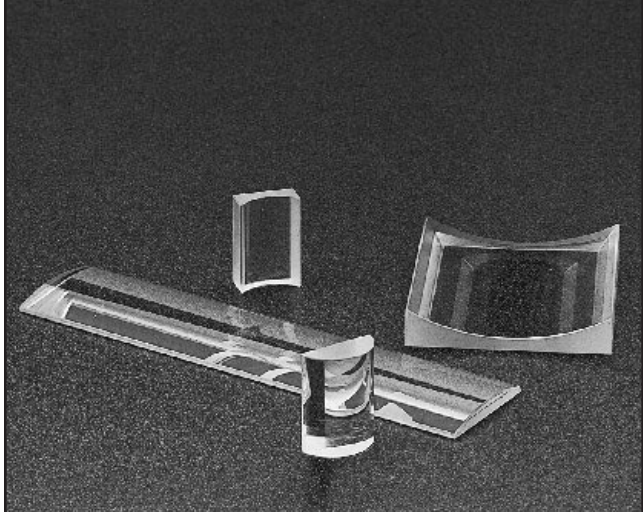


Available in:
 ✓ Production Quantities
 ✓ Custom Sizes



Precision Plano-Cylindrical Synthetic Fused-Silica Lenses

Although precision plano-cylindrical synthetic fused-silica lenses are suitable for the same applications as precision glass cylindrical lenses, they have several distinct advantages:

- They can be used over a larger spectral range (180–2100 nm) than BK7.
- They have low dispersion with a low thermal-expansion coefficient and offer better resistance to thermal shock and scratches.
- They have excellent transmission in the deep ultraviolet range.
- Antireflection and reflective coatings may be ordered by appending the appropriate coating suffix from Chapter 5, *Optical Coatings*.

SPECIFICATIONS: PRECISION PLANO-CYLINDRICAL SYNTHETIC FUSED-SILICA LENSES

Paraxial Focal Length: $f \pm 2\%$

Design Wavelength (λ_0): 587.6 nm

Surface Accuracy:

$\lambda/2$ in the y direction and $\lambda/4$ per centimeter in the x-direction, at 632.8 nm

Wedge = $\Delta t_c/x$: < 1.0 mrad within lens

Centration: ≤ 3 arc minutes (400 series ≤ 6 arc minutes)

Length: $x \pm 0.1$ mm

Width: $y \pm 0.14$ mm

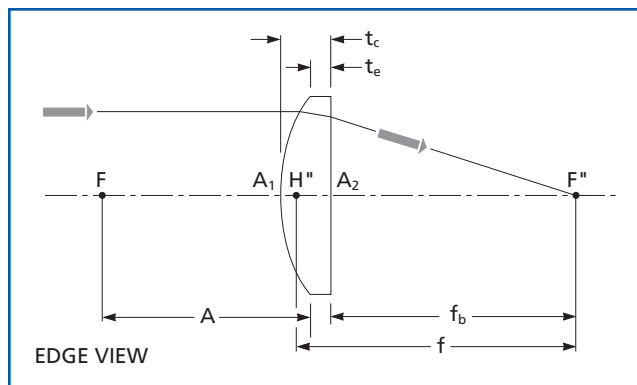
Flat Island Width (Δ): 0.75 mm ± 0.25 mm

Clear Aperture Width (x_1, y_1): see table on page 8.8

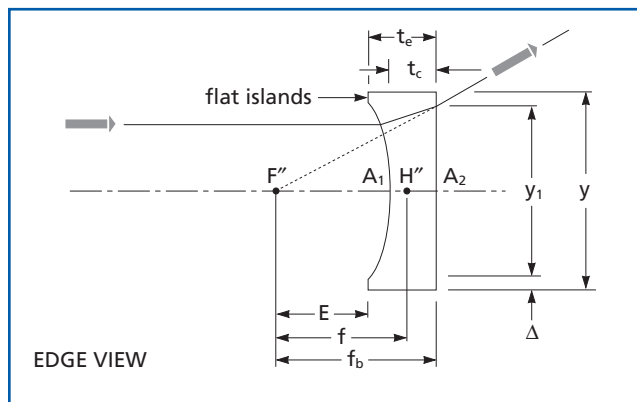
Center Thickness: $t_c \pm 0.5$ mm

Material: UV-grade synthetic fused silica

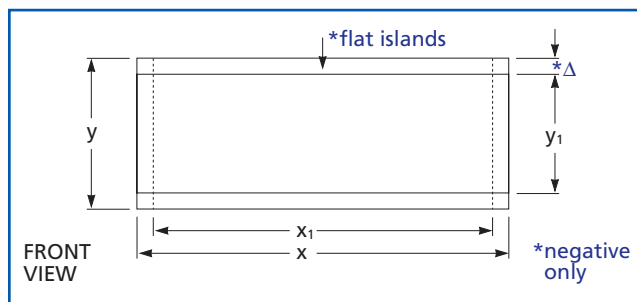
Surface Quality: Pitch polished, 60–40 scratch and dig



