



Interferometric Optics

2022 Optics Catalog



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

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Multiple-Prism Beam Expanders[†]

M	Number of Prisms	Prisms Height	Exit Aperture	Deployment Configuration ^{††}	Dispersion ^{†††}
81	2	10 mm	20mm	+ -	$(\partial\phi/\partial\lambda) = 0$ @ 590 nm ^{††††}
120	3	10 mm	30 mm	+ + -	$(\partial\phi/\partial\lambda) = 0$ @ 590 nm ^{††††}

[†] 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 200 μ m. 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

- F. J. Duarte and J. A. Piper, Dispersion theory of multiple-prism beam expander for pulsed dye lasers, *Optics Communications* **43**, 303-307 (1982).
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Multiple-Prism Pulse Compressors[†]

Number of Prisms	Prism Material	Design λ (nm)	Prism Class	Dimensions ^{††} (mm)
2	Fused silica	620	Near Isosceles	30 mm
2	Fused silica	800	Near Isosceles	30 mm
2	NSF 10	620	Near Isosceles	30 mm
2	NSF 10	800	Near Isosceles	30 mm

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

^{††} 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 on request.

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