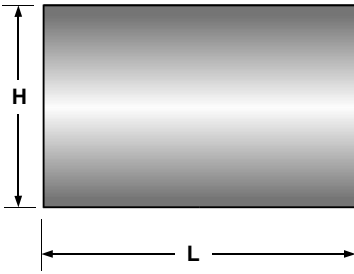


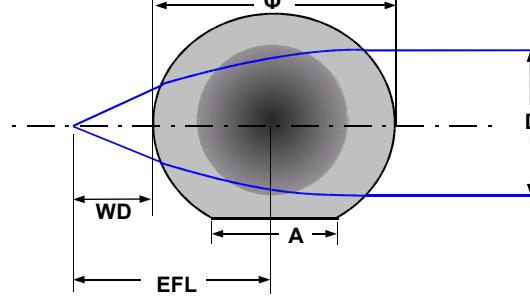
DORIC GRADIENT-INDEX CYLINDRICAL LENSES

LENS DRAWING

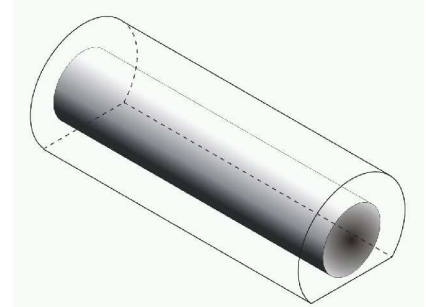
Front view



Side view



3D view



LENS DESIGN INFORMATION

Ordering Code	Paraxial data ¹		Dimensions ¹		
	EFL	WD ²	Φ	H ²	L
CYL_DGI_Φ_L_AR(λ ₁ - λ ₂)					
Material: Fused silica (cladding) and GRIN (core) Design wavelength: visible and near IR Numerical aperture: NA = 0.50					
CYL_DGI_0.060_L_AR(λ ₁ - λ ₂)	0.041	0.011	0.060	0.055	custom
CYL_DGI_0.080_L_AR(λ ₁ - λ ₂)	0.055	0.015	0.080	0.075	custom
CYL_DGI_0.100_L_AR(λ ₁ - λ ₂)	0.068	0.018	0.100	0.093	custom
CYL_DGI_0.120_L_AR(λ ₁ - λ ₂)	0.082	0.022	0.120	0.111	custom
CYL_DGI_0.150_L_AR(λ ₁ - λ ₂)	0.103	0.028	0.150	0.138	custom
CYL_DGI_0.200_L_AR(λ ₁ - λ ₂)	0.137	0.037	0.200	0.185	custom
CYL_DGI_0.250_L_AR(λ ₁ - λ ₂)	0.171	0.046	0.250	0.231	custom
CYL_DGI_0.300_L_AR(λ ₁ - λ ₂)	0.205	0.055	0.300	0.277	custom
CYL_DGI_0.400_L_AR(λ ₁ - λ ₂)	0.274	0.074	0.400	0.370	custom
CYL_DGI_0.500_L_AR(λ ₁ - λ ₂)	0.342	0.092	0.500	0.462	custom
CYL_DGI_0.555_L_AR(λ ₁ - λ ₂)	0.380	0.102	0.555	0.380	custom
CYL_DGI_0.600_L_AR(λ ₁ - λ ₂)	0.411	0.111	0.600	0.555	custom
CYL_DGI_0.750_L_AR(λ ₁ - λ ₂)	0.514	0.139	0.750	0.647	custom
CYL_DGI_0.800_L_AR(λ ₁ - λ ₂)	0.548	0.148	0.800	0.740	custom
CYL_DGI_0.820_L_AR(λ ₁ - λ ₂)	0.562	0.151	0.820	0.758	custom
CYL_DGI_1.00_L_AR(λ ₁ - λ ₂)	0.685	0.185	1.000	0.925	custom
CYL_DGI_1.50_L_AR(λ ₁ - λ ₂)	1.027	0.277	1.500	1.387	custom
CYL_DGI_2.50_L_AR(λ ₁ - λ ₂)	1.719	0.462	2.500	2.312	custom
CYL_DGI_3.00_L_AR(λ ₁ - λ ₂)	2.055	0.555	3.000	2.775	custom

1. Units: mm

2. Working distance, and height are given as a reference only; lens diameter is the critical parameter.

Useful formulae

$$EFL = 0.685 \times \Phi$$

$$WD = 0.185 \times \Phi$$

$$H = 0.925 \times \Phi$$

$$A = 0.527 \times \Phi$$

$$D = 2 \times EFL \times NA$$

NOTES

- i. Flat surface is preferred to determine which side are AR coated. It doesn't affect lens numerical aperture.
- ii. Values for parameters A and H are given as guidance only and may differ. Controlled key parameter is lens diameter.
- iii. Different lenses shape are available on request

Legend

Φ : Cylindrical Lens diameter
 AR(λ₁ - λ₂) : AR coating wavelength range (standard : AR(600-900) and AR(750-1100))
 D : Beam diameter
 EFL : Effective focal length
 H : Flatended cylindrical lens height
 L : Cylindrical lens length
 NA : Numerical aperture
 WD : Working distance