

## BBO POCCKELS CELLS – PCB

### Features

- Minimal piezoelectric ringing
- Very low absorption and suitability for high power laser applications
- Reliable design for operation up to 3 MHz HV pulse repetition rate
- Broad transmission rate from 200 to 2000 nm
- Pockels cell with active cooling available upon request

BBO Pockels cells are transverse field devices. Low electro-optical coefficient of BBO results in higher operating voltages. The operating voltage is proportional to the ratio of electrode spacing and crystal length. Double crystal design is employed to reduce required voltages and to allow operation in half-wave mode with fast switching times.

Low piezoelectric ringing makes these Pockels cells attractive for the control of high-power and high pulse repetition rate

lasers. Fast switching electronic drivers properly matched to the cell are available for Q-switching, cavity dumping and other applications.

Quatro BBO Pockels cell employs quadruple crystal design with an independent control of two sides, meaning this Pockels cell can be controlled by two synchronized sets of Pockels cell drivers enabling advanced polarization control.

### Applications

- High repetition rate Q-switching
- Pulse picking at up to 3 MHz rate
- Laser cavity dumping
- Pulses coupling into and from regenerative amplifier



PCB4D



PCB6.3D

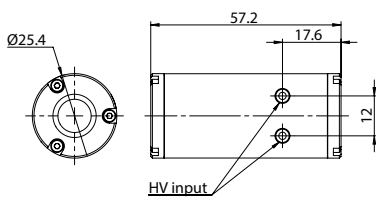


BBO Pockels cell with active cooling

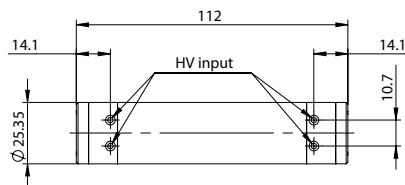
### Specifications

MODEL	PCB3S	PCB3D	PCB4S	PCB4D	PCB6.3S	PCB6.3D	PCB4Q
Clear aperture diameter, mm	2.5		3.5		5.8		3.5
Quantity of crystals	1	2	1	2	1	2	4
$\lambda/4$ voltage (@ 1064 nm), kV DC	< 3.5	< 1.8	< 4.6	< 2.3	< 7.5	< 3.8	$2 \times < 1.3$
Capacitance, pF (typical)	4	6	3	6	6	< 8	$2 \times < 6$
Optical transmission	> 98 % at 1064 nm						
LIDT of AR coatings	> 0.5 GW/cm <sup>2</sup> (5 J/cm <sup>2</sup> ), 1064 nm, 10 Hz, 10 ns						
Contrast ratio	> 1:1000	> 1:500	> 1:1000	> 1:500	> 1:1000	> 1:500	> 1:500
Dimensions, mm	Ø25.4×37.2	Ø25.4×57.2	Ø25.4×37.2	Ø25.4×57.2	Ø25.4×42.2	Ø35×68	Ø25.4×112

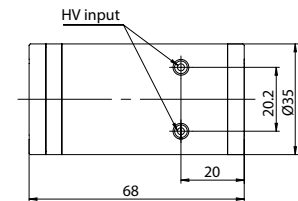
Specifications are subject to changes without advance notice.



PCB3D, PCB4D drawing



PCB4Q drawing



PCB6.3D drawing