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

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
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<tbody>
<tr>
<td>Length (Z-Axis)</td>
<td>±0.5mm or specify</td>
</tr>
<tr>
<td>Cross-Section: X-Axis / Y-Axis</td>
<td>±0.1mm / ±0.1mm</td>
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<tr>
<td>Chamfer, all edges</td>
<td>0.4mm at 45° or specify</td>
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<tr>
<td>Optical faces, normal to Z-Axis</td>
<td>Within 10 arc minutes or specify</td>
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<tr>
<td>Lateral faces, normal to X &amp; Y Axis</td>
<td>Within 10 arc minutes</td>
</tr>
<tr>
<td>Typical Laser Damage Threshold</td>
<td>≥ 300MW/cm2 at 1064nm</td>
</tr>
<tr>
<td>Optical Face</td>
<td>10-5 scratch-dig</td>
</tr>
<tr>
<td>Flatness</td>
<td>λ/10 at 633nm</td>
</tr>
<tr>
<td>Parallel</td>
<td>within 10 arc seconds</td>
</tr>
<tr>
<td>Anti-reflection coatings</td>
<td>Reflectance ≤ 0.2%</td>
</tr>
<tr>
<td>Surface Finish, lateral faces</td>
<td>Fineground</td>
</tr>
<tr>
<td>Electrodes</td>
<td>Au/Cr on X-faces</td>
</tr>
<tr>
<td>Extinction Ratio at 1064nm (passive)</td>
<td>≥ 26 dB</td>
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<tr>
<td>Transmitted Wavefront Distortion</td>
<td>λ/8 or better</td>
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