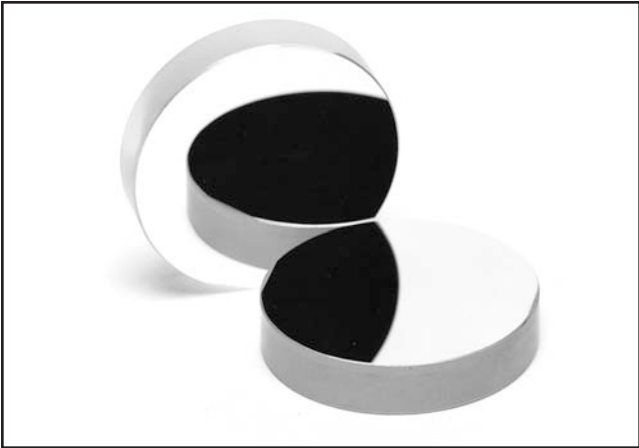


Broadband Dielectric Mirrors
Tunable Broadband Mirrors



Tunable Broadband Mirrors

The TLM2 mirrors are specially designed to achieve high reflectivity and low dispersion for cw oscillators and low-fluence pulses. These mirrors can be coated for any angle of incidence from 0° to 60° and any center wavelength between 450 nm and 2100 nm for OEM applications. For 45° tuning mirror applications involving very short pulses or very broad bandwidths, CVI Laser Optics recommends using s polarization if possible. This minimizes pulse distortion and maximizes average reflectivity. Check that the bandwidth is realistic by using the Typical Bandwidth for TLM2 mirror tables, then specify the exact center wavelength and all other parameters in the ordering blocks.

- High energy dielectric coating
- Other wavelengths and substrates readily available
- Contact CVI Laser Optics for OEM capabilities

SPECIFICATIONS: Tunable Broadband Mirrors

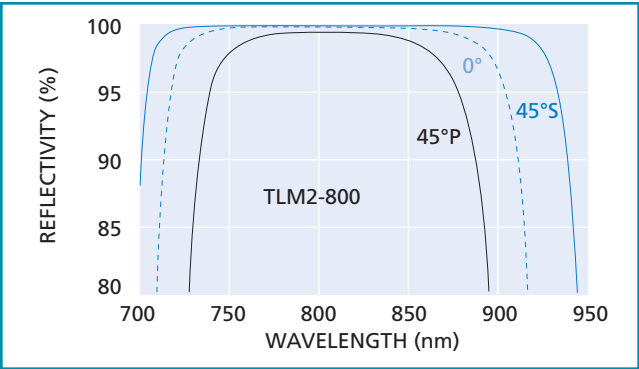
Substrate Material	N-BK7
S1 Surface Figure	$\lambda/10$ @ 633 nm before coating
S1 Surface Quality	10-5 scratch and dig
S2 Surface Quality	Commercial polish
Diameter Tolerance	+ 0/ - 0.25 mm
Thickness Tolerance	± 0.25 mm
Wedge	≤ 5 arc min
Chamfer	0.35 mm at 45° typical
Concentricity	≤ 0.05 mm
Radius Tolerance	$\pm 0.5\%$
Coating Technology	Electron beam multilayer dielectric
Adhesion and Durability	Per MIL-C-675C. Insoluble in lab solvents.
Clear Aperture	$\geq 85\%$ of central diameter
Reflectivity	Please refer to the typical bandwidth tables
Damage Threshold	
Pulsed	100 mJ/cm ² , 8 nsec @ 1064 nm
Coated Surface Figure	$\lambda/10$ @ 633 nm on select substrates
Bandwidth Tolerance	+ 0/ - 10% typical
Center Wavelength Tolerance	$\pm 3\%$

From our Shelves to Your Lab –
Standard Products for Fast Delivery

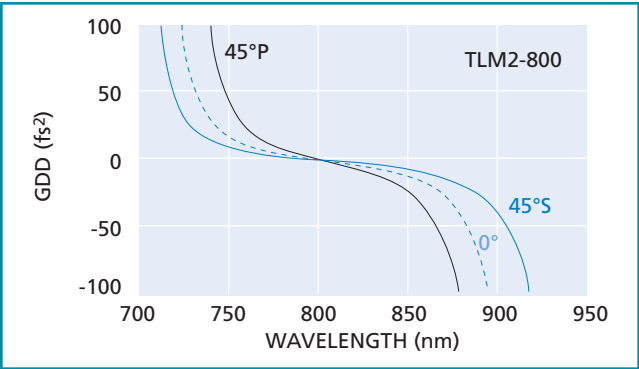
Standard TLM2 Laser Line Mirrors

Wavelength (nm)	Incidence Angle	ϕ (mm)	t (mm)	PART NUMBER
780.0	0	25.4	6.35	TLM2-780-45-1025
800.0	0	12.7	6.35	TLM2-800-0-0525
800.0	45	12.7	6.35	TLM2-800-45-0525
800.0	0	25.4	6.35	TLM2-800-0-1025
800.0	45	25.4	6.35	TLM2-800-45-1025
800.0	45	25.4	9.53	TLM2-800-45-1537
800.0	0	50.8	9.53	TLM2-800-0-2037
800.0	45	50.8	9.53	TLM2-800-45-2037
1030.0	45	12.7	6.35	TLM2-1030-45-0525
1030.0	45	25.4	6.35	TLM2-1030-45-1025

(continued)



Reflectivity vs wavelength of TLM2-800 broadband laser mirror showing 0° and 45° angle of incidence designs



Group velocity dispersion vs wavelength of TLM2-800 broadband laser mirror showing 0° and 45° angle of incidence designs

Typical Bandwidth for TLM2 mirrors

Center Wavelength (nm)	Bandwidth (nm)		
	R > 99% 0°	R > 99% 45° S	R > 99% 45° P
450	90	113	45
500	100	125	50
550	110	138	55
600	120	150	60
650	130	163	65
700	140	175	70
750	150	188	75
800	156	197	76

* R > 97%

Typical Bandwidth for TLM2 mirrors

Center Wavelength (nm)	Bandwidth (nm)		
	R > 99% 0°	R > 99% 45° S	R > 99% 45° P
850	161	204	76
900	167	212	77
950	171	219	77
1000	180	230	80
1100	193	248	83
1200	210	264	90
1300	221	280	91
1400	238	294	98
1500	255	315	105