



Gooch & Housego



*TX series Large Aperture KD*P Cell*

TX series KD*P Pockels cells are the most advanced large aperture optical isolators commercially available and are proven performers in high power applications. Gooch & Housego is the leading producer of Pockels cells for the development of laser induced nuclear fusion and sub-micron microlithography. Nearly 300 units are in use worldwide...more than twice the total from all other manufacturers combined.

We have incorporated state-of-the-art features, such as specially modified cylindrical-ring electrode geometries for optimum aperture extinction and transmission uniformity and minimum optical path length. Series TX cells also feature axially adjustable windows for sub-millimeter control of window/crystal spacing and 224 TPI differential screws for arc-second adjustment of windows parallelism or net wedge. These units typically have a lifetime of many years and can often be rebuilt for a fraction of the cost of a new unit. Each unit comes with detailed 2-page/4-photo test documentation for quality assurance.

We recommend premium 50-ohm electrical receptacles on series TX cells because of their 20kVdc and 1GHz mil-spec ratings (used with RG-8 A/U or RG-213/U coaxial cable), but we can also install the more common HN receptacles. For customer convenience, we stock GHV bulkhead receptacles as well as cable-end plugs.

Contact us today and ask for information on all of our Pockels cell products, including series TX large aperture optical isolators and IMPACT series miniature Pockels cells.

TX series KD*P Cell



General Features:

- * Axially adjustable windows for sub-millimeter control of window/crystal spacing, especially important in fluid-filled units.
- * Differential screws for arc-minute adjustment of input/output window parallelism or net wedge (equivalent to 224 threads per inch)
- * Double fill/drain ports for easy fluid draining, purging or refilling.
- * Individually accessible crystal faces for convenient inspection or cleaning of either end of the crystal without disturbing the opposite end, even if the cell is fluid-filled.
- * Precision housing using our in-house BOSTOMATIC 3000 CNC vertical milling machine, which facilitates clean assembly (no need for potting compounds, cements, epoxies or adhesives) and helps assure years of trouble-free service.

TYPICAL SPECS	TX2042	TX2650	TX3460	TX5065	TX7595	TX100D
Physical						
• L x H x W (mm)*	85 x 80 x 85	97 x 87 x 92	102 x 95 x 103	115 x 111 x 119	151 x 136 x 144	157 x 161 x 169
• Hard Aperture	19.5mm	25.5mm	33.5mm	49.5mm	73.5mm	99.0mm
• Weight	1.1kg	1.4kg	1.9kg	2.7kg	5.4kg	7.5kg
• Crystal Deuteration**	95%	95%	95%	95%	95%	95%
Optical(1064nm)						
• Single Pass Insertion Loss	3.5%	4%	5%	5%	6.5%	7%
• Voltage Contrast Ratio						
X polarizers	8000:1	8000:1	6000:1	3000:1	800:1	200:1
polarizers	3000:1	2500:1	1500:1	500:1	300:1	100:1
• Max. Residual Birefringence (typically <1% of aperture)	<10nm	<12nm	<18nm	<20nm	<40nm	<80nm
• dc Halfwave Voltage	6.4 kV	6.4 kV	6.7 kV	6.9 kV	7.3 kV	7.7 kV
• Single Pass Distortion	$\lambda/20$	$\lambda/20$	$\lambda/15$	$\lambda/12$	$\lambda/8$	$\lambda/4$
Electrical						
• Capacitance @ 1kHz	23 pF	27 pF	32 pF	56 pF	86 pF	115 pF
• 10-90% Risetime (50Ω line)	1 nsec	<2 nsec	2 nsec	3 nsec	5 nsec	7 nsec
	←		50Ω source and termination	→		

*L=housing length along optic axis direction; W=width between electrical terminals; H=height.

**99% deuterated KD*P and UV-grade KDP also available in certain sizes. Please inquire.

Contact:

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www.GoochandHousego.com

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