

Material	Diameter Tolerance	Thickness Tolerance	Wedge	Surface Figure	Surface Quality	CA	Chamfer
Spherical Lens							
ZnSe	+0.0"/-.010"	±.010"	< 3 arc min	λ/40 @ 10.6um	40/20	> 85%	.01" -.03" @ 45°
ZnS	+0.0"/-.010"	±.010"	< 3 arc min	λ/40 @ 10.6um	40/20	> 85%	.01" -.03" @ 45°
Ge	+0.0"/-.010"	±.010"	< 3 arc min	λ/40 @ 10.6um	40/20	> 85%	.01" -.03" @ 45°
Silicon	+0.0"/-.010"	±.010"	< 3 arc min	λ/40 @ 10.6μm	40/20	> 85%	.01" -.03" @ 45°
CaF ₂	+0.0"/-.010"	±.010"	< 3 arc min	λ/4	20/10	> 85%	.01" -.03" @ 45°
Sapphire	+0.0"/-.010"	±.010"	< 3 arc min	λ/4	20/10	> 85%	.01" -.03" @ 45°
Fused Silica	+0.0"/-.010"	±.010"	< 3 arc min	λ/10	10/5	> 85%	.01" -.03" @ 45°
SF	+0.0"/-.010"	±.010"	< 3 arc min	λ/10	10/5	> 85%	.01" -.03" @ 45°
BK7	+0.0"/-.010"	±.010"	< 3 arc min	λ/10	10/5	> 85%	.01" -.03" @ 45°
Cylindrical Lens							
ZnSe	+0.0"/-.010"	±.010"	< 3 arc min	λ/40 @ 10.6μm	40/20	> 85%	.01" -.03" @ 45°
ZnS	+0.0"/-.010"	±.010"	< 3 arc min	λ/40 @ 10.6μm	40/20	> 85%	.01" -.03" @ 45°
Ge	+0.0"/-.010"	±.010"	< 3 arc min	λ/40 @ 10.6μm	40/20	> 85%	.01" -.03" @ 45°
Silicon	+0.0"/-.010"	±.010"	< 3 arc min	λ/40 @ 10.6μm	40/20	> 85%	.01" -.03" @ 45°
CaF ₂	+0.0"/-.010"	±.010"	< 3 arc min	λ/4	20/10	> 85%	.01" -.03" @ 45°
Sapphire	+0.0"/-.010"	±.010"	< 3 arc min	λ/4	20/10	> 85%	.01" -.03" @ 45°
Fused Silica	+0.0"/-.010"	±.010"	< 3 arc min	λ/4	10/5	> 85%	.01" -.03" @ 45°
SF	+0.0"/-.010"	±.010"	< 3 arc min	λ/4	10/5	> 85%	.01" -.03" @ 45°
BK7	+0.0"/-.010"	±.010"	< 3 arc min	λ/4	10/5	> 85%	.01" -.03" @ 45°
Flats/Plano							
ZnSe	+0.0"/-.010"	±.010"	< 3 arc min	λ/40 @ 10.6μm	40/20	> 85%	.02" @ 45°
ZnS	+0.0"/-.010"	±.010"	< 3 arc min	λ/40 @ 10.6μm	40/20	> 85%	.02" @ 45°
Ge	+0.0"/-.010"	±.010"	< 3 arc min	λ/40 @ 10.6μm	40/20	> 85%	.02" @ 45°
Silicon	+0.0"/-.010"	±.010"	< 3 arc min	λ/40 @ 10.6μm	40/20	> 85%	.02" @ 45°
CaF ₂	+0.0"/-.010"	±.010"	< 3 arc min	λ/4	20/10	> 85%	.02" @ 45°
Sapphire	+0.0"/-.010"	±.010"	< 3 arc min	λ/4	20/10	> 85%	.02" @ 45°
Fused Silica	+0.0"/-.010"	±.010"	< 3 arc min	λ/20 (thickness dependant)	10/5	> 85%	.02" @ 45°
SF	+0.0"/-.010"	±.010"	< 3 arc min	λ/20 (thickness dependant)	10/5	> 85%	.02" @ 45°
BK7	+0.0"/-.010"	±.010"	< 3 arc min	λ/20 (thickness dependant)	10/5	> 85%	.02" @ 45°

Please Note: This represents a general list of specifications intended for reference only. Specifications are dependent on dimensions and other customer requirements.

