

POCKELS CELL MODULATORS

Our longitudinal Pockels Cells are often used in polarimetry on imaging light beams and in the chopping of polarized beams. They consist of Z-cut KD*P crystals between protective windows that have transparent indium-tin oxide electrodes applied to their interior faces. The electrodes produce a uniform electric field normal to the optical faces and permit use of a thin (approximately 3 mm) KD*P crystal.

As shown on the response graph, the electric field creates a positive or negative retardance value depending on the instantaneous field direction.

The thin crystal additionally makes these cells suitable for use in non-collimated imaging light beams slower than $f/20$. Meadowlark specializes in clear apertures up to 40 mm. These devices are useful as variable retarders in applications requiring very fast switching.

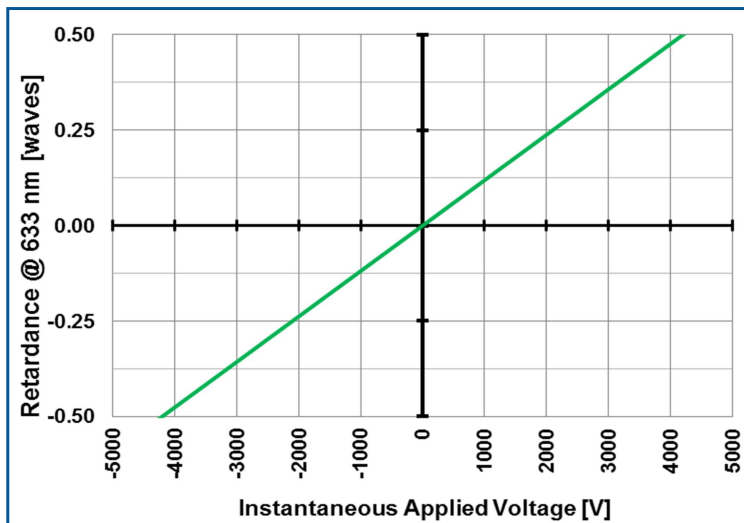
Due to the wide variation in customer applications, Meadowlark is unable to provide a turn-key high voltage driver, but is pleased to help identify the critical voltage/current requirements.



Key Features

- Large clear apertures (40 mm)
- Suitable for imaging applications
- Symmetric nanosecond Switching times

Retardance vs. Voltage



SPECIFICATIONS @ 633 NM, 20 °C	
Transmission	>90% @ 633 nm
Quarter Wave Voltage	<2200 V (linear w/wavelength)
Maximum Voltage	±4500 V
AC Voltage Modulation Range	10 Hz to 10 kHz (must be AC with no DC bias)
Nominal Capacitance	~120 pF (25 mm) ~200 pF (40 mm)
Contrast Ratio	>1000:1 (Collimated Light)
Cell Dimensions	∅2.25" x 1.01" (25 mm CA) ∅2.95" x 1.18" (40 mm CA)
Operating Temperature	5 °C to 35 °C

ORDERING INFORMATION	
Part Number	Pockels Cell - 25 mm - λ Pockels Cell - 40 mm - λ
<i>Please note that power supply, cables and software are not included.</i>	



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