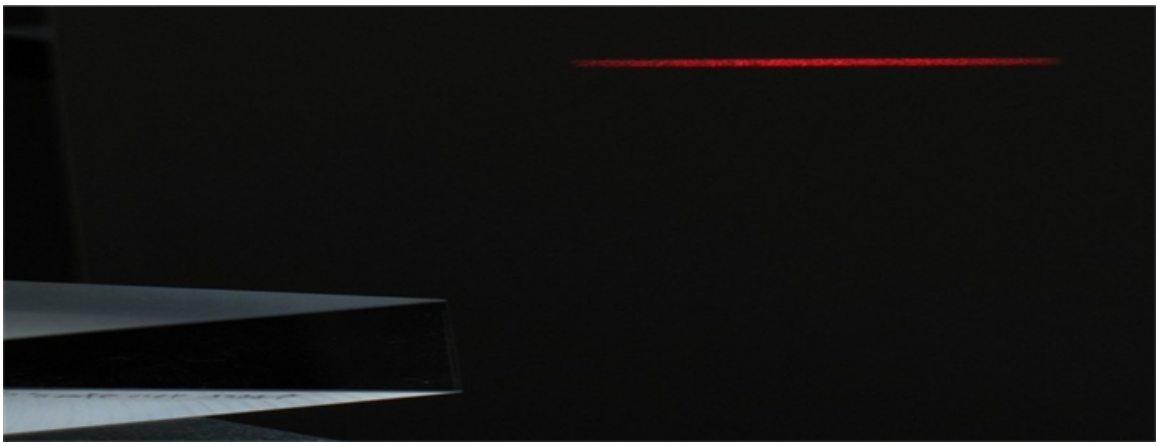
Interferometric Optics

2017 Optics Catalog



Fine optics for research: US made with US made materials

Contents

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Multiple-Prism Beam Expanders†

M	Number of Prisms	Prisms Height	Exit Aperture	Deployment Configuration††	Dispersion†††	Price of Set (US Dollars)
81	2	10 mm	20mm	+ −	$(\partial\phi/\partial\lambda) = 0$ @ 590 nm††††	1 900.00
120	3	10 mm	30 mm	+ + −	$(\partial\phi/\partial\lambda) = 0$ @ 590 nm††††	2 900.00

† 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

1. F. J. Duarte and J. A. Piper, Dispersion theory of multiple-prism beam expander for pulsed dye lasers, *Opt. Commun.* **43**, 303-307 (1982).
2. F. J. Duarte and J. A. Piper, Narrow linewidth high prf copper laser-pumped dye-laser oscillators, *Appl. Opt.* **23**, 1391-1394 (1984).
3. F. J. Duarte, Multiple-prism Littrow and grazing incidence pulsed CO_2 lasers, *Appl. Opt.* **24**, 1244-1245 (1985).
4. F. J. Duarte, Tunable laser optics: applications to optics and quantum optics, *Progress in Quantum Electronics* **37**, 326-347 (2013).

Multiple-Prism Pulse Compressors†

Number of Prisms	Prism Material	Design λ (nm)	Prism Class	Dimensions†† (mm)	Price of Set (US Dollars)
2	Fused silica	620	Near Isosceles	30 mm	1 990.00
2	Fused silica	800	Near Isosceles	30 mm	1 990.00
2	NSF 10	620	Near Isosceles	30 mm	2 050.00
2	NSF 10	800	Near Isosceles	30 mm	2 050.00

† 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.

†† Refers to the incidence and exit surfaces. Prism height (or thickness) is 10 mm.

Note: special designs, for specific wavelengths or optical materials, are available up on request.

Bibliography

1. F. J. Duarte and J. A. Piper, Dispersion theory of multiple-prism beam expander for pulsed dye lasers, *Opt. Commun.* **43**, 303-307 (1982).
2. F. J. Duarte, Generalized multiple-prism dispersion theory for pulse compression in ultrafast dye lasers, *Opt. Quantum Electron.* **19**, 223-229 (1987).
3. K. Osvay *et al.*, Measurement of non-compensated angular dispersion and the subsequent temporal lengthening of femtosecond pulses in a CPA laser, *Opt. Commun.* **248**, 201-209 (2005).
4. F. J. Duarte, Generalized multiple-prism dispersion theory for laser pulse compression: higher order phase derivatives, *Appl. Phys. B* **96**, 809-814 (2009).

Intracavity Solid Etalons†

Diameter (mm) ††	Thickness (mm)	FSR (GHz)	Surface Flatness†††	Price (US Dollars)
12.7	5	~ 30.00	λ/20	1 350.00
12.7	10	~ 15.00	λ/20	1 350.00
12.7	15	~ 9.99	λ/20	1 350.00
12.7	20	~ 7.49	λ/20	1 350.00
12.7	25	~ 6.00	λ/20	1 350.00
25.4	5	~ 30.00	λ/20	1 550.00
25.4	10	~ 15.00	λ/20	1 550.00
25.4	15	~ 9.99	λ/20	1 550.00
25.4	20	~ 7.49	λ/20	1 550.00
25.4	25	~ 6.00	λ/20	1 550.00

† Material: fused silica.
†† Clear aperture: 80-90% central.
††† Measured at λ = 632.8 nm. Surface quality is better than 10/20-10/5. Surface parallelism: 0.2 arc min.

Note: Specific FSRs are available up on special request.

General Notes:

1. Prices do not include tax or FedEx delivery.
2. Export: customers are responsible of local custom expenses.
3. Delivery times vary between 6-8 weeks.
4. All orders are prepaid.