

Broadband Dielectric Mirrors

- Designs for tunable and white-light applications
- Polished to $\lambda/10$ minimizing subsurface structure
- ≤ 3 arcmin parallelism
- 30-100 dielectric layer designs for high reflectance
- Designed for 45 degree angle of incidence
- Standard diameters from 12.7 to 50.8mm



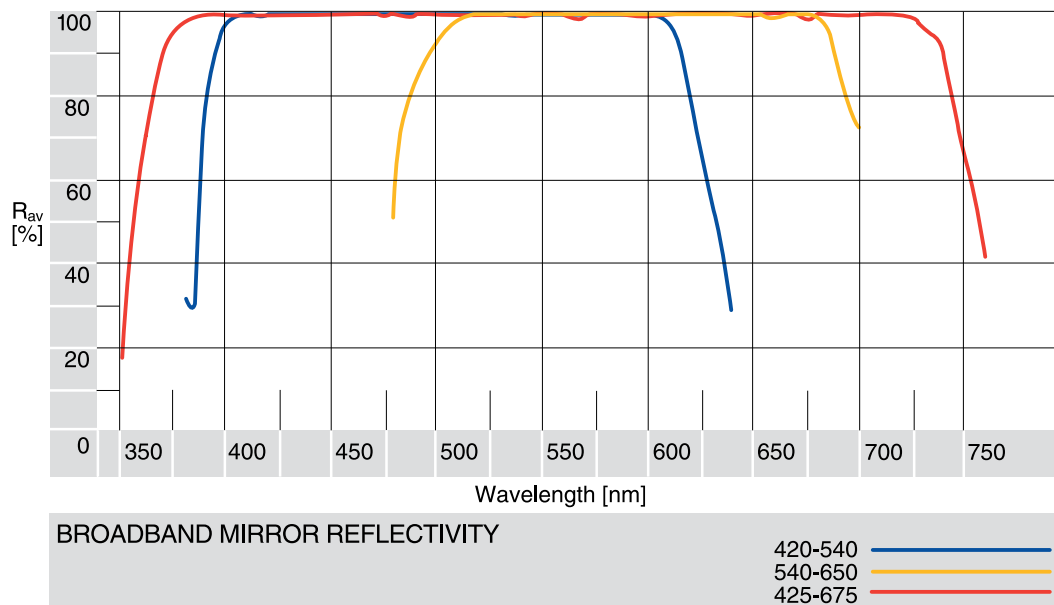
These mirrors have the same exceptional specifications as our laser mirrors except that they use special multilayer coatings to achieve a very high degree of reflectance for both s- and p-polarizations over a broad wavelength range. For white light or tunable laser use these mirrors provide the ultimate in high reflectance and insignificant polarization effect.

The reflectance of these coatings is consistently greater than 99.5% average. However, this figure includes very small dips in the p-reflectance which can never be completely eliminated. The s-polarization component has a reflectance greater than 99.9% over the entire range. (See curves below and on opposite page)

Specifications & Tolerances

Surface flatness: $\lambda/10$
 Surface quality: 20-10
 Thickness: ± 0.1 mm
 Bevel: 0.2mmx45° typical
 Durability: to MIL-C-675

Reflectance: $R > 99.0\%$ (45° incidence)
 Diameter: +0, -0.1mm
 Parallelism: ≤ 3 arcmin
 Clear aperture: $> 90\%$ diameter
 Material: BK7, grade A

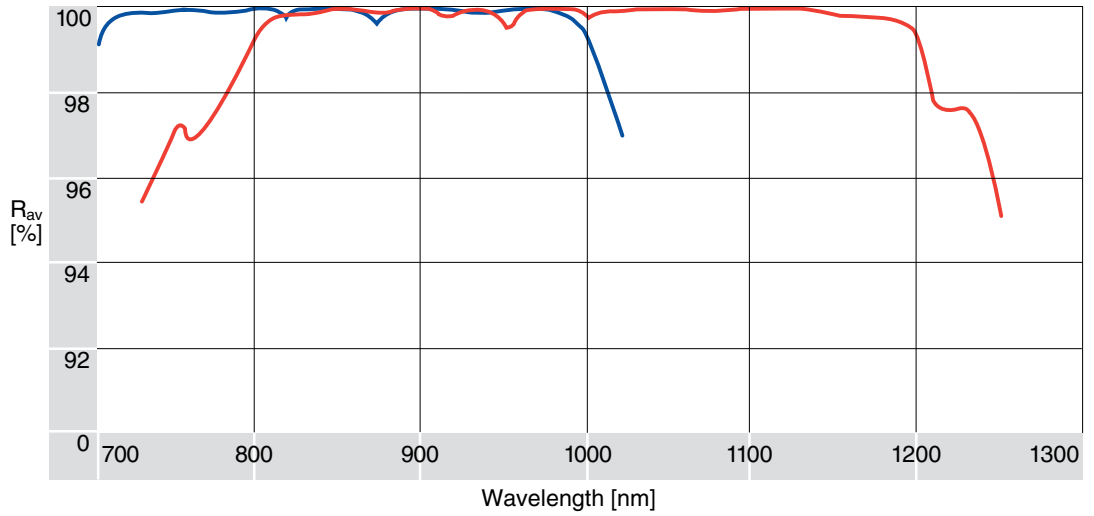


Because the coatings on these Broadband Mirrors cover a very wide portion of the visible spectrum, they are ideal for imaging and data transfer applications where the spectral information is important. The coatings covering the entire visible spectrum have a slightly lower reflectivity than the other two coatings (which, on the other hand, are better matched, spectrally, to many detectors and electronic vision systems).

