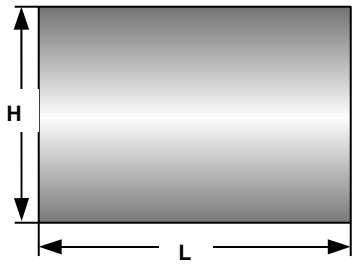
Plano Convex BK7 Acylindric Lenses

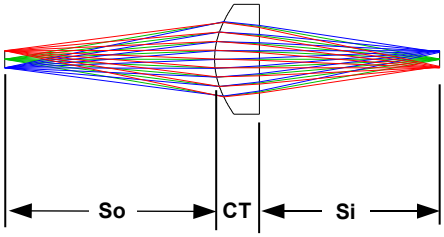
Finite conjugates
surface 1: Acylindric
surface 2: Plano

LENS DRAWING

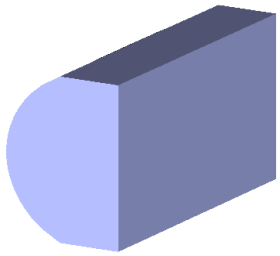
Front view



Side view



3D view



LENS DESIGN INFORMATIONS

Ordering Code	Paraxial data [1,4]			Dimensions [1]			Surfaces data [1,2,3]		
							1		2
ACL_PCX_MAG_BK7_EFL_L_AR(λ_1 - λ_2)	EFL	So	Si	H	CT	L	R	CC	R
Material: BK7 **Design Wavelength:** λ_0 = 808 – 980 nm **Refractive index:** n(λ_0) = 1.5106 **Numerical aperture:** NA_{obj} = 0.14 **Magnification:** MAG = 1:1									
ACL_PCX_MAG1:1_BK7_5.84_L_AR(λ_1 - λ_2)	5.84	11.68	10.03	5.1	2.5	custom	-2.967	-1.1373	Plano

1. Units: mm
2. The acylinder 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 object
4. Given as a reference only, lens has been optimized in that configuration, but can be used in other configuration and still get excellent performance.

General acylinder equation :

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

Legend

ACL : Acylindric lens
PCX : Plano convex
MAG : Magnification
EFL : Effective focal length
NA_{obj} : Object numerical aperture
So : Object to lens distance
Si : Lens to image distance
H : Lens height
CT : Central thickness
L : Cylinder length
R : Radius of curvature
C = 1/R : Curvature
CC : Conic constant
Ai : General acylindric coefficients
AR(λ_1 - λ_2) : Anti-reflection coating wavelength range