

## Fused Silica Plano Concave Lenses

- Simple negative lenses for general use
- Focal lengths from -15 to -300mm
- Diameters from 10 to 50.8mm
- Complete range of optional Anti-Reflection coatings available



These simple negative lenses have many uses. Alone they form a virtual image of a distant object or collimated light source. Used in combination with other optics they reduce the power of the system. Sharp edges, which are common in negative lenses, are removed by beveling in order to reduce the likelihood of chipping. These Ultra-Violet grade synthetic fused silica lenses are provided uncoated, however a wide range of standard Anti-Reflection coatings is available for these lenses as described on pages 18 and 19.

### Specifications & Tolerances

Focal length:  $\pm 1\%$   
 Thickness:  $\pm 0.15\text{mm}$   
 Surface quality: 20-10

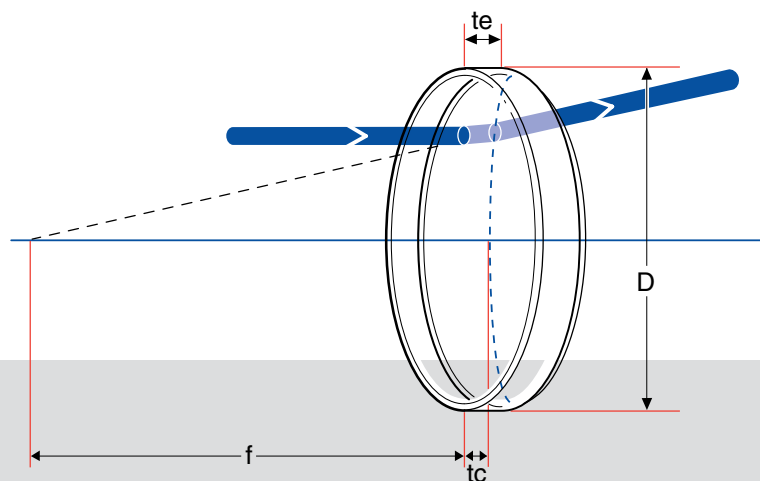
Material: Synthetic fused silica,

Diameter:  $+0, -0.1\text{mm}$

Centration:  $\leq 1\text{arcmin}$

Clear aperture:  $>90\%$

Coating: Optional (see page 18 and 19)



PLANO CONCAVE LENS

*If you need a simple lens quickly, let us know. With our next-day delivery option your system will be up and running that much sooner. And if you don't see exactly the lens that you need give us a call. We have a wide range of special focal lengths, diameters, and coatings available.*

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## Fused Silica Plano Concave Lenses

