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Sapphire and Ruby Ball Lenses



- Excellent for Severe Environments
- High Strength and Hardness
- High Chemical Stability
- [Sapphire and Ruby Half-Ball Lenses](#) Also Available

Common Specifications

Physical & Mechanical Properties

Specific Gravity (g/cm ³):	3.98	Compressive Strength (psi):	300,000
Diameter Tolerance (μm):	±2.54		

Optical Properties

Coating:	Uncoated		
Index of Refraction (n _d):	1.77	Sphericity (μm):	0.625

Material Properties

Coefficient of Thermal Expansion CTE (10 ⁻⁶ /°C):	8.4	Porosity (%):	0.00
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Environmental & Durability Factors

Melting Temperature (°C):	2053.00
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Technical Information

Products

Dia. (mm)	Substrate	Type	Coating	Stock Number	Price	Buy
0.30	Ruby Doped Sapphire (Al ₂ O ₃)	Ball Lens	Uncoated	#46-223	S\$40.60 Volume Pricing	20+ In Stock
0.40	Ruby Doped Sapphire (Al ₂ O ₃)	Ball Lens	Uncoated	#46-224	S\$40.60 Volume Pricing	20+ In Stock
0.50	Ruby Doped Sapphire (Al ₂ O ₃)	Ball Lens	Uncoated	#46-225	S\$40.60 Volume Pricing	20+ In Stock
0.79	Ruby Doped Sapphire (Al ₂ O ₃)	Ball Lens	Uncoated	#46-226	S\$40.60 Volume Pricing	20+ In Stock
1.00	Ruby Doped Sapphire (Al ₂ O ₃)	Ball Lens	Uncoated	#43-639	S\$40.60 Volume Pricing	20+ In Stock
1.59	Ruby Doped Sapphire (Al ₂ O ₃)	Ball Lens	Uncoated	#46-227	S\$40.60 Volume Pricing	20+ In Stock
1.50	Ruby Doped Sapphire (Al ₂ O ₃)	Ball Lens	Uncoated	#43-641	S\$40.60 Volume Pricing	20+ In Stock
2.00	Ruby Doped Sapphire (Al ₂ O ₃)	Ball Lens	Uncoated	#43-643	S\$40.60 Volume Pricing	20+ In Stock
2.38	Ruby Doped Sapphire (Al ₂ O ₃)	Ball Lens	Uncoated	#46-228	S\$40.60 Volume Pricing	10 In Stock
2.50	Ruby Doped Sapphire (Al ₂ O ₃)	Ball Lens	Uncoated	#43-820	S\$40.60 Volume Pricing	20+ In Stock
2.78	Ruby Doped Sapphire (Al ₂ O ₃)	Ball Lens	Uncoated	#43-822	S\$40.60 Volume Pricing	4 In Stock
3.00	Ruby Doped Sapphire (Al ₂ O ₃)	Ball Lens	Uncoated	#43-645	S\$40.60 Volume Pricing	20+ In Stock
3.18	Ruby Doped Sapphire (Al ₂ O ₃)	Ball Lens	Uncoated	#46-229	S\$40.60 Volume Pricing	20+ In Stock
4.76	Ruby Doped Sapphire (Al ₂ O ₃)	Ball Lens	Uncoated	#46-230	S\$46.55 Volume Pricing	6 In Stock
4.00	Ruby Doped Sapphire (Al ₂ O ₃)	Ball Lens	Uncoated	#43-824	S\$46.55 Volume Pricing	2 In Stock

5.00	Ruby Doped Sapphire (Al ₂ O ₃)	Ball Lens	Uncoated	#43-647	S\$50.40 Volume Pricing	20+ In Stock
5.55	Ruby Doped Sapphire (Al ₂ O ₃)	Ball Lens	Uncoated	#43-828	S\$50.40 Volume Pricing	11 In Stock
6.00	Ruby Doped Sapphire (Al ₂ O ₃)	Ball Lens	Uncoated	#43-830	S\$54.60 Volume Pricing	20+ In Stock
9.53	Ruby Doped Sapphire (Al ₂ O ₃)	Ball Lens	Uncoated	#63-228	S\$137.90 Volume Pricing	5 In Stock
0.30	Sapphire (Al ₂ O ₃)	Ball Lens	Uncoated	#46-115	S\$39.55 Volume Pricing	20+ In Stock
0.40	Sapphire (Al ₂ O ₃)	Ball Lens	Uncoated	#46-116	S\$39.55 Volume Pricing	20+ In Stock
0.50	Sapphire (Al ₂ O ₃)	Ball Lens	Uncoated	#46-117	S\$39.55 Volume Pricing	5 In Stock
0.79	Sapphire (Al ₂ O ₃)	Ball Lens	Uncoated	#46-118	S\$39.55 Volume Pricing	14 In Stock
1.00	Sapphire (Al ₂ O ₃)	Ball Lens	Uncoated	#43-638	S\$39.55 Volume Pricing	20+ In Stock
1.59	Sapphire (Al ₂ O ₃)	Ball Lens	Uncoated	#46-119	S\$39.55 Volume Pricing	6 In Stock
1.50	Sapphire (Al ₂ O ₃)	Ball Lens	Uncoated	#43-640	S\$39.55 Volume Pricing	20+ In Stock
2.00	Sapphire (Al ₂ O ₃)	Ball Lens	Uncoated	#43-642	S\$39.55 Volume Pricing	20+ In Stock
2.38	Sapphire (Al ₂ O ₃)	Ball Lens	Uncoated	#46-120	S\$39.55 Volume Pricing	20+ In Stock
2.50	Sapphire (Al ₂ O ₃)	Ball Lens	Uncoated	#43-819	S\$39.55 Volume Pricing	20+ In Stock
2.78	Sapphire (Al ₂ O ₃)	Ball Lens	Uncoated	#43-821	S\$39.55 Volume Pricing	20+ In Stock
3.00	Sapphire (Al ₂ O ₃)	Ball Lens	Uncoated	#43-644	S\$39.55 Volume Pricing	20+ In Stock
3.18	Sapphire (Al ₂ O ₃)	Ball Lens	Uncoated	#46-121	S\$39.55 Volume Pricing	20+ In Stock
4.00	Sapphire (Al ₂ O ₃)	Ball Lens	Uncoated	#43-823	S\$44.45 Volume Pricing	20+ In Stock

4.76	Sapphire (Al ₂ O ₃)	Ball Lens	Uncoated	#46-122	S\$44.45 Volume Pricing	20+ In Stock
5.00	Sapphire (Al ₂ O ₃)	Ball Lens	Uncoated	#43-646	S\$49.00 Volume Pricing	12 In Stock
5.55	Sapphire (Al ₂ O ₃)	Ball Lens	Uncoated	#43-827	S\$49.00 Volume Pricing	8 In Stock
6.00	Sapphire (Al ₂ O ₃)	Ball Lens	Uncoated	#43-829	S\$52.15 Volume Pricing	20+ In Stock
6.35	Sapphire (Al ₂ O ₃)	Ball Lens	Uncoated	#43-831	S\$57.40 Volume Pricing	20+ In Stock
9.53	Sapphire (Al ₂ O ₃)	Ball Lens	Uncoated	#63-227	S\$128.45 Volume Pricing	20+ In Stock



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