CHAPTERS

Optical Elements

Polarization Optics

Optical Isolators

Optical Systems

Ar-Ion, Kr-Ion, and Excimer Laser Mirrors



Specifications

- Substrate Material: Fused Silica
- Front Surface Flatness: $\lambda/10$ at 633 nm
- Front Surface Quality: 10-5 Scratch-Dig
- **Diameter Tolerance:** +0.0/-0.1 mm
- **Thickness:** 6.0 ± 0.2 mm
- **Parallelism:** ≤3 arcmin
- Chamfers: 0.50 mm x 45° (Both Sides)

Optics Kits

SECTIONS \(\neg\)

Spherical Lenses

Achromatic Lenses

Aspheric Lenses

Cylindrical Lenses

Mirrors

Spectral Filters

ND Filters

Beamsplitters

Prisms

Gratings

Windows

Diffusers

- Clear Aperture: >80% of Diameter

- Back Surface: Fine Ground

External-cavity laser mirrors are designed to provide high reflectance at specific laser wavelengths. Each optic is individually tested to ensure better than $\lambda/10$ flatness and surface finishes of 10-5 scratch-dig. The coating has a high-damage threshold suitable for use with the output beam from large-frame high-power lasers.

Ar-lon λ = 244 – 257 nm, Damage Threshold = 1 kW/cm² (CW)

ITEM #	\$	£	€	RMB	WAVELENGTH RANGE	DIAMETER	ANGLE OF INCIDENCE	REFLECTIVITY
NB1-H02	\$ 120.00	£ 86.40	€104,40	¥ 956.40	244 – 257 nm	25.4 mm (1")	0°	R _{avg} >99.5%
NB1-J02	\$ 120.00	£ 86.40	€104,40	¥ 956.40	244 – 257 nm	25.4 mm (1")	45°	R _{avg} >99.5%

Ar-Ion $\lambda = 300 - 308$ nm, Damage Threshold = 1 kW/cm² (CW)

ITEM #	\$	£	€	RMB	WAVELENGTH RANGE	DIAMETER	ANGLE OF INCIDENCE	REFLECTIVITY
NB1-J05	\$ 120.00	£ 86.40	€104,40	¥ 956.40	300 – 308 nm	25.4 mm (1")	45°	R _{avg} >99.5%

Ar-Ion λ = 333 – 364 nm, Damage Threshold = 1 kW/cm² (CW)

ITEM #	\$	£	€	RMB	WAVELENGTH RANGE	DIAMETER	ANGLE OF INCIDENCE	REFLECTIVITY
NB1-H07	\$ 120.00	£ 86.40	€104,40	¥ 956.40	333 – 364 nm	25.4 mm (1")	0°	R _{avg} >99.5%
NB1-J07	\$ 120.00	£ 86.40	€104,40	¥ 956.40	333 – 364 nm	25.4 mm (1")	45°	Ravg >99.5%

Ar-Ion λ = 458 – 528 nm, Damage Threshold = 1 kW/cm² (CW)

ITEM #	\$	£	€	RMB	WAVELENGTH RANGE	DIAMETER	ANGLE OF INCIDENCE	REFLECTIVITY
NB1-H10	\$ 120.00	£ 86.40	€104,40	¥ 956.40	458 – 528 nm	25.4 mm (1")	0°	R _{avg} >99.5%
NB1-J10	\$ 120.00	£ 86.40	€104,40	¥ 956.40	458 – 528 nm	25.4 mm (1")	45°	R _{avg} >99.5%

Kr-Ion λ = 520 – 647 nm, Damage Threshold = 1 kW/cm² (CW)

ITEM #	\$	£	€	RMB	WAVELENGTH RANGE	DIAMETER	ANGLE OF INCIDENCE	REFLECTIVITY
NB1-J11	\$ 120.00	£ 86.40	€104,40	¥ 956.40	520 – 647 nm	25.4 mm (1")	45°	R _{avg} >99.7%

Excimer ArF λ = 193 nm, Damage Threshold = 3 J/cm² (10 ns Pulse)

ITEM #	¢	£.	€	RMB	WAVELENGTH RANGE	DIAMETER	ANGLE OF INCIDENCE	REFLECTIVITY
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NB1-H01	\$ 120.00	£ 86.40	€104,40	¥ 956.40	193 nm	25.4 mm (1")	0°	R _{avg} >98.0%

Excimer KrF λ = 248 nm, Damage Threshold = 5 J/cm² (10 ns Pulse)

ľ	TEM #	\$	£	€	RMB	WAVELENGTH RANGE	DIAMETER	ANGLE OF INCIDENCE	REFLECTIVITY
N	JB1-H03	\$ 120.00	£ 86.40	€104,40	¥ 956.40	248 nm	25.4 mm (1")	0°	R _{avg} >97.0%

Excimer XeF λ = 352 nm, Damage Threshold = 5 J/cm² (10 ns Pulse)

ITEM #	\$	£	€	RMB	WAVELENGTH RANGE	DIAMETER	ANGLE OF INCIDENCE	REFLECTIVITY
NB1-H09	\$ 120.00	£ 86.40	€104,40	¥ 956.40	352 nm	25.4 mm (1")	0°	$R_{avg} > 99.5\%$

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