

Mirrors & Beamsplitters

Mirrors

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Optics

Lenses & Microscope Components

Coatings

Mirrors, Beamsplitters

Prisms & Polarizers

Filters

Pinholes

Opto-mechanics

Breadboards & Rails

Mounting Hardware

Mirror & Component Mounts

Manual Micro-positioners

Motorized Positioners

Optical Instruments

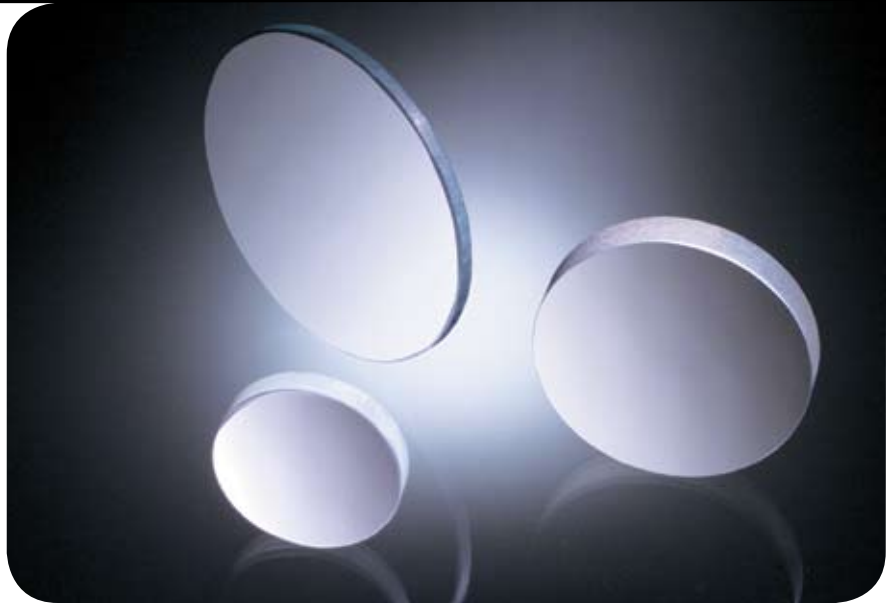
Light Sources

Light Measurement

Diode Laser Modules

Aluminized Circular Flat Mirrors

- Protected aluminum coating
- Four levels of quality



Ealing offers a range of protected aluminum flat mirrors in four different qualities. Select from interferometer to utility quality based upon the application at hand. The 25.4 and

50.8 mm mirrors can be held with our mirror mounts. The 76.2 and 101.6 mm mirrors would best be mounted with kinematic mirror mounts.

Specifications

INTERFEROMETER QUALITY

Material: Fused Silica
Diameter Tolerance: ± 0.5 mm
Thickness Tolerance: ± 0.5 mm
Surface Accuracy: $\lambda/20$ at 633 nm
Surface Quality: 40-20
Coating: Protected Aluminum

RESEARCH QUALITY

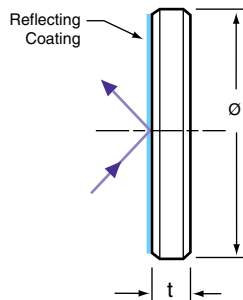
Material: As indicated in table
Diameter Tolerance: ± 1.0 mm
Thickness Tolerance: ± 0.5 -1.5 mm
Surface Accuracy: $\lambda/10$ at 633 nm
Surface Quality: 60-40
Coating: Protected Aluminum

LABORATORY QUALITY

Material: Pyrex
Diameter Tolerance: ± 1.0 mm
Thickness Tolerance: ± 1.0 mm
Surface Accuracy: $\lambda/4$ at 633 nm
Surface Quality: 60-40
Coating: Protected Aluminum

UTILITY QUALITY

Material: Crown Glass
Diameter Tolerance: ± 1.0 mm
Thickness Tolerance: ± 0.5 -1.5 mm
Surface Accuracy: 1-3 λ at 633 nm
Surface Quality: 80-50
Coating: Protected Aluminum



