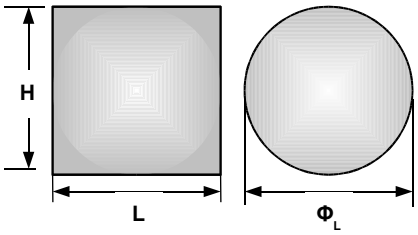
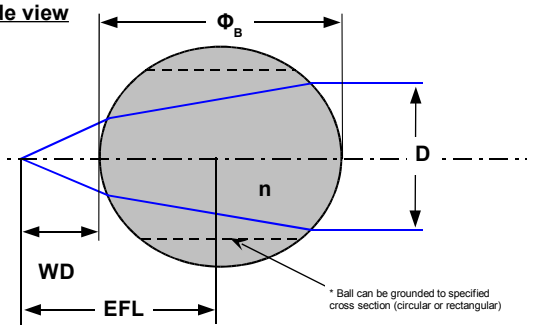
BK7 Ball Lenses

LENS DRAWING

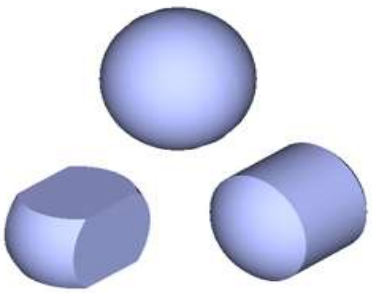
Front view



Side view



3D view



LENS DESIGN INFORMATIONS

Ball lens

Ordering Code SPL_BAL_BK7_Φ_B_AR(λ_1-λ_2)	Dimensions [1] Φ_B
Material: BK7	
to be completed	

1. All units are mm

Circular cross-section ball lens (drum lens)

Ordering Code SPL_BAL_BK7_Φ_B_Φ_L_AR(λ_1-λ_2)	Dimensions [1] Φ_B	 Φ_L
Material: BK7		
to be completed		

1. All units are mm

Rectangular cross section ball lenses

Ordering Code SPL_BAL_BK7_Φ_B_H×L_AR(λ_1-λ_2)	Dimensions [1] Φ_B	 H	 L
Material: BK7			
to be completed			

1. All units are mm

Useful formulae

$$R = \Phi_B / 2$$

$$EFL = \frac{n \cdot R}{2 \cdot (n-1)}$$

$$WD = \frac{EFL \cdot (2-n)}{n}$$

$$D = 2 \cdot EFL \cdot NA$$

BK7 refractive index vs. λ

λ (nm)	532	633	810	1064	1550
n	1.5195	1.5151	1.5106	1.5066	1.5006

Legend

EFL: Effective focal length
NA: Numerical aperture
WD: Working distance
D: Beam diameter
Φ_B: Ball diameter
R: Ball radius
H: Lens height
L: Lens length
Φ_L: Lens diameter
n: Refractive index
AR(λ_1 - λ_2): Anti-reflection coating wavelength range

Doric Lenses Inc.