

# CASTECH<sup>®</sup>

## LASER COMPONENTS



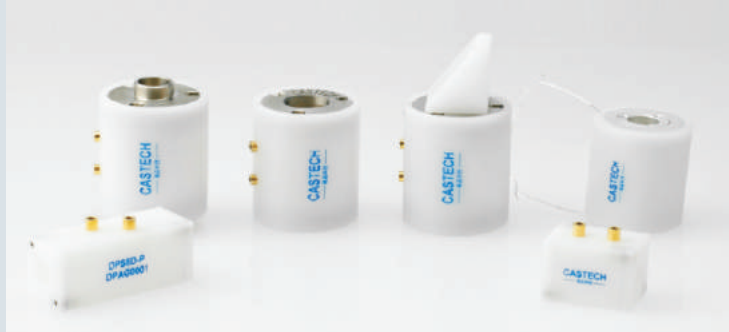
# KD\*P Pockels Cells

Pockels cells are used to change the polarization state of light passing through it when a voltage is applied to the electrodes of electro-optic crystals such as KD\*P. When used in conjunction with polarizer, pockels cells can be used as fast optical switches.

We offer different kinds of KD\*P pockels cells. The DPC-R series are

cylindrical and the DPC-S series are cubic. For DPC-R series, the electrode connection can be optional among wires, thread and pin. And also, it's available with integrated, pre-adjusted Brewster polarizer such as DPC-R8S-PB and with ceramic to control the aperture such as DPC-R8S-PC. And for the DPC-S series, switching voltage can be halved such as DPC-S8D-P.

All pockels cells series have AR coated windows for improved lifetime and protection in less user friendly environment.



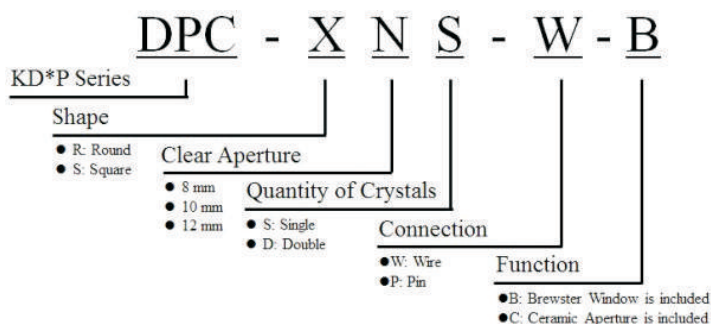
## Features

- ▶ KD\*P-based pockels cells
- ▶ Low absorption loss
- ▶ Good temperature stability
- ▶ High extinction ratio
- ▶ Capacitance value is small, fast switching speed
- ▶ High damage threshold
- ▶ Compact structure

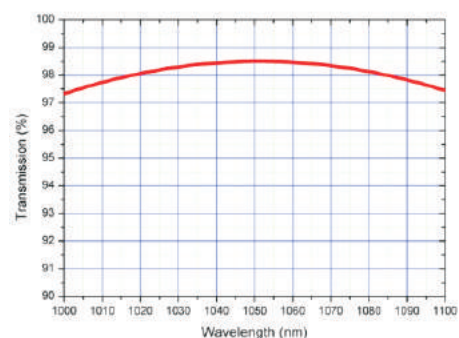
## Applications

- ▶ Medical and aesthetic laser systems
- ▶ Cavity dumping
- ▶ Regenerative amplifiers
- ▶ Q-switching of the laser cavity

## Model Number



## Typical Transmission Curve



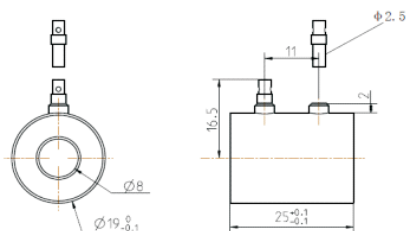
# Pockels Cells

## Specifications

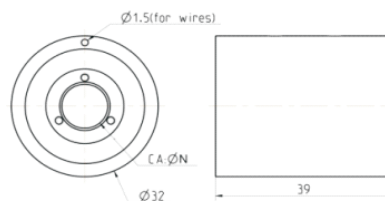
| Product                                | DPC-RNS-W | DPC-RNS-PC | DPC-RNS-PB | DPC-RNS-P | DPC-SNS-P | DPC-SND-P |
|--|-----------|------------|------------|-----------|-----------|-----------|
| Clear Aperture, $\Phi$ (mm)            | 8,10,12   | 8,10,12    | 8,10       | 8         | 8         | 8         |
| Intrinsic Contrast Ratio(ICR)          | >2000:1   | >2000:1    | >1000:1    | >2000:1   | >2000:1   | >2000:1   |
| Voltage Contrast Ratio (VCR)           | CP        | >1500:1    | >1500:1    | >800:1    | >1500:1   | >1500:1   |
|  | PP        | >1000:1    | >1000:1    | >500:1    | >1000:1   | >500:1    |
| Optical Transmission                   | >98%      | >98%       | >97%       | >98%      | >98%      | >97%      |
| $\lambda/4$ Voltage (@ 1064 nm), kV DC | <4.0      | <4.0       | <4.0       | <4.0      | <4.0      | <2.0      |
| Capacitance, pF                        | 3-8       | 3-8        | 3-6        | 3-4       | 3-4       | 6-8       |

All crystals are coated AR/AR@1064 nm. Other antireflection coatings are available under request.  
Damage threshold >10 J/cm<sup>2</sup> for 5 ns pulses, 10 Hz at 1064 nm.

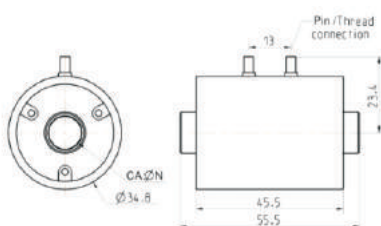
## Dimensions(unit: mm)



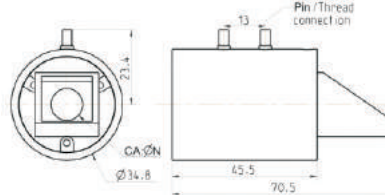
DPC-RNS-P



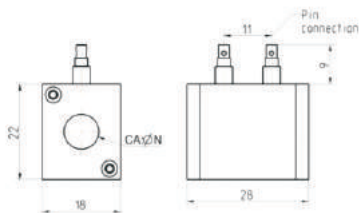
DPC-RNS-W



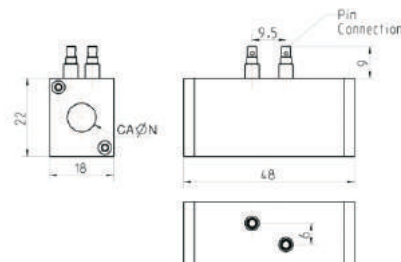
DPC-RNS-PC



DPC-RNS-PB



DPC-SNS-P



DPC-SND-P

## RELATED PRODUCTS



**PCD-L series**  
**Pockels Cells Drive**  
 ▶ for Q-Switching  
 ▶ for Flashlamp Pumped Lasers



**BPC series**  
**Pockels Cells**  
 ▶ for High Repetition Rate Applications  
 ▶ Low Piezoelectric Coupling Coefficients



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