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OPTICAL COMPONENTS

- Spherical Lenses
- Cylindrical Lenses
- Lens Kits
- Achromatic Doublets
- Multi-Element
- Micro Optics
- Mirrors**
- Prisms
- Substrates & Windows
- Beamsplitters
- Polarizers
- Filter & Apertures



BROADBAND MIRROR REFLECTIVITY

700-1000 nm ————
800-1200 nm ————

Broadband Mirrors

Wavelength Range (nm)	Diameter, D (mm)	Thickness, t (mm)	Rear Surface	Reflectance (%)	Price	PART NUMBER
420-540	12.7	5.0	Polished	≥99.0		034-2270
420-540	19.1	5.0	Polished	≥99.0		034-2275
420-540	25.4	5.0	Polished	≥99.0		034-2280
420-540	30.0	5.0	Polished	≥99.0		034-2290
420-540	50.0	8.0	Polished	≥99.0		034-2330
420-540	50.8	8.0	Polished	≥99.0		034-2340
420-480	12.7	5.0	Polished	≥99.5		034-0440
420-480	19.1	5.0	Polished	≥99.5		034-0445
420-480	25.4	5.0	Polished	≥99.5		034-0450
420-480	30.0	5.0	Polished	≥99.5		034-0460
420-480	50.0	8.0	Polished	≥99.5		034-0470
420-480	50.8	8.0	Polished	≥99.5		034-0480
425-675	12.7	5.0	Polished	≥99.0		034-2220
425-675	19.1	5.0	Polished	≥99.0		034-2225
425-675	25.4	5.0	Polished	≥99.0		034-2230
425-675	30.0	5.0	Polished	≥99.0		034-2240
425-675	50.8	8.0	Polished	≥99.0		034-2260
480-540	12.7	5.0	Polished	≥99.5		034-0490
480-540	15.0	5.0	Ground	≥99.5		034-0493
480-540	19.1	5.0	Polished	≥99.5		034-0495
480-540	20.0	5.0	Gound	≥99.5		034-0520
480-540	25.0	5.0	Polished	≥99.5		034-0530
480-540	25.4	5.0	Polished	≥99.5		034-0550
480-540	30.0	5.0	Polished	≥99.5		034-0560
480-540	50.0	8.0	Polished	≥99.5		034-0570
480-540	50.8	8.0	Polished	≥99.5		034-0580
540-660	12.7	5.0	Polished	≥99.0		034-2350
540-660	19.1	5.0	Polished	≥99.0		034-2355
540-660	25.4	5.0	Polished	≥99.0		034-2360
540-660	30.0	5.0	Polished	≥99.0		034-2370
540-660	50.0	8.0	Polished	≥99.0		034-2380
540-660	50.8	8.0	Polished	≥99.0		034-2390

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Broadband Mirrors (continued)

Wavelength Range (nm)	Diameter, D (mm)	Thickness, t (mm)	Rear Surface	Reflectance (%)	Price	PART NUMBER
570-640	12.7	5.0	Polished	≥99.5		034-0770
570-640	15.0	5.0	Ground	≥99.5		034-0773
570-640	19.1	5.0	Polished	≥99.5		034-0775
570-640	20.0	5.0	Ground	≥99.5		034-0777
570-640	25.0	5.0	Polished	≥99.5		034-0779
570-640	25.4	5.0	Polished	≥99.5		034-0780
570-640	30.0	5.0	Polished	≥99.5		034-0790
570-640	50.0	8.0	Polished	≥99.5		034-0880
570-640	50.8	8.0	Polished	≥99.5		034-0890
630-700	12.7	5.0	Polished	≥99.5		034-0990
630-700	19.1	5.0	Polished	≥99.5		034-0995
630-700	25.4	5.0	Polished	≥99.5		034-1110
630-700	30.0	5.0	Polished	≥99.5		034-1120
630-700	50.8	8.0	Polished	≥99.5		034-1140
770-840	12.7	5.0	Polished	≥99.5		034-1150
770-840	15.0	5.0	Ground	≥99.5		034-1153
770-840	19.1	5.0	Polished	≥99.5		034-1155
770-840	20.0	5.0	Ground	≥99.5		034-1157
770-840	25.0	5.0	Polished	≥99.5		034-1159
770-840	25.4	5.0	Polished	≥99.5		034-1160
770-840	30.0	5.0	Polished	≥99.5		034-1170
770-840	50.0	8.0	Polished	≥99.5		034-1180
770-840	50.8	8.0	Polished	≥99.5		034-1190
700-1000	12.7	5.0	Polished	≥99.0		034-1200
700-1000	19.1	5.0	Polished	≥99.0		034-1205
700-1000	25.4	5.0	Polished	≥99.0		034-1210
700-1000	50.8	8.0	Polished	≥99.0		034-1215
800-1200	12.7	5.0	Polished	≥99.0		034-2460
800-1200	19.1	5.0	Polished	≥99.0		034-2465
800-1200	25.4	5.0	Polished	≥99.0		034-2470
800-1200	50.8	8.0	Polished	≥99.0		034-2480

