

Ball & Half Ball Lens Capabilities



Ball lenses are completely spherical most commonly used to couple light in and out of fibres, half-ball lenses are hemispheres.

Knight Optical supplies bespoke ball and half-ball lenses to suit our customer's specifications. Ball lenses can be manufactured in quartz due to excellent UV and IR transmission between 185nm to 2000+nm, whilst sapphire lenses have a higher refractive index allowing a very short fall back length to better facilitate fibre coupling.

Knight Optical custom ball lenses are available in a range of alternative materials such as BK7 (or equivalent) glass or ceramics, or IR crystal. Our half ball lenses offer uniform dispersion of light and typically used in LED displays and LED traffic lights.

We are able to supply high precision grade three, mid-range grade 25 to commercial grade 100 ball lenses to cater for all grades to suit any application.



Custom Capabilities

Diameter	0.15mm to 30mm+
Diameter tolerance (sphericity)	<0.075µm
Basic diameter tolerance	+/-0.5µm
Surface roughness (Ra)	< 0.007µm
Material	Schott Glass or equivalent, UV Fused Silica, Ruby, Cubic Zirconia, Sapphire, Ceramic (Al ₂ O ₃ , ZrO ₂ , Si ₃ N ₄), Quartz

To keep up with the latest scientific developments, we guarantee that our in-house Metrology and Quality Assurance departments will not only deliver premium, individually inspected and tested optical components to your business, but should there be a need, can deliver bespoke optics designed to your exact specifications.

For more information on any of our optical services, to discuss your requirements or place a direct order with one of our technical sales team, please contact Knight Optical by Email: info@knightoptical.com or call direct on +44 1622 859 444 (UK, EUR or ROW) +1 401 583 7846 (USA & Canada).

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