01 LQC precision plano-cylindrical synthetic fused-silica lenses, positive



01 LQC precision plano-cylindrical synthetic fused-silica lenses, negative



01 LQC precision plano-cylindrical synthetic fused-silica lenses

Precision Plano-Cylindrical Synthetic Fused-Silica Lenses, Positive

f (mm)	x (mm)	y (mm)	t _c (mm)	t _e (mm)	A ₂ H ⁺ (mm)	f _b (mm)	A (mm)	f/#	x ₁	y ₁	PRODUCT NUMBER
4.0	12.5	3.2	1.80	0.9	-1.20	2.8	4.9	1.25	11.0	2.75	01 LQC 403
8.0	12.5	6.5	3.80	1.9	-2.60	5.4	10.0	1.23	11.0	5.0	01 LQC 405
10.0	12.5	8.0	3.80	1.5	-2.60	7.4	12.3	1.25	11.0	6.5	01 LQC 407
12.7	25.0	10.0	3.84	1.0	-2.63	10.0	15.5	1.27	23.0	8.0	01 LQC 000
19.0	25.0	15.0	5.28	1.0	-3.62	15.4	23.3	1.27	23.0	12.0	01 LQC 001
25.0	60.0	15.0	4.79	2.0	-3.29	21.7	27.8	1.67	57.0	12.0	01 LQC 002
40.0	60.0	26.0	7.40	2.0	-5.08	34.9	45.4	1.54	57.0	23.0	01 LQC 003
50.0	60.0	26.0	6.04	2.0	-4.14	45.9	54.0	1.92	57.0	23.0	01 LQC 004
76.2	60.0	26.0	4.51	2.0	-3.09	73.1	78.7	2.93	57.0	23.0	01 LQC 005
100.0	60.0	26.0	3.88	2.0	-2.66	97.3	101.9	3.85	57.0	23.0	01 LQC 006
200.0	60.0	26.0	3.93	3.0	-2.69	197.3	200.0	7.69	57.0	23.0	01 LQC 007
300.0	60.0	26.0	3.62	3.0	-2.48	297.5	300.6	11.54	57.0	23.0	01 LQC 008

Precision Plano-Cylindrical Synthetic Fused-Silica Lenses, Negative

f (mm)	x (mm)	y (mm)	t _c (mm)	t _e (mm)	A ₂ H ⁺ (mm)	f _b (mm)	E (mm)	f/#	x ₁	y ₁	PRODUCT NUMBER
-12.7	25.0	10.0	5.0	7.1	-3.4	-16.1	9.0	-1.41	23.0	8.0	01 LQC 009
-19.0	25.0	15.0	5.0	8.5	-3.4	-22.4	13.9	-1.36	23.0	12.0	01 LQC 011
-25.4	25.0	15.0	5.0	7.3	-3.4	-28.8	21.5	-1.81	57.0	12.0	01 LQC 012
-40.0	60.0	26.0	5.0	9.9	-3.4	-43.4	33.5	-1.60	57.0	23.0	01 LQC 013
-50.0	60.0	26.0	5.0	8.7	-3.4	-53.4	44.7	-2.00	57.0	23.0	01 LQC 014
-76.2	60.0	26.0	5.0	7.3	-3.4	-79.6	72.3	-3.05	57.0	23.0	01 LQC 015
-100.0	60.0	26.0	5.0	6.7	-3.4	-103.4	96.7	-4.00	57.0	23.0	01 LQC 016
-200.0	60.0	26.0	5.0	5.9	-3.4	-203.4	107.6	-8.00	57.0	23.0	01 LQC 017
-300.0	60.0	26.0	5.0	5.6	-3.4	-303.4	297.9	-12.00	57.0	23.0	01 LQC 018