Spherical Lenses

Cylindrical Lenses

Lens Kits

Achromatic Doublets

Multi-Element

Micro Optics

Mirrors

Prisms

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Beamsplitters

Polarizers

Filter & Apertures



High performance optical coatings require pristine substrates. We ensure that all contaminants are removed from our substrates in a clean room environment before the coating process begins.

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Ultra Broadband Mirrors

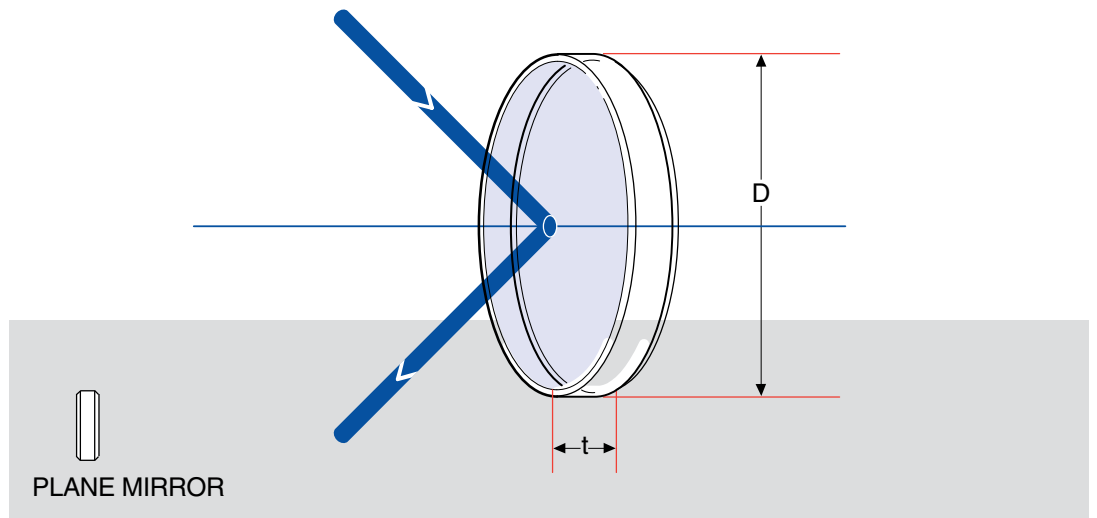
- All Dielectric multilayer coated
- Visible, near infrared and other multiple wavelengths are covered with a single mirror



Specifications & Tolerances

Surface flatness: $\lambda/10$
 Surface quality: 40-20
 Thickness: $\pm 0.1\text{mm}$
 Bevel: $0.2\text{mm} \times 45^\circ$ typical

Diameter: $+0, -0.1\text{mm}$
 Parallelism: $\leq 3\text{arcmin}$
 Clear aperture: 90%
 Material: BK7 or equivalent



Ultra Broadband Mirrors

Wavelength Range (nm)	Diameter, D (mm)	Thickness, t (mm)	Rear Surface	Reflectance (%)	Price	PART NUMBER
245-400	25.4	5.0	Polished	Ave ≥ 97.0		034-2712
245-400	30.0	5.0	Polished	Ave ≥ 97.0		034-2713
245-700	25.4	5.0	Polished	Ave ≥ 97.0		034-2722
245-700	30.0	5.0	Polished	Ave ≥ 97.0		034-2723
400-1100	25.4	5.0	Polished	Ave ≥ 98.0		034-2732
400-1100	30.0	5.0	Polished	Ave ≥ 98.0		034-2733
400-1100	50.0	8.0	Polished	Ave ≥ 98.0		034-2725
400-2000	25.4	5.0	Polished	Ave ≥ 98.0		034-2742
400-2000	30.0	5.0	Polished	Ave ≥ 98.0		034-2743
400-2000	50.0	8.0	Polished	Ave ≥ 98.0		034-2745
300-2000	25.4	5.0	Polished	Ave ≥ 97.0		034-2752
300-2000	30.0	5.0	Polished	Ave ≥ 97.0		034-2753
300-2000	50.0	8.0	Polished	Ave ≥ 97.0		034-2755

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