltage pulses in the most advanced laser systems.

The drivers are designed for high-speed switching of light polarization by applying HV to an electro-optical crystal and are incorporated in applications such as pulse picking, Q-switching, mode-locking, and cavity dumping. The PCD series is compatible with a wide range of Pockels cells employing BBO, RTP, KD*P, KTP, LiNbO₃, and CdTe crystals.

The PCD drivers are widely used in solid-state femtosecond, picosecond, nanosecond and CW lasers across industrial, medical, and scientific sectors.

A key feature of the PCD Series is its efficient thermal management. Expertise in this field allows to reduce footprint of drivers making them twice smaller than typical competition.

The vast majority of units demonstrates a **Mean Time Between Failures (MTBF) exceeding 10 years** of continuous 24/7 operation, even under the most demanding conditions.

The most unique option amongst EKSPALA's HV switches is **Fast Amplitude Modulation (FAM)** version which allows to control amplitude of an each individual HV pulse. It helps user to manage optical pulse gating in a more flexible way.

Despite their compact footprint, these drivers provide high-voltage output pulses up to 9.8 kV, with repetition rates reaching 6 MHz. Fast electrical pulse rise times as low as 5.5 ns, combined with pulse durations ranging from 0 ns to virtually infinity, make this driver line suitable for an exceptionally wide range of applications with minimal customization.

With more than 60 standard HV switch versions already developed, each matched with compatible high-voltage power supplies, the Pockels cell driver line offers **most likely the widest selections available on the market**. This variety enables easy adaptation into different laser architectures optimizing system's performance and cost.

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