Aluminized Circular Flat Mirrors Research Quality - Fused Silica

Catalog Number	Diameter, Ø (mm)	Thickness, t (mm)	US Price
36-1600	25.4	12.7	\$89.00
36-1618	50.8	15.9	\$172.00
36-1626	76.2	15.9	\$263.00
36-1667	101.6	19.1	\$428.00

Aluminized Circular Flat Mirrors - Laboratory Quality

Catalog Number	Diameter, Ø (mm)	Thickness, t (mm)	US Price
23-6604	25.4	6.2	\$50.00
23-6166	50.8	9.5	\$102.00
23-6174	76.2	12.7	\$186.00
23-6182	101.6	15.8	\$290.00

Aluminized Circular Flat Mirrors - Interferometer Quality

Catalog Number	Diameter, Ø (mm)	Thickness, t (mm)	US Price
23-6570	25.4	12.7	\$93.00
23-6265	50.8	15.9	\$185.00
23-6273	76.2	15.9	\$320.00
23-6281	101.6	19.1	\$535.00

Aluminized Circular Flat Mirrors Research Quality - Pyrex

Catalog Number	Diameter, Ø (mm)	Thickness, t (mm)	US Price
23-6612	25.4	6.2	\$63.00
23-6216	50.8	9.5	\$135.00
23-6224	76.2	12.7	\$229.00
23-6232	101.6	15.8	\$375.00

Aluminized Circular Flat Mirrors Utility Quality

Catalog Number	Diameter, Ø (mm)	Thickness, t (mm)	US Price
23-5218	25.4	5.7-6.35	\$35.00
23-5234	38.1	5.7-6.35	\$66.00
23-5259	50.8	5.7-6.35	\$57.00
23-5275	76.2	5.7-6.35	\$83.00
23-5291	101.6	5.7-6.35	\$117.00

Optics

Lenses & Microscope Components

Coatings

Mirrors, Beamsplitters

Prisms & Polarizers

Filters

Pinholes

Opto-mechanics

Breadboards & Rails

Mounting Hardware

Mirror & Component Mounts

Manual Micro-positioners

Motorized Positioners

Optical Instruments

Light Sources

Light Measurement

Diode Laser Modules

Aluminized Square, Rectangular & Elliptical Mirrors

Optics

Lenses & Microscope Components

Coatings

Mirrors, Beamsplitters

Prisms & Polarizers

Filters

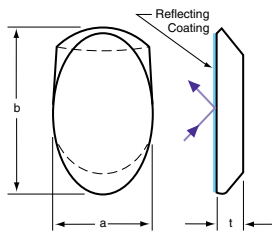
Pinholes

- Protected aluminum coating
- Elliptical mirrors for circular cross-sections

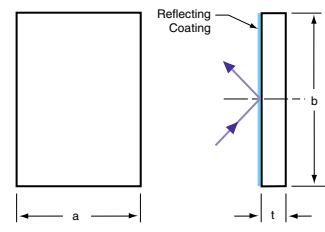
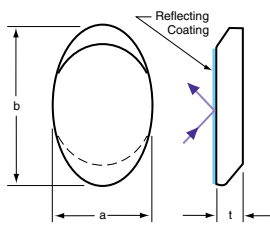
These mirrors are useful in many situations where round mirrors are inappropriate. Elliptical mirrors have a circular cross section when used at 45 degrees.



