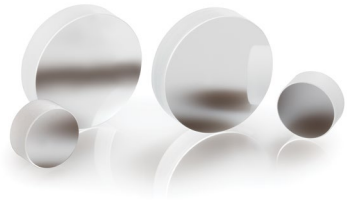
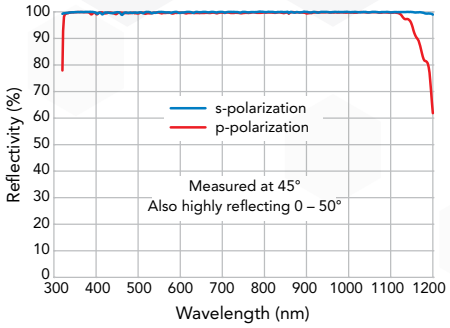
MaxMirror® Ultra-broadband Mirrors



Semrock's patented MaxMirror is a unique high-performance laser mirror that is optimized for life sciences applications. This mirror covers an ultra-broad range of wavelengths (350 – 1100nm) – it can replace three or more conventional laser mirrors. U.S. Patent No. 6,894,838

- Very highly reflecting (>99%) over:
  - Near-UV, all Visible, and Near-IR wavelengths
  - All states of polarization
  - All angles from 0 to 50° inclusive – simultaneously
- Low scattering
- 6 mm substrate thickness, compatible with popular mounts

MAXMIRROR PERFORMANCE
ACTUAL MEASURED DATA



English Units		Metric Units			
Diameter	Part Number	Diameter	Part Number	Absolute Surface Flatness	Price
12.7 mm (0.5")	MM3-311S-12.7	12.5 mm	MM3-311S-12.5	< λ/5	
25.4 mm (1.0")	MM3-311S-25.4	25 mm	MM3-311S-25	< λ/5	

Common Specifications

Property	Value	Comment
Wavelength Range	350 –1100 nm	All specifications apply
Angle of Incidence Range	0° – 50°	
Average Reflectivity	> 99.0%	
Laser Damage Threshold	1 J/cm² @ 355 nm 2 J/cm² @ 532 nm 6 J/cm² @ 1064 nm 1 J/cm² @ 532 nm (S-Grade only spec)	10 ns pulse width
Substrate Material	Fused Silica	
Coating Type	"Hard" ion-beam-sputtered	
Clear Aperture	> 90% of Outer Diameter	
Outer Diameter Tolerance	+ 0.0 / - 0.1 mm (12.5 mm; 12.7 mm) + 0.0 / - 0.25 mm (25.0 mm; 25.4 mm; 50.0 mm; 50.8 mm)	
Thickness and Tolerance	6.0 ± 0.2 mm	
Mirror Side Surface Flatness	< λ/10 (25.0 mm; 25.4 mm) < λ/5 (12.5 mm; 12.7 mm; 25.0 mm; 25.4 mm) (S-Grade) < 3λ/4 (50.0 mm; 50.8 mm) (S-Grade)	Measured at λ = 633 nm within clear aperture
Mirror Side Surface Quality	20-10 scratch-dig (12.5 mm; 12.7 mm; 25.0 mm; 25.4 mm) 40-20 scratch-dig (12.5 mm; 12.7 mm; 25.0 mm; 25.4 mm) (S-Grade) 60-40 scratch-dig (50.0 mm; 50.8 mm) (S-Grade)	Measured within clear aperture
Mirror Side Bevel	0.3 mm maximum	
Pulse Dispersion	The MaxMirror will not introduce appreciable pulse broadening for most laser pulses that are > 1 picosecond; however, pulse distortion is likely for significantly shorter laser pulses, including femtosecond pulses.	
Reliability and Durability	Ion-beam-sputtered, hard-coating technology with unrivaled filter life. MaxMirror ultra-broadband mirrors are rigorously tested and proven to MIL-STD-810F and MIL-C-48497A environmental standards.	