Low voltage, large aperture Q-switching devices

The KD*P Pockels cell is a laser modulation component based on the electro-optic effect of the DKDP crystal.The products can be divided into transverse and longitudinal types based on the direction of the electro-optical effect.

The transverse type KD*P Pockels cell operates with the direction of light propagation perpendicular to the electric field. We can control the number and size of electro-optical crystals, which can effectively reduce the operating voltage to the hundred-volt level and realize the MHz repetition frequency.

The longitudinal type products operate with the direction of light propagation parallel to the electric field. CASTECH's team has developed longitudinal KD*P Pockels cell with excellent optical uniformity, high extinction ratio and high transmittance.

Applications

- Q-switching
- Regenerative amplifier
- Cavity dumping
- Beam chopper
- Pulse picker
- Optical power stabilizer

CASTECH's products are produced independently throughout the entire process and can be customized according to customer needs. Refer to the following list for standard products.

Model Number: Longitudinal Type DPC-taq-c-b-w
Transverse Type DPt-alq-b-w

	Type (t)	Clear Aperture (a)	Cascade Type (q)	Electrode type (c)	Optional Accessories(b)	Wavelength(w)
Longitudinal	L(Longitudinal)	8 (8 mm) 10 (10 mm) ...	S (Single) D (Doubel) ...	P (Pin) W (Wire) ...	P (Polarizing prism) N (Nothing) ...	532 nm 1030 nm 1064 nm ...

	Type (t)	Clear Aperture (a)	Crystal Length (l)	Cascade Type (q)
Transverse	T (Low Repetition Frequency) H (High Repetition Frequency)	3 (3 mm) 5 (5 mm) ...	A (20 mm) B (25 mm) C (40 mm) ...	D (Doubel) Q (Four) ...

Typical Specifications

Type	Clear Aperture*	Voltage Contrast Ratio	Capacitance@ 10kHz	λ/4 Voltage	Rise/Fall Time**	Cascade Type	Transmission
Longitudinal	8-15 mm	≥1000:1	6~12 pF	3.5 kV	＜10 ns	Single	≥98.5%
Transverse	3-5 mm	≥500:1	30~80 pF	＜1 kV	＜20 ns	Double	≥98%

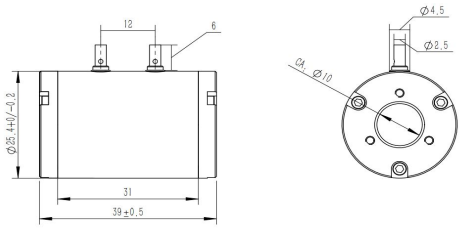
Damage threshold: 10 J/cm², 10 ns, 10 Hz

*Recommend to use a light spot (1/e ²) less than 0.6 times the clear aperture

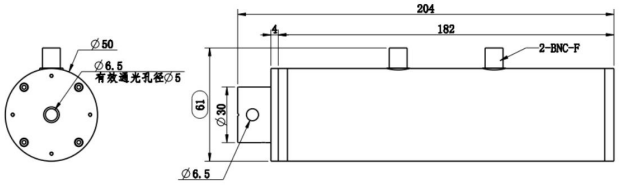
**The actual value is affected by the drive.

Housing dimensions(mm):

DPC-L10S-P-N



DPH-5CQ-P



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