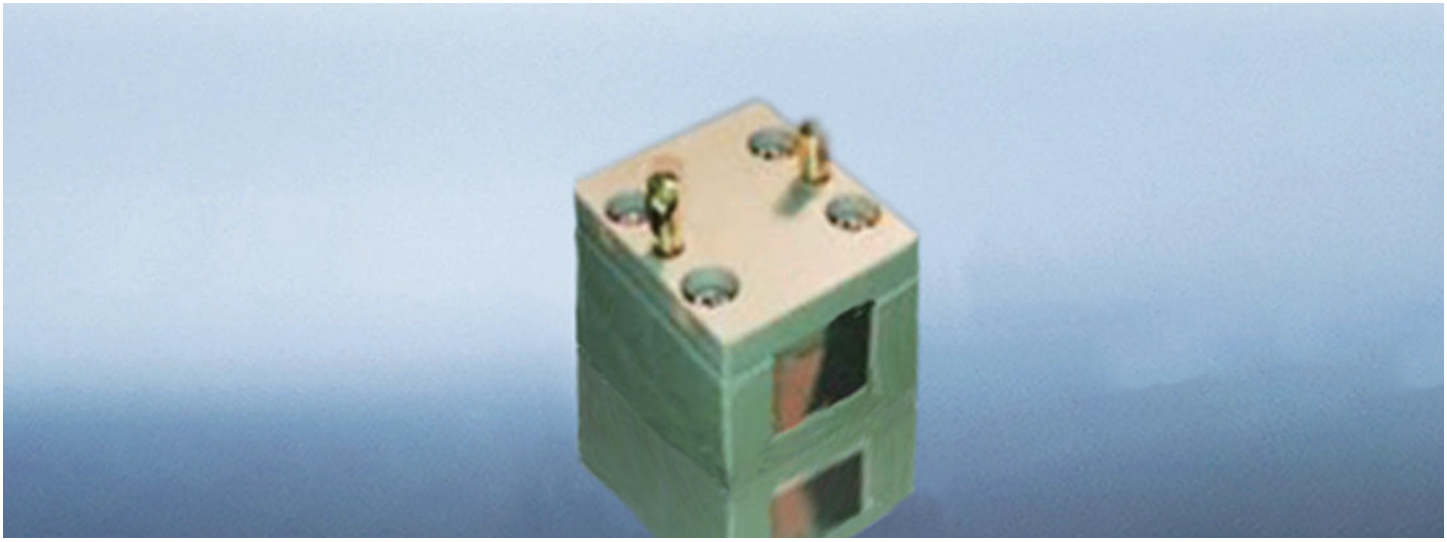
LN&MgO:LiNbO3 POCKELS CELL



DESCRIPTION

LN ($LiNbO_3$) pockets cells, also known as lithium niobate pockets cells, is a comprehensive and excellent pockets cells The device is widely used in the fields of optical communication and optical waveguide technology. The product has the advantages of high electro-optical coefficient, non-hygroscopicity, a wide range of transparency, and good mechanical and physical properties, which can be applied in the fields of electro-optical modulators, modulation of laser beams outside the wave voltage of resonators. Lithium niobate crystals are one of the most commonly used materials for Q-switches and phase modulators due to their high electro-optical coefficient, non-hygroscopicity, good transmission up to 4.0 μm, and transverse mode operation. $LiNbO_3$ pocket cells can be configured to operate at lower voltages than KD*P cells by applying an electric field laterally in the direction of light propagation. $LiNbO_3$ pocket cells can support IR wavelength operation up to 4.0 μm and are also a good choice for low to medium power solid-state laser (Er: YAG, Ho: YAG, Tm: YAG pulsed lasers) applications. Also, $LiNbO_3$ with Mgo doping has a significantly higher damage threshold compared to conventional undoped $LiNbO_3$.

FEATURES

- Low loss
- High electro-optical coefficient
- Wide range of transparency
- Low wavefront distortion
- High temperature stability
- Stable mechanical and chemical properties

APPLICATIONS

- Target Indicator
- Electro-optical modulator
- Medical and Industrial Lasers
- Q-switched compact Nd+ lasers, e.g. rangefinders

SPECIFICATIONS

Aperture	Min: 5×5mm, Max: 20×20mm
Length	~60mm
Flatness	<λ/8 @633nm
Wavefront distortion	<λ/4 @633nm
Parallelism	<20 arc seconds
Perpendicularity	<5 arc seconds
Surface quality	20/10
Operating band	300-3000nm

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PRODUCT PARAMETER

Aperture	2.5mm	5mm	8mm	9mm
Housing size	φ20×66mm	φ25.4×36mm	φ30/32×26/30mm	φ31/32×26mm
λ/4 voltage	400V λ/2 @633nm	800V λ/2 @633nm	1800V-1900V λ/4 @1064nm	2100V λ/4 @1064nm
Overall transmittance	>98%	>98%	>98%	>98%
Insertion loss	3%	3%	3%	3%
Flatness	<λ/8 @633nm	<λ/8 @633nm	<λ/8 @633nm	<λ/8 @633nm
Extinction ratio (5mm)	200:1	200:1	200:1	200:1
Capacitance	5pF	5pF	5pF	5pF
Damage Threshold	100MW/cm^2 @1064nm 10ns 10Hz(LN)			
	300MW/cm^2 @1064nm 10ns 10Hz(MgO:LN)			

MgO:LiNbO3 CRYSTAL Q-SWITCH SPECIFICATIONS

Product Model	Clear Aperture (mm)	Crystal Size(mm)	Shell Size (mm)	Quarter Wave Voltage (@ 1064 nm), kV DC	Capacitor, pF	Transmittance	Wavelength Range	Damage Threshold, 10ns 10Hz 1064nm	Extinction Ratio	Electrode Method
CLMGO-S0920-3026	9mm	9 x 9 x 20 mm3	Dia.30x26 mm	1.9kV	14pF	>99%	1064nm	200 MW/cm^2	300:1	Cylindrical pin
CLMGO-S0620-2533	6mm	6 x 6 x 20mm3	Dia.25x33 mm	1.4kV	14pF	>99%	1064nm	200 MW/cm^2	300:1	Cylindrical pin electrode
CLMGO-S0920-181720-S	9mm	9 x 9 x 20 mm3	18 x 17 x 20 mm	1.9kV	14pF	>99%	1064nm	200 MW/cm^2	300:1	Square case pin electrode

STRUCTURE