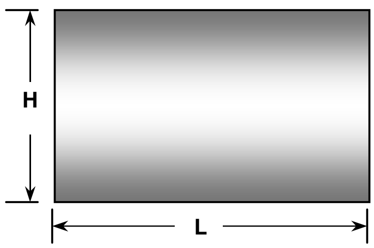
# Double Convex Fused Silica Acylindric Lens

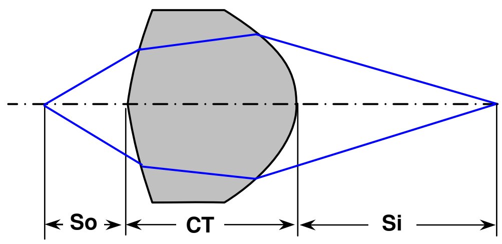
Finite conjugates | Surface 1: Conic | Surface 2: High order Acylindric

## LENS DRAWING

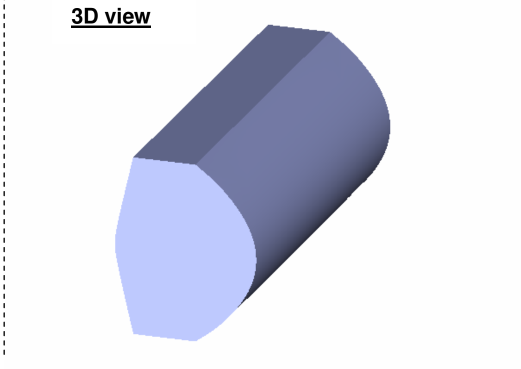
**Front view**




**Side view**




**3D view**



## LENS DESIGN INFORMATIONS

| Ordering Code | Paraxial data [1,4] | | | Dimensions [1] | | | Surfaces data [1,2,3] | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | 1 | | 2 | | | |
| ACL_DCX_CAC_MAG_FS_EFL_L_AR($\lambda_1$ - $\lambda_2$) | EFL | So | Si | H | CT | L | R | CC | R | CC | $A_6$ | $A_8$ |
| **Material:** Fused silica **Design Wavelength:** $\lambda_0$ = nm **Refractive index:** n($\lambda_0$) = 1. **Numerical aperture:** $NA_{obj}$ = 0. Magnification: MAG = | | | | | | | | | | | | |
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1. Units: mm
2. The acylindric coefficients are given only as guidance for optical modeling. The actual surface is different, analytically designed higher order curve and gives better lenses.
3. Surface 1 faces focal point.
4. Given as reference only, lens has been optimized in that configuration, but can be used in other configuration and still get excellent performance.

General acylinder equation :

$$surf(x) = \frac{Cx^2}{1+\sqrt{1-C^2(CC+1)x^2}} + A_6x^6 + A_8x^8 + A_{10}x^{10} + \dots$$

**Legend**

- **ACL :** Acylindric lens
- **DCX :** Double convex
- **EFL :** Effective focal length
- **NA :** Numerical aperture
- **H :** Lens height
- So : Distance object to surface 1
- Si : Distance surface 2 to image
- **CT :** Central thickness
- **L :** Cylinder length
- **R :** Radius of curvature
- **C = 1/R :** Curvature
- **CC :** Conic constant
- **Ai :** General acylindric coefficients
- **MAG :** Magnification
- **AR($\lambda_1$ - $\lambda_2$) :** AR coating wavelength range

Doric Lenses Inc.