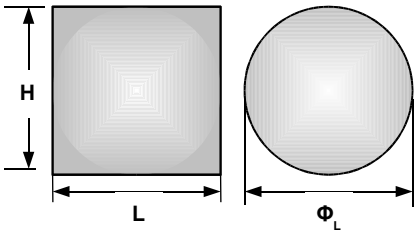
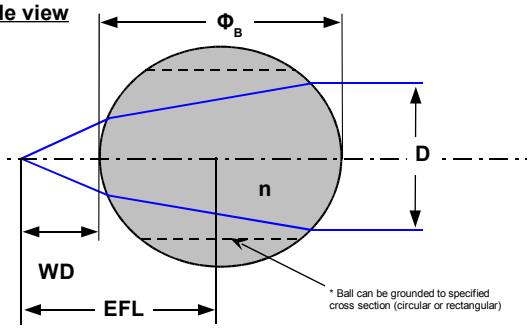
FUSED SILICA BALL LENSES

LENS DRAWING

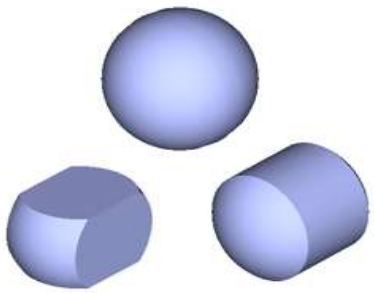
Front view



Side view



3D view



LENS DESIGN INFORMATIONS

Ball lens

Ordering Code SPL_BAL_FS_Φ_B_AR(λ_1-λ_2)	Dimensions [1] Φ_B
Material: Fused silica	
to be completed	

1. All units are mm

Circular cross-section ball lens (drum lens)

Ordering Code SPL_BAL_FS_Φ_B_Φ_L_AR(λ_1-λ_2)	Dimensions [1] Φ_B	Φ_L
Material: Fused silica		
to be completed		

1. All units are mm

Rectangular cross section ball lenses

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

1. All units are mm

Useful formulae

$$R = \Phi_B / 2$$

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

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

Fused silica refractive index vs. λ

λ (nm)	532	633	810	1064	1550
n	1.4607	1.4570	1.4531	1.4496	1.4440

Legend

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