Type 1



Type 2



Opto-mechanics

Breadboards & Rails

Mounting Hardware

Mirror & Component Mounts

Manual Micro-positioners

Motorized Positioners

Specifications

Elliptical Flat Mirrors

RESEARCH QUALITY

Material: Pyrex

Dimensions Tolerance: $\pm 1\%$

Thickness Tolerance: $\pm 7\%$

Surface Accuracy: $\lambda/8$ at 633 nm

Surface Quality: 60-40

Coating: Protected Aluminum

Square & Rectangular Flat Mirrors

LABORATORY QUALITY

Material: Pyrex

Dimensions Tolerance: ± 0.5 mm

Thickness Tolerance: $+0.5-1.5$ mm

Surface Accuracy: $\lambda/4$ at 633 nm

Surface Quality: 60-40

Coating: Protected Aluminum

UTILITY QUALITY

Material: Crown Glass

Dimensions Tolerance: ± 0.5 mm

Thickness Tolerance: $+0.5-1.5$ mm

Surface Accuracy: $1-3 \lambda/25$ mm at 633 nm

Surface Quality: 80-50

Coating: Protected Aluminum

Aluminized Elliptical Flat Mirrors Research Quality

Catalog Number	Width a (mm)	Height b (mm)	Thickness t (mm)	US Price
23-3262 ²	12.7	18.0	3.8	\$57.00
23-3296 ²	22.2	31.4	6.4	\$58.00
23-3304 ²	27.0	38.2	6.4	\$58.00
23-3312 ¹	31.8	44.9	9.5	\$58.00
23-3320 ¹	38.1	53.9	9.5	\$86.00
23-3338 ¹	47.6	67.3	11.7	\$144.00
23-3346 ²	57.2	80.8	15.9	\$200.00
23-3353 ²	66.7	94.3	15.9	\$245.00
23-3361 ²	76.2	107.7	19.1	\$319.00

Aluminized Rectangular and Square Flat Mirrors - Laboratory Quality

Catalog Number	Width a (mm)	Height b (mm)	Thickness t (mm)	US Price
23-4161	25.4	25.4	6.35	\$39.00
23-4476	25.4	38.1	6.35	\$47.00
23-4179	25.4	50.8	9.60	\$55.00
23-4195	25.4	101.6	9.60	\$121.00
23-4203	50.8	50.8	9.60	\$95.00
23-4211	50.8	76.2	9.60	\$129.00
23-4229	50.8	101.6	9.60	\$187.00
23-4237	76.2	76.2	9.60	\$183.00
23-4245	76.2	101.6	9.60	\$242.00
23-4252	101.6	101.6	12.70	\$252.00

Aluminized Rectangular and Square Flat Mirrors - Utility Quality

Catalog Number	Width a (mm)	Height b (mm)	Thickness t (mm)	US Price
23-5358	25.4	25.4	6.35	\$16.00
23-5374	25.4	38.1	6.35	\$17.00
23-5390	25.4	50.8	6.35	\$18.00
23-5416	25.4	76.2	6.35	\$19.00
23-5432	25.4	101.6	6.35	\$20.00
23-5457	50.8	50.8	6.35	\$20.00
23-5473	50.8	76.2	6.35	\$21.00
23-5499	50.8	101.6	6.35	\$25.00
23-5614	76.2	76.2	6.35	\$27.00
23-5630	76.2	101.6	6.35	\$34.00
23-5655	101.6	101.6	6.35	\$38.00

^{1,2} The numbers next to the catalog numbers refer to the type of mirror, as shown in the diagrams above.