## Spherical Lenses

## Cylindrical Lenses

## Lens Kits

## Achromatic Doublets

## Multi-Element

## Micro Optics

## Mirrors

## Prisms

## Substrates &amp; Windows

## Beamsplitters

## Polarizers

## Filter &amp; Apertures

	D (mm)	f (mm)	te (mm)	tc (mm)	fb (mm)	r (mm)	Centration (arcmin)	Surface Quality	Price	PART NUMBER
	10.0	-15.0	4.1	2.0	-16.4	6.90	≤ 1	20 - 10		012-0050
	10.0	-20.0	3.5	2.0	-21.4	9.20	≤ 1	20 - 10		012-0060
	10.0	-25.0	3.1	2.0	-26.4	11.50	≤ 1	20 - 10		012-0070
	10.0	-30.0	2.9	2.0	-31.4	13.80	≤ 1	20 - 10		012-0080
	10.0	-40.0	2.7	2.0	-41.4	18.40	≤ 1	20 - 10		012-0081
	10.0	-50.0	2.6	2.0	-51.4	23.00	≤ 1	20 - 10		012-0082
	10.0	-60.0	2.5	2.0	-61.4	27.60	≤ 1	20 - 10		012-0720
	10.0	-70.0	2.4	2.0	-71.4	32.20	≤ 1	20 - 10		012-0722
	10.0	-80.0	2.3	2.0	-81.4	36.80	≤ 1	20 - 10		012-0724
	10.0	-90.0	2.3	2.0	-91.4	41.40	≤ 1	20 - 10		012-0726
	10.0	-100.0	2.3	2.0	-101.4	46.00	≤ 1	20 - 10		012-0728
	12.7	-20.0	4.5	2.0	-21.4	9.20	≤ 1	20 - 10		012-0083
	12.7	-25.0	3.9	2.0	-26.4	11.50	≤ 1	20 - 10		012-0084
	12.7	-30.0	3.5	2.0	-31.4	13.80	≤ 1	20 - 10		012-0085
	12.7	-40.0	3.1	2.0	-41.4	18.40	≤ 1	20 - 10		012-0086
	15.0	-20.0	5.9	2.0	-21.4	9.20	≤ 1	20 - 10		012-0087
	15.0	-25.0	4.8	2.0	-26.4	11.50	≤ 1	20 - 10		012-0088
	15.0	-30.0	4.2	2.0	-31.4	13.80	≤ 1	20 - 10		012-0089
	15.0	-40.0	3.6	2.0	-41.4	18.40	≤ 1	20 - 10		012-0091
	15.0	-50.0	3.3	2.0	-51.4	23.00	≤ 1	20 - 10		012-0092
	15.0	-60.0	3.0	2.0	-61.4	27.60	≤ 1	20 - 10		012-0093
	15.0	-70.0	2.9	2.0	-71.4	32.20	≤ 1	20 - 10		012-0094
	15.0	-80.0	2.8	2.0	-81.4	36.80	≤ 1	20 - 10		012-0095
	15.0	-90.0	2.7	2.0	-91.4	41.40	≤ 1	20 - 10		012-0096
	15.0	-100.0	2.6	2.0	-101.4	46.00	≤ 1	20 - 10		012-0097
	20.0	-25.0	7.8	2.0	-26.4	11.50	≤ 1	20 - 10		012-0090
	20.0	-30.0	6.3	2.0	-31.4	13.80	≤ 1	20 - 10		012-0110
	20.0	-40.0	5.0	2.0	-41.4	18.40	≤ 1	20 - 10		012-0120
	20.0	-50.0	4.3	2.0	-51.4	23.00	≤ 1	20 - 10		012-0130
	20.0	-60.0	3.9	2.0	-61.4	27.60	≤ 1	20 - 10		012-0740
	20.0	-70.0	3.6	2.0	-71.4	32.20	≤ 1	20 - 10		012-0742
	20.0	-80.0	3.4	2.0	-81.4	36.80	≤ 1	20 - 10		012-0744
	20.0	-90.0	3.2	2.0	-91.4	41.40	≤ 1	20 - 10		012-0746
	20.0	-100.0	3.1	2.0	-101.4	46.00	≤ 1	20 - 10		012-0748
	20.0	-120.0	2.9	2.0	-121.4	55.20	≤ 1	20 - 10		012-0750
	20.0	-150.0	2.7	2.0	-151.4	69.00	≤ 1	20 - 10		012-0752
	25.0	-30.0	10.0	2.0	-31.4	13.80	≤ 1	20 - 10		012-0132
	25.0	-35.0	8.0	2.0	-36.4	16.10	≤ 1	20 - 10		012-0133
	25.0	-40.0	6.9	2.0	-41.4	18.40	≤ 1	20 - 10		012-0134
	25.0	-50.0	5.7	2.0	-51.4	23.00	≤ 1	20 - 10		012-0140
	25.0	-60.0	5.0	2.0	-61.4	27.60	≤ 1	20 - 10		012-0142
	25.0	-70.0	4.5	2.0	-71.4	32.20	≤ 1	20 - 10		012-0145
	25.0	-80.0	4.2	2.0	-81.4	36.80	≤ 1	20 - 10		012-0150
	25.0	-90.0	3.9	2.0	-91.4	41.40	≤ 1	20 - 10		012-0155
	25.0	-100.0	3.7	2.0	-101.4	46.00	≤ 1	20 - 10		012-0160
	25.0	-120.0	3.4	2.0	-121.4	55.20	≤ 1	20 - 10		012-0165
	25.0	-150.0	3.1	2.0	-151.4	69.00	≤ 1	20 - 10		012-0170
	25.0	-170.0	3.0	2.0	-171.4	78.20	≤ 1	20 - 10		012-0175
	25.0	-200.0	2.9	2.0	-201.4	92.00	≤ 1	20 - 10		012-0180
	25.4	-30.0	10.4	2.0	-11.4	13.80	≤ 1	20 - 10		012-0222
	25.4	-35.0	8.2	2.0	-36.4	16.10	≤ 1	20 - 10		012-0225
	25.4	-40.0	7.1	2.0	-41.4	18.40	≤ 1	20 - 10		012-0227
	25.4	-50.0	5.8	2.0	-51.4	23.00	≤ 1	20 - 10		012-0230
	25.4	-60.0	5.1	2.0	-61.4	27.60	≤ 1	20 - 10		012-0232
	25.4	-70.0	4.6	2.0	-71.4	32.20	≤ 1	20 - 10		012-0235