Type	Wavelength	AOR	R at 0°	R at 45°	Transmittance	Tp/Ts
AR Coatings						
Narrowband(IR)	2μm to 20μm		R ≤ 0.5%	R ≤ 1.0%		
Broadband(IR)	2μm to 20μm		Ra ≤ 1.0%	Ra ≤ 1.5%		
Narrowband(UV/VIS/NIR)	222nm to 2.0μm		R ≤ 0.25%	R ≤ .5%		
Broadband(VIS/NIR)	Varies		Ra ≤ 0.5%	Ra ≤ 1.0%		
HR Coatings						
Laserline(IR)	2μm to 20μm		R ≥ 99.5%	R ≥ 99.0%		
Laserline(UV/VIS/NIR)	222nm to 2.0μm		R ≥ 99.7%	R ≥ 99.4%		
Broadband(VIS/NIR)	Varies		Ra ≥ 99%	Ra ≥ 98.5%		
Metal Coatings						
Bare Al	.22μm to 20μm		86.7% to 98.7%			
Bare Ag	.4μm to 20μm		17.6% to 99.6%			
Bare Au	.65μm to 20μm		95.5% to 99.4%			
Protected Al	.22μm to 20μm		85.7% to 97.7%			
Protected Ag	.40μm to 20μm		94.6% to 98.6%			
Protected Au	.65μm to 20μm		94.5% to 98.4%			
Enhanced Al	.325μm to 1.550μm		95% to 97.5%	94.7% to 97.2%		
Enhanced Ag	.442μm to 10.6μm		97.8% to 99.5%	97.5% to 99.2%		
Enhanced Au	2.06μm to 10.6μm		99.50%	99.20%		
Dichoric Filters						
SWP/LWP(UV)	Varies		Ra ≥ 99%	Ra ≥ 98%	Ta @ 0° ≥ 90%, Ta @ 45° ≥ 85%, T= 50% ±5% @ λo	
SWP/LWP(VIS/NIR)	Varies		Ra ≥ 99%	Ra ≥ 98%	Ta @ 0° ≥ 90%, Ta @ 45° ≥ 85%, T= 50% ±5% @ λo	
SWP/LWP(IR)	Varies		Ra ≥ 99%	Ra ≥ 98%	Ta @ 0° ≥ 90%, Ta @ 45° ≥ 85%, T= 50% ±5% @ λo	
Multiwavelength	Varies		R ≥ 99.7%	R ≥ 99.4%	T @ 0° ≥ 95%, T @ 45° ≥ 95%	
Non-Polarizer						
Cube BS(UV/VIS/NIR)	400nm to 2.0μm	90	10% ≤ R ≤ 90% ± 3%			
Cube BS Broadband(VIS/NIR)	425nm to 1600nm	90	Ra = 45% ± 5%			
Plate BS(UV/VIS/NIR)	400nm to 2.0μm			10% ≤ R ≤ 90% ± 3%		
Plate BS(IR)	2.0μm to 20.0μm			30% ≤ R ≤ 70% ± 5%		
Polarizer						
Cube BS(UV)	248nm to 400nm	90	Rs ≥ 99.5%		Tp ≥ 95%	200/1
Cube BS(VIS/NIR)	400μm to 2.0μm	90	Rs ≥ 99.9%		Tp ≥ 95%	1000/1
Cube BS Broadband(VIS/NIR)	425nm to 1000nm	90	Rs ≥ 99.8%		Tp ≥ 95%	500/1
Cube BS High Power(VIS/NIR)	400nm to 2.0 μm	90	Rs ≥ 99.5%		Tp ≥ 95%	200/1
Thin Film Plate(UV)	248nm to 400nm		Rs ≥ 99% @ Θb		Tp ≥ 93%	100/1
Thin Film Plate(VIS/NIR)	400nm to 2.0μm		Rs ≥ 99% @ Θb		Tp ≥ 95%	100/1
Thin Film Plate(IR)	2μm to 20μm		Rs ≥ 99% @ Θb		Tp ≥ 90%	100/1
IR Phase Retarding Mirror						
IR Phase Retarding Mirror	2μm to 20μm		R ≥ 98.5%	R ≥ 98.5%	Retardation: 0° ± 6°, 90° ± 6° AOI: 45°	

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