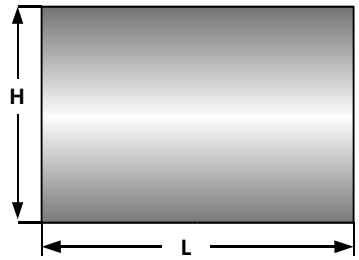
PLANO CONVEX BK7 ACYLINDRIC LENSES

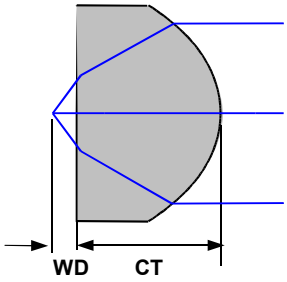
INFINITE CONJUGATES SURFACE 1 : PLANO
SURFACE 2 : HIGH ORDER ACYLINDRIC

LENS DRAWING

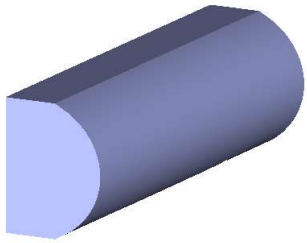
Front view



Side view



3D view



LENS DESIGN INFORMATIONS

Ordering Code	Paraxial data [1]		Dimensions [1]			Surfaces data [1,2,3]					
						1	2				
ACL_PCX_INF_BK7_EFL_L_AR(λ_1 - λ_2)	EFL	WD	H	CT	L	R	R	CC	A_6	A_8	A_{10}
Material: BK7 **Design wavelength** : λ_0 = 905 nm **Refractive index**: n(λ_0) = 1.508917 **Numerical aperture:** NA = 0.50											
ACL_PCX_INF_BK7_9.686_L_AR(λ_1 - λ_2)	9.686	6.8697	10.00	4.25	25	plano	-4.9295	-0.5378	-1.9084 E-06	4.6703 E-08	-2.6091 E-09
Material: BK7 **Design wavelength** : λ_0 = visible (560 nm) **Refractive index**: n(λ_0) = 1. 518032 **Numerical aperture:** NA = 0.45											
ACL_PCX_INF_BK7_19.032_L_AR(λ_1 - λ_2)	19.032	13.432	19.00	8.50	25	plano	-9.8590	-0.55	0	0	0

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 focal point

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
INF : Infinite conjugates
EFL : Effective focal length
WD : Working distance
NA : Numerical aperture
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
MAG : Magnification