

IMPACT SERIES

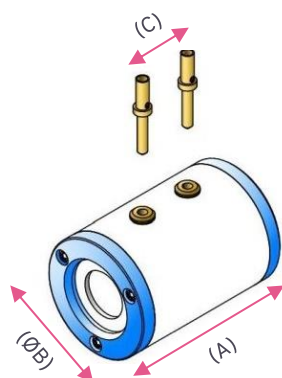
KD*P Pockels Cell

PRODUCT DATASHEET

From the world leader in nonlinear materials and electro-optic devices comes the ideal Pockels cell for OEM applications, the Impact KD*P cell. Once again we set the industry standard, and at an exceptional value.

We employ the finest strain-free, highly deuterated KD*P available, grown in our own crystal growth facility. Ceramic apertures ensure robust performance in demanding applications.

The Impact offers high damage threshold solgel and dielectric AR coatings for a variety of laser wavelengths. Superior connectors for high-voltage applications, the standard pin-type connectors provide quick connection for simplified system design and assembly. Conventional threaded connectors are available as an option, if needed.



MODEL	DIM 'A'	DIM 'B'	DIM 'C'
Impact 8	0.989 [25.1]	0.748 [19.0]	0.394 [10.0]
Impact 9	1.368 [34.8]	0.998 [25.3]	0.472 [12.0]
Impact 10	1.456 [37.0]	0.998 [25.3]	0.472 [12.0]
Impact 13	1.672 [42.5]	0.998 [25.3]	0.472 [12.0]



Key Features

- Highest purity KD*P, 99%
- 99% KD*P grown by G&H in the USA, see figure 2
- Low loss KD*P crystal 0.4% @ 1064 nm
- Intrinsic contrast ratio > 4000:1
- Voltage contrast ratio > 3500:1
- $< \lambda / 10$ transmitted wavefront distortion
- LIDT > 10 J/cm² (1064 nm, 10 ns, 10 Hz)
- Premium UV-grade fused silica windows
- Ceramic aperture eliminating outgassing
- Nitrogen backfilled ensuring long lifetime

Options

- Threaded HV connectors

Applications

- Q-switching
- Pulse picking
- Attenuator
- Power control

Performance Data

Typical Specifications 99% KD*P	Impact 8	Impact 9	Impact 10	Impact 13
PHYSICAL				
Wavelength range for 99% KD*P (>99.5% internal transmission)	300 nm-1100 nm			
Hard aperture diameter	8 mm	9.25 mm	10 mm	13 mm
Single pass insertion loss @ 1064 nm	<1.0%, see figure 1			
Intrinsic contrast ratio (ICR) @ 1064 nm	>4000:1, see figure 3			
Voltage contrast ratio (VCR) @ 1064 nm (parallel polarizers)	>3500:1, see figure 4			
Single pass distortion @ 1064 nm	< $\lambda/10$			
ELECTRICAL				
Capacitance (DC)	6 pF			
DC quarter wave voltage @ 1064 nm	3.5 kV			
10-90% rise time (theoretical) into 50 Ω line	0.8 ns	0.9 ns	1.1 ns	1.1 ns
LASER DAMAGE THRESHOLD (LIDT)				
1064 nm, 10 ns, 10 Hz, 1 mm beam	>10 J/cm ²			

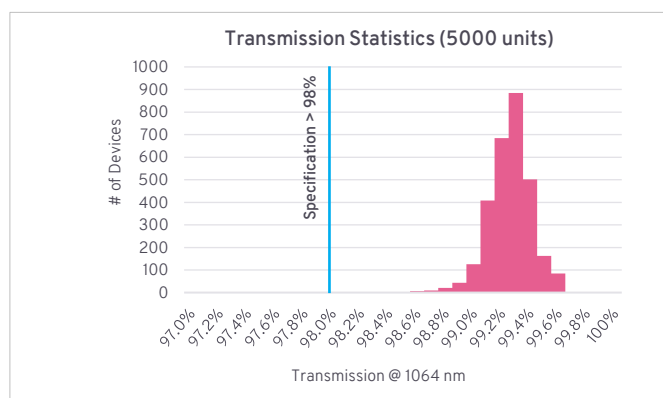


Figure 1 Single pass insertion loss

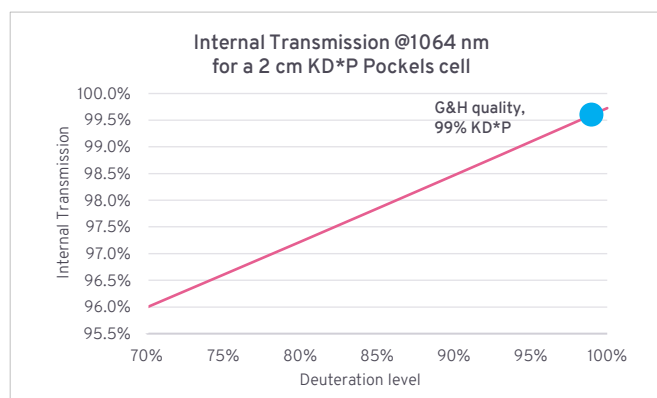


Figure 2 Internal KD*P transmission

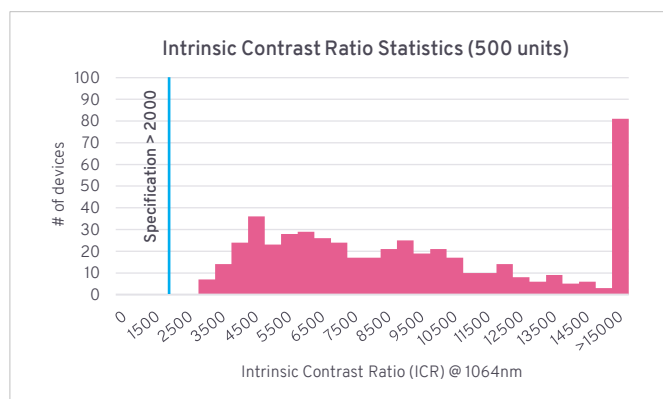


Figure 3 Intrinsic contrast ratio

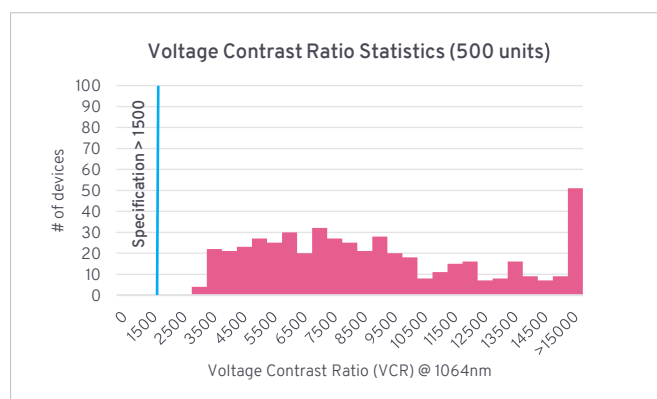


Figure 4 Voltage contrast ratio

For further information

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Datasheet Revision No. 2.1

As part of our policy of continuous product improvement, we reserve the right to change specifications at any time.

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