Optical Instruments

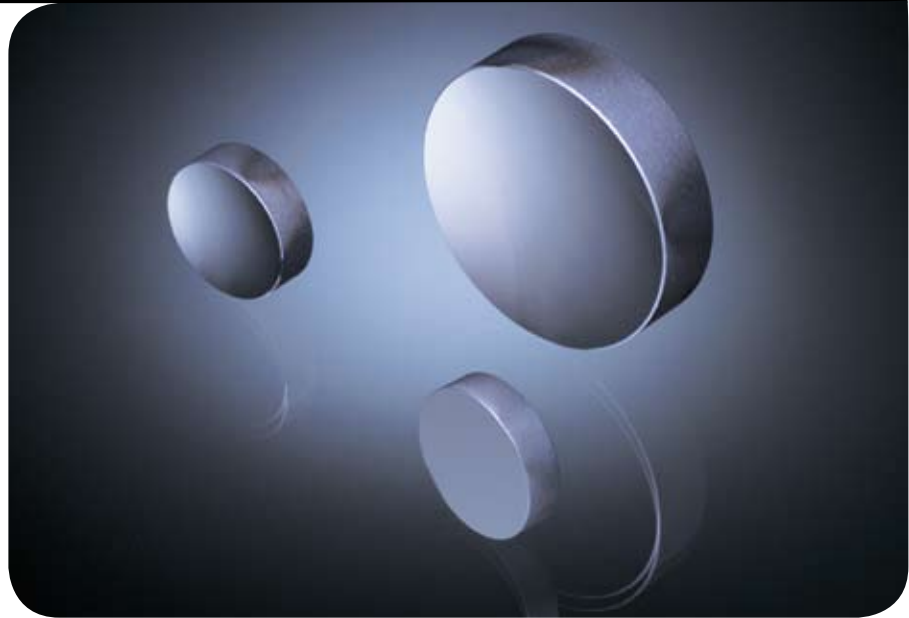
Light Sources

Light Measurement

Diode Laser Modules

Aluminized Concave Mirrors

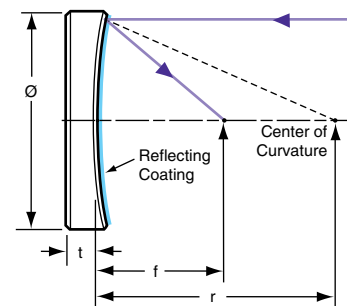
- **Focusing mirrors in research and laboratory qualities**
- **Protected aluminum coating**



- Optics
- Lenses & Microscope Components
- Coatings
- Mirrors, Beamsplitters
- Prisms & Polarizers
- Filters
- Pinholes

Concave mirrors are used as focusing elements in an optical system. The focal length f of a concave mirror is equal to half of the radius of curvature, $r/2$. These concave mirrors are offered in two qualities to suit different applications. They can be incorporated into optical systems in place of a lens where a folded

path is necessary, or where broadband or achromatic operation is required. The mirror surface is coated with protected aluminum. These mirrors can be held with our mirror mounts.



- Opto-mechanics
- Breadboards & Rails
- Mounting Hardware
- Mirror & Component Mounts
- Manual Micro-positioners
- Motorized Positioners

Specifications

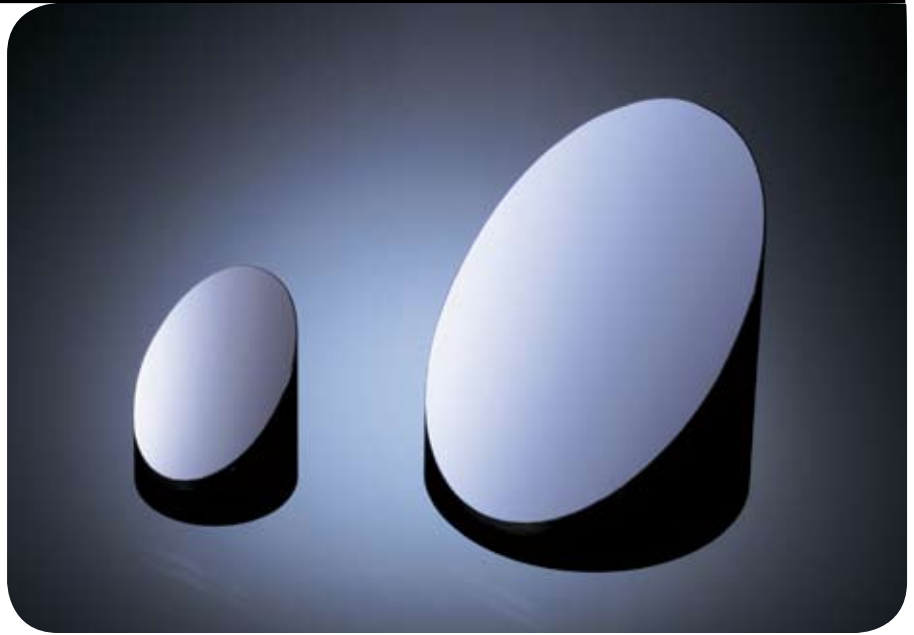
Grade:	Research	Laboratory
Material:	Zerodur	Pyrex
Diameter Tolerance:	+0 -0.25 mm	+0/-0.3 mm
Thickness Tolerance:	±0.25 mm	+0/-10% mm
Surface Accuracy:	$\lambda/4$ at 633 nm	$\lambda/4$ at 633 nm
Surface Quality:	40-20	60-40
Coating:	Protected aluminum	

