

# Lithium Niobate Q-Switch Elements

## Product Description

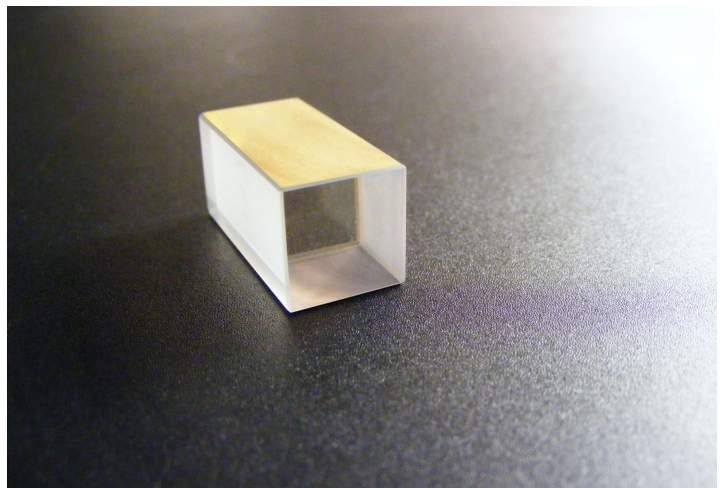
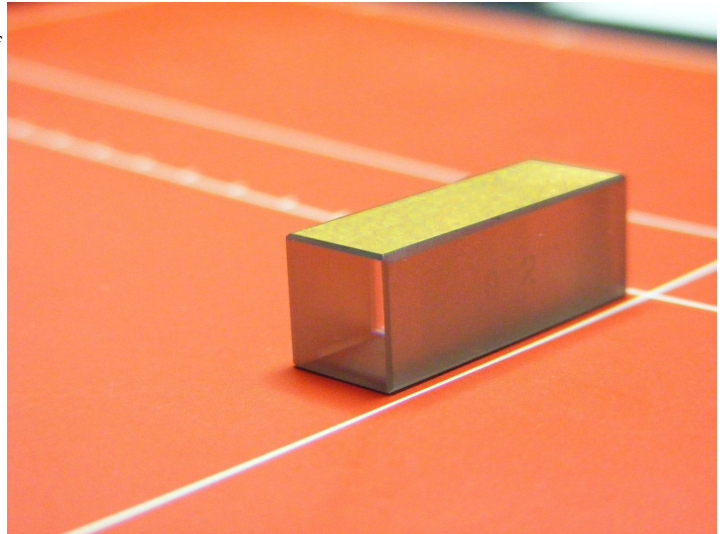
Deltronic Crystal's Lithium Niobate, with its combination of excellent optical transmission and high electro-optic coefficient, is an ideal choice for Pockels Cell Q-Switching. Crystals are grown, oriented and cut to provide z-axis optical propagation. Q-Switch elements are polished, electroded and anti-reflection coated, ready for laser cavity installation. Sizes and shapes can be tailored to meet custom device requirements.

## Applications

- Range Finders
- Target Designation
- YAG Q-Switched Lasers

## Features

- Low Wavefront Distortion
- High Extinction Ratio
- Low Transmission Loss
- Super-Polished Optical Faces
- Precise Crystal Orientation
- Low Reflectance AR Coatings
- High Damage Threshold



| Specifications                       |                                   |
|--------------------------------------|-----------------------------------|
| Length (Z-Axis)                      | ±0.5mm or specify                 |
| Cross-Section: X-Axis / Y-Axis       | ±0.1mm / ±0.1mm                   |
| Chamfer, all edges                   | 0.4mm at 45° or specify           |
| Optical faces, normal to Z-Axis      | Within 10 arc minutes or specify  |
| Lateral faces, normal to X & Y Axis  | Within 10 arc minutes             |
| Typical Laser Damage Threshold       | ≥ 300MW/cm <sup>2</sup> at 1064nm |
| Optical Face                         |                                   |
| Polish                               | 10-5 scratch-dig                  |
| Flatness                             | λ/10 at 633nm                     |
| Parallel                             | within 10 arc seconds             |
| Anti-reflection coatings             | Reflectance ≤ 0.2%                |
| Surface Finish, lateral faces        | Fineground                        |
| Electrodes                           | Au/Cr on X-faces                  |
| Extinction Ratio at 1064nm (passive) | ≥ 26 dB                           |
| Transmitted Wavefront Distortion     | λ/8 or better                     |