
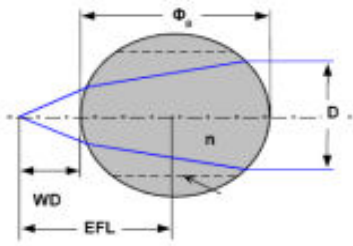


ball lenses

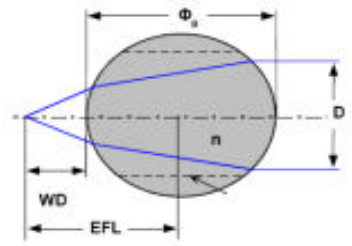
Ball lenses are highly polished spheres made of optically transparent homogeneous materials. Carefully controlled manufacturing process produces spheres with precise diameters and unsurpassed surface quality.

Numerical aperture of ball lenses is proportional to their refractive index. These lenses are used in visible and near infrared spectrum. The ball lenses could be equatorially ground relative to direction of optical axis to facilitate packaging and orient AR coating. The round cross-section of these lenses results in the large field of view and simple, cost-effective alignment where most of the positioning errors result in simple focusing errors. These lenses can be used as fiber-optics collimators. In order to accommodate different fiber-arrays pitch, the edge of the lens may be ground to a desired width.

Drum shaped drum lenses are cut from Doric high quality ball lenses which are rounded into a cylinder with a smaller outer diameter, while square ball lenses are machined to a square cross-section. Those are easier to manipulate and integrate in a system than full ball lenses.

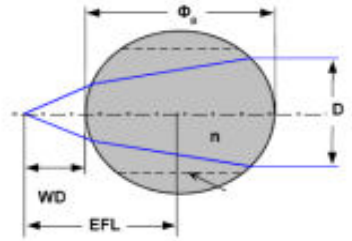
WEBCODE:		D148-xxx	
LENS DRAWING			
			
SPECIFICATIONS	SYMBOL	VALUE	
Lens Type		BALL LENS	
Material		FUSED SILICA BK7 LaSFN9	
Operating Wavelength	λ	400 – 1600 nm	
Available ball diameter	Φ	0.3 to 10 mm	
Diameter tolerance	$\Delta\Phi$	+/- 5 μm	
AR coating	AR	2S-VIS : broad band 2 side AR coating @ 600 – 900 nm 2S-NIR : broad band 2 side AR coating @ 750 – 1100 nm	
NOTE		custom diameter and custom AR coating are available upon request	

LENS DRAWING



SPECIFICATIONS	SYMBOL	VALUE
Lens Type		DRUM BALL LENS
Material		FUSED SILICA BK7 LaSFN9
Operating Wavelength	λ	400 – 1600 nm
Available ball diameter	Φ	0.3 to 10 mm
Diameter tolerance	$\Delta\Phi$	+/- 5 μ m
Drum Diameter	D	custom
AR coating	AR	2S-VIS : broad band 2 side AR coating @ 600 – 900 nm 2S-NIR : broad band 2 side AR coating @ 750 – 1100 nm
NOTE		custom diameter and custom AR coating are available upon request

LENS DRAWING



SPECIFICATIONS	SYMBOL	VALUE
Lens Type		SQUARE BALL LENS
Material		FUSED SILICA BK7 LaSFN9
Operating Wavelength	λ	400 – 1600 nm
Available ball diameter	Φ	0.3 to 10 mm
Diameter tolerance	$\Delta\Phi$	+/- 5 μ m
Cross Section	HxL	custom
AR coating	AR	2S-VIS : broad band 2 side AR coating @ 600 – 900 nm 2S-NIR : broad band 2 side AR coating @ 750 – 1100 nm
NOTE		custom diameter and custom AR coating are available upon request