



# Nd:YAG Laser Optics

## LASER MIRRORS

Our Nd:YAG laser mirrors are suitable for fundamental Nd:YAG laser 1064 nm, frequency-doubled 532 nm, frequency-tripled 355 nm and frequency quadrupled 266 nm wavelength application. Two kinds of substrate material are available. Laser line mirrors are designed for 45° angle of incidence. Featuring high polishing quality, low scattering and high damage threshold, our dielectric reflectors enables perfect beam steering for Nd:YAG lasers.

### SUBSTRATE

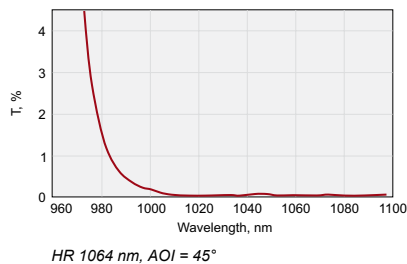
Material	UV grade Fused Silica or BK7 glass
S1 Surface Flatness	λ/10 at 633 nm
S1 Surface Quality	20-10 scratch & dig (MIL-PRF-13830B)
S2 Surface Quality	Commercial polish
Diameter Tolerance	+0.00 mm -0.12 mm
Thickness Tolerance	±0.25 mm
Wedge	< 3 min
Chamfer	0.3 mm at 45° typical

### COATING

Technology	Electron beam multilayer dielectric or Ion Beam Sputtering
Adhesion and Durability	Per MIL-C-675A. Insoluble in lab solvents
Clear Aperture	Exceeds central 85% of diameter
Damage Threshold:	
BK7 laser line mirrors	5 J/cm <sup>2</sup> , 8 nsec pulse, 1064 nm typical
UV FS laser line mirrors	8 J/cm <sup>2</sup> , 8 nsec pulse, 1064 nm typical
BK7 dual line mirrors	1 J/cm <sup>2</sup> , 8 nsec pulse, 1064 nm typical
UV FS dual line mirrors	2 J/cm <sup>2</sup> , 8 nsec pulse, 1064 nm typical
Coated Surface Flatness	λ/10 at 633 nm over clear aperture
Angle of Incidence	0 or 45°

## Laser Line Mirrors

Substrate material: **BK7 grade A**



Size – Ø12.7 × 3 mm

Wavelength, nm	R, % (s+p)/2	Catalogue number		Price, EUR
	AOI=0° / AOI=45°	AOI=0°	AOI=45°	AOI=0° / AOI=45°
351–361	99.8 / 99.5	031-0350-i0	031-0350	59 / 59
527–532	99.8 / 99.5	031-0530-i0	031-0530	56 / 56
1047–1064	99.8 / 99.5	031-1060-i0	031-1060	57 / 57

Size – Ø25.4 × 6 mm

Wavelength, nm	R, % (s+p)/2	Catalogue number		Price, EUR
	AOI=0° / AOI=45°	AOI=0°	AOI=45°	AOI=0° / AOI=45°
351–361	99.8 / 99.5	032-0350-i0	032-0350	95 / 95
527–532	99.8 / 99.5	032-0530-i0	032-0530	74 / 74
1047–1064	99.8 / 99.5	032-1060-i0	032-1060	75 / 75

Size – Ø50.8 × 8 mm

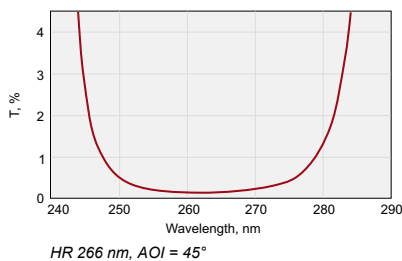
Wavelength, nm	R, % (s+p)/2	Catalogue number		Price, EUR
	AOI=0° / AOI=45°	AOI=0°	AOI=45°	AOI=0° / AOI=45°
351–361	99.8 / 99.5	035-0350-i0	035-0350	128 / 128
527–532	99.8 / 99.5	035-0530-i0	035-0530	110 / 110
1047–1064	99.8 / 99.5	035-1060-i0	035-1060	110 / 110

Size – Ø76.2 × 12.7 mm

Wavelength, nm	R, % (s+p)/2	Catalogue number		Price, EUR
	AOI=0° / AOI=45°	AOI=0°	AOI=45°	AOI=0° / AOI=45°
527–532	99.8 / 99.5	037-0530-i0	037-0530	185 / 185
1047–1064	99.8 / 99.5	037-1060-i0	037-1060	185 / 185

