Interferometric Optics

2020 Optics Catalog

Fine optics for research: US designed... made with US materials

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P. O. Box 16583, Rochester, New York 14616, USA
Multiple-Prism Beam Expanders†

<table>
<thead>
<tr>
<th>( M )</th>
<th>Number of Prisms</th>
<th>Prisms Height</th>
<th>Exit Aperture</th>
<th>Deployment Configuration††</th>
<th>Dispersion†††</th>
</tr>
</thead>
<tbody>
<tr>
<td>81</td>
<td>2</td>
<td>10 mm</td>
<td>20 mm</td>
<td>+ −</td>
<td>((\partial \phi / \partial \lambda) = 0) @ 590 nm††††</td>
</tr>
<tr>
<td>120</td>
<td>3</td>
<td>10 mm</td>
<td>30 mm</td>
<td>+ + −</td>
<td>((\partial \phi / \partial \lambda) = 0) @ 590 nm††††</td>
</tr>
</tbody>
</table>

† Made of fused silica. Detailed angular deployment position of each prism supplied. All beam incidence and beam exit prisms surfaces polished to \( \lambda/10 \) over 90%. Only the hypotenuse and the exit surfaces are polished. All prism angles are specified within 5 arc min.

†† Simple deployment of the last prism to a positive configuration (+) provides a highly dispersive arrangement.

††† Assumes an original unexpanded beam diameter of 200μm. For \( M = 81 \) the expanded beam is 16.2 mm and for \( M = 120 \) the expanded beam is 24 mm.

†††† Quoted dispersion is for deployment in a compensating configuration. Large dispersion values can be obtained by deploying the prisms in an additive configuration.

Note: special designs, for specific \( M \) factors and optical materials, are available up on request.

Bibliography


## Multiple-Prism Pulse Compressors†

<table>
<thead>
<tr>
<th>Number of Prisms</th>
<th>Prism Material</th>
<th>Design $\lambda$ (nm)</th>
<th>Prism Class</th>
<th>Dimensions$^{\dagger\dagger}$ (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Fused silica</td>
<td>620</td>
<td>Near Isosceles</td>
<td>30 mm</td>
</tr>
<tr>
<td>2</td>
<td>Fused silica</td>
<td>800</td>
<td>Near Isosceles</td>
<td>30 mm</td>
</tr>
<tr>
<td>2</td>
<td>NSF 10</td>
<td>620</td>
<td>Near Isosceles</td>
<td>30 mm</td>
</tr>
<tr>
<td>2</td>
<td>NSF 10</td>
<td>800</td>
<td>Near Isosceles</td>
<td>30 mm</td>
</tr>
</tbody>
</table>

† Designed for incidence at the Brewster angle. Detailed angular deployment position of each prism supplied. All beam incidence and beam exit prisms surfaces polished to $\lambda/10$ over 90%. Only the incidence and exit surfaces are polished. All prism angles are specified within 5 arc min.

$^{\dagger\dagger}$ Refers to the incidence and exit surfaces. Prism height (or thickness) is 10 mm.

Special designs, for specific wavelengths or optical materials, are available up on request.

**Special designs for Amici Prism arrays, for applications in astronomical instrumentation, are also available up on request.**

**Bibliography**


