

BBO Pockels Cells

Capable of withstanding high power and operating at high repetition rates

The **BBO Pockels cells** are laser devices developed based on the electro-optic effect. When a voltage is applied to the electro-optic crystal, the refractive index of the crystal changes. The phase difference caused by birefringence for the polarized light transmitted along the optical axis will lead to a change in the polarization state after exiting. The working principle of BBO Pockels cells is based on the transverse electro-optic effect. Therefore, the working voltage can be effectively reduced by changing the size of the BBO crystal.

CASTECH can provide BBO Pockels cells with different specifications and requirements. The products can be applied to different usage environments. Due to the low ringing effect of BBO Pockels cells, combined with CASTECH's self-made driver, a repetition rate of 1 MHz can be achieved. In addition, CASTECH also provide water-cooled or other special accessory customizations.

CASTECH's BBO Pockels cells are fully in-house manufactured and customizable to meet specific needs. Explore our standard product range below.



Applications

- Q-switching
- Regenerative amplifier
- Pulse picker
- Cavity dumping

Model Number: BPt-alq-b-λ-h

Type (t)	Effective Clear Aperture (a)	Crystal Length (l)	Cascade Type (q)	Optional Accessories (b)	Wavelength (λ)	Housing (h)
A (Square)	3 (2.6 mm)	A (20 mm)	S (Single)	C (Ceramic)	1030 (1030 nm)	A01
C (Round)	...	B (25 mm)	D (Double)	L (Water Cooling)
S (Special)	T (Triple)	N (None)

*Don't include connectors, pins, or other accessories.

**Used to distinguish between models with the same packaging but different requirements. If not specified, the default is A0.

Typical Specifications(@1064 nm)

Aperture*	Extinction ratio	Rise/Fall Time	Cascade Type	Transmission	Representative Model	λ/4 voltage***
3-6 mm	≥1200:1	<10 ns	Single	≥98.5 %	3 AS	3.6 kV
3-6 mm	≥1000:1	<10 ns	Double	≥98.5 %	3 AD	1.8 kV
7-12 mm	≥500:1	<20 ns	Double	≥98.5 %	10 AD	5.8 kV

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

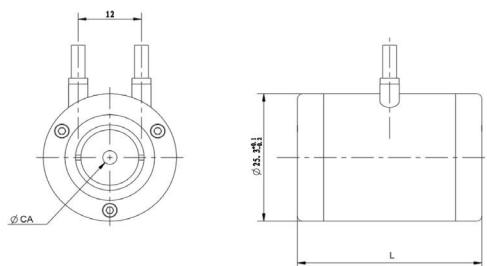
*Recommend to use a light spot (1/e²) less than 0.6 times the clear aperture

**The actual value is affected by the drive.

*** Relate to the model, and it is recommended that the maximum operating voltage does not exceed 1.3 times the standard voltage of the customized model (e.g. for a clear aperture of 3 mm, it is recommended that the maximum operating voltage does not exceed 3.9 kV).

Housing dimensions(mm):

■ BPC-alq-C-λ-A0



■ BPS-10AD-L-λ-A0