Aluminized Concave Mirrors

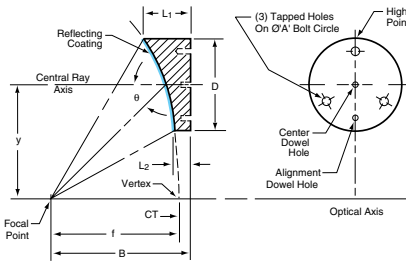
Diameter, Ø (mm) f (mm)	Focal Length, f (mm)	Thickness, t (mm)	Radius, r (mm)	Research Grade		Laboratory Grade	
				Catalog Number	Price US	Catalog Number	Price US
25.4	25.4	6.4	50	34-9712	\$151.00	35-7244	\$106.00
25.4	50.8	6.4	100	34-9720	\$151.00	35-7251	\$106.00
25.4	76.2	6.4	150	34-9738	\$132.00	35-7269	\$81.00
25.4	101.6	6.4	200	34-9746	\$132.00	35-7277	\$81.00
50.8	508.0	9.6	1000	34-9852	\$197.00	35-7335	\$154.00

- Optical Instruments
- Light Sources
- Light Measurement
- Diode Laser Modules

Diamond Turned Off-Axis Parabolic Mirrors



- **Ideal for IR applications**
- **Aluminum or gold coatings available**



These diamond turned mirrors are ideal for IR applications. Please select either a protected aluminum or graded gold coating by adding the appropriate coating suffix (-018 for aluminum and -021 for gold).

Specifications

Substrates: Aluminum

Focal Length Tolerance: $\pm 1\%$

Off-Axis Distance Tolerance: ± 0.025 mm

Mount Distance Tolerance: ± 0.05 mm

Surface Accuracy: $\lambda/4$ rms at 633nm

Surface Quality: $\sim 100 \text{ \AA}$ rms

Tapped Holes:

25.4 mm D: 6-32 thread

50.8 mm D: 6-32 thread

76.2 mm D: 8-32 thread

Dowel Holes:

4.77 mm diam.

4.76 mm deep

Diamond Turned Off-Axis Parabolic Mirrors

Catalog Number	Diameter D (mm)	Focal Length f (mm)	Off-Axis Angle, θ (degrees)	Off-Axis Distance y (mm)	Mount Distance B (mm)	Thickness L ₁ (mm)	Thickness L ₂ (mm)	Bolt Circle A (mm)	Price US	
									Aluminum -018	Gold -021
43-8853	25.4	25.4	90	50.8	17.5	31.8	6.4	19.1	\$170.00	\$190.00
43-8861	25.4	38.1	90	76.2	18.0	31.8	6.4	19.1	\$170.00	\$190.00
43-8879	25.4	50.8	90	101.6	18.3	31.8	6.4	19.1	\$170.00	\$190.00
43-8945	50.8	50.8	90	101.6	28.6	57.2	6.4	31.8	\$370.00	\$390.00
43-8952	50.8	76.2	90	152.4	29.6	57.2	6.4	31.8	\$370.00	\$390.00
43-8960	50.8	50.8	60	58.7	51.7	35.7	6.4	31.8	\$370.00	\$390.00
43-8978	50.8	76.2	60	88.0	69.7	35.7	6.4	31.8	\$370.00	\$390.00
43-8986	50.8	101.6	60	117.3	87.2	35.7	6.4	31.8	\$370.00	\$390.00

Delivery on these items is 6-8 weeks. Please select either the -018 or -021 coating option.

Optics

Lenses & Microscope Components

Coatings

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Prisms & Polarizers

Filters

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