

PLANO CONVEX S-TIH53 ACYLINDRIC LENSES

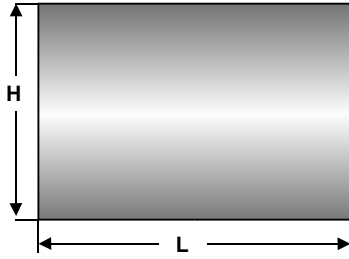
INFINITE CONJUGATES

SURFACE 1: PLANO

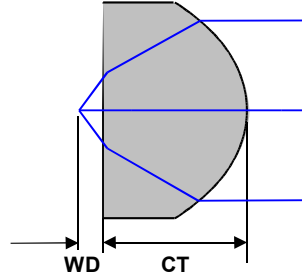
SURFACE 2: HIGH ORDER ACYLINDRIC

LENS DRAWING

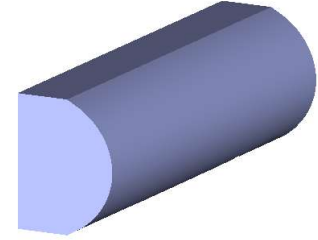
Front view



Side view



3D view



LENS DESIGN INFORMATIONS

Ordering Code ACL_PCX_INF_S-TIH53_EFL_L_AR($\lambda_1 - \lambda_2$)	Paraxial data ¹		Dimensions ¹			Surfaces data ^{1,2,3}					
	EFL	WD	H	CT	L	1	2				
						R	R	CC	A ₆	A ₈	A ₁₀
Material: S-TIH53	Design wavelength : $\lambda_0 = 808$ nm		Refractive index: $n(\lambda_0) = 1.8229$			Numerical aperture: NA = 0.86					
ACL_PCX_INF_S-TIH53_0.2757_L_AR(750-1100)	0.2757	0.0699	0.490	0.3748	custom	Plano	-0.2269	-0.4173	7.4832	-721.9610	-4146.7487
ACL_PCX_INF_S-TIH53_0.32_L_AR(750-1100)	0.320	0.0811	0.569	0.4350	custom	Plano	-0.2633	-0.4173	3.5524	-254.4024	-1084.6480
ACL_PCX_INF_S-TIH53_0.512_L_AR(750-1100)	0.512	0.1297	0.91	0.6960	custom	Plano	-0.4213	-0.4173	0.3388	-9.4772	-15.7837
ACL_PCX_INF_S-TIH53_0.59_L_AR(750-1100)	0.590	0.1495	1.05	0.8020	custom	Plano	-0.4855	-0.4173	0.1667	-3.5124	-4.4052
ACL_PCX_INF_S-TIH53_0.9_L_AR(750-1100)	0.900	0.2281	1.60	1.2234	custom	Plano	-0.7406	-0.4173	0.0202	-0.1828	-0.0985
ACL_PCX_INF_S-TIH53_7.0_L_AR(750-1100)	7.00	4.202	13.4	5.10	custom	Plano	-5.760	-0.5876	-1.4084×10^6	-6.0291×10^8	0
ACL_PCX_INF_S-TIH53_9.0_L_AR(750-1100)	9.00	2.280	16.0	12.23	custom	Plano	-7.4037	-0.4173	2.02182×10^7	-1.8316×10^8	-9.8784×10^{11}

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 :

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

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($\lambda_1 - \lambda_2$) : Anti-reflection coating wavelength range

MAG : Magnification