**Laser Line Mirrors**

Substrate material: **UV grade Fused Silica**



Size – **Ø12.7 × 3 mm**

Wavelength, nm	R, % (s+p)/2 AOI=0° / AOI=45°	Catalogue number		Price, EUR AOI=0° / AOI=45°
		AOI=0°	AOI=45°	
262–266	99 / 99	041-0260-i0	041-0260	81 / 81
351–361	99.8 / 99.5	041-0350-i0	041-0350	77 / 77
527–532	99.8 / 99.5	041-0530-i0	041-0530	72 / 72
1047–1064	99.8 / 99.5	041-1060-i0	041-1060	72 / 72

Size – **Ø25.4 × 6 mm**

Wavelength, nm	R, % (s+p)/2 AOI=0° / AOI=45°	Catalogue number		Price, EUR AOI=0° / AOI=45°
		AOI=0°	AOI=45°	
262–266	99 / 99	042-0260-i0	042-0260	111 / 111
351–361	99.8 / 99.5	042-0350-i0	042-0350	107 / 107
	– / 99.9	–	042-0350HHR	– / 175
527–532	99.8 / 99.5	042-0530-i0	042-0530	102 / 102
	99.9 / 99.9	042-0530HHR-i0	042-0530HHR	145 / 145
1047–1064	99.8 / 99.5	042-1060-i0	042-1060	102 / 102
	99.9 / 99.9	042-1060HHR-i0	042-1060HHR	145 / 145

Size – **Ø50.8 × 8 mm**

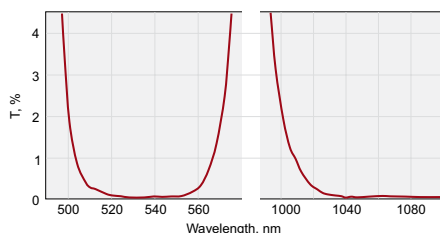
Wavelength, nm	R, % (s+p)/2 AOI=0° / AOI=45°	Catalogue number		Price, EUR AOI=0° / AOI=45°
		AOI=0°	AOI=45°	
262–266	99 / 99	045-0260-i0	045-0260	207 / 207
351–361	99.8 / 99.5	045-0350-i0	045-0350	187 / 187
527–532	99.8 / 99.5	045-0530-i0	045-0530	169 / 169
1047–1064	99.8 / 99.5	045-1060-i0	045-1060	169 / 169

Size – **Ø76.2 × 12.7 mm**

Wavelength, nm	R, % (s+p)/2 AOI=0° / AOI=45°	Catalogue number		Price, EUR AOI=0° / AOI=45°
		AOI=0°	AOI=45°	
351–361	99.8 / 99.5	047-0350-i0	047-0350	281 / 281
527–532	99.8 / 99.5	047-0530-i0	047-0530	258 / 258
1047–1064	99.8 / 99.5	047-1060-i0	047-1060	258 / 258

**Dual Band Mirrors**

Substrate material: **BK7 grade A**



Size – **Ø12.7 × 3 mm**

Wavelength, nm	R, % (s+p)/2 AOI=0° / AOI=45°	Catalogue number		Price, EUR AOI=0° / AOI=45°
		AOI=0°	AOI=45°	
532+1064	99.8 / 99.5	051-5306-i0	051-5306	85 / 85
633+1064	99.8 / 99.5	051-6306-i0	051-6306	85 / 85

Size – **Ø25.4 × 6 mm**

Wavelength, nm	R, % (s+p)/2 AOI=0° / AOI=45°	Catalogue number		Price, EUR AOI=0° / AOI=45°
		AOI=0°	AOI=45°	
532+1064	99.8 / 99.5	051-5306-i0	051-5306	103 / 103
633+1064	99.8 / 99.5	051-6306-i0	051-6306	103 / 103

Size – **Ø50.8 × 8 mm**

Wavelength, nm	R, % (s+p)/2 AOI=0° / AOI=45°	Catalogue number		Price, EUR AOI=0° / AOI=45°
		AOI=0°	AOI=45°	
532+1064	99.8 / 99.5	051-5306-i0	051-5306	151 / 151
633+1064	99.8 / 99.5	051-6306-i0	051-6306	151 / 151

Size – **Ø76.2 × 12.7 mm**

Wavelength, nm	R, % (s+p)/2 AOI=0° / AOI=45°	Catalogue number		Price, EUR AOI=0° / AOI=45°
		AOI=0°	AOI=45°	
532+1064	99.8 / 99.5	051-5306-i0	051-5306	227 / 227
633+1064	99.8 / 99.5	051-6306-i0	051-6306	227 / 227

**RELATED PRODUCTS**

Prisms

See page 1.38

Kinematic  
Mirror/Beamsplitter  
Mounts 840-0056

See page 8.66