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D (mm)	f (mm)	te (mm)	tc (mm)	fb (mm)	r (mm)	Centration (arcmin)	Surface Quality	Price	PART NUMBER
25.4	-80.0	4.3	2.0	-81.4	36.80	≤ 1	20 - 10		012-0240
25.4	-90.0	4.0	2.0	-91.4	41.40	≤ 1	20 - 10		012-0245
25.4	-100.0	3.8	2.0	-101.4	46.00	≤ 1	20 - 10		012-0250
25.4	-150.0	3.2	2.0	-151.4	69.00	≤ 1	20 - 10		012-0252
25.4	-200.0	2.9	2.0	-201.4	92.00	≤ 1	20 - 10		012-0254
30.0	-35.0	12.3	2.0	-36.4	16.10	≤ 1	20 - 10		012-0260
30.0	-40.0	9.7	2.0	-41.4	18.40	≤ 1	20 - 10		012-0330
30.0	-50.0	7.6	2.0	-51.4	23.00	≤ 1	20 - 10		012-0340
30.0	-60.0	6.4	2.0	-61.4	27.60	≤ 1	20 - 10		012-0342
30.0	-70.0	5.7	2.0	-71.4	32.20	≤ 1	20 - 10		012-0345
30.0	-80.0	5.2	2.0	-81.4	36.80	≤ 1	20 - 10		012-0350
30.0	-90.0	4.8	2.0	-91.4	41.40	≤ 1	20 - 10		012-0355
30.0	-100.0	4.5	2.0	-101.4	46.00	≤ 1	20 - 10		012-0360
30.0	-120.0	4.1	2.0	-121.4	55.20	≤ 1	20 - 10		012-0365
30.0	-150.0	3.7	2.0	-151.4	69.00	≤ 1	20 - 10		012-0370
30.0	-170.0	3.5	2.0	-171.4	78.20	≤ 1	20 - 10		012-0375
30.0	-200.0	3.2	2.0	-201.4	92.00	≤ 1	20 - 10		012-0380
30.0	-220.0	3.1	2.0	-221.4	101.20	≤ 1	20 - 10		012-0385
30.0	-250.0	3.0	2.0	-251.4	115.00	≤ 1	20 - 10		012-0390
40.0	-50.0	13.6	2.0	-51.4	23.00	≤ 1	20 - 10		012-0410
40.0	-60.0	10.6	2.0	-61.4	27.60	≤ 1	20 - 10		012-0412
40.0	-70.0	9.0	2.0	-71.4	32.20	≤ 1	20 - 10		012-0414
40.0	-80.0	7.9	2.0	-81.4	36.80	≤ 1	20 - 10		012-0416
40.0	-90.0	7.2	2.0	-91.4	41.40	≤ 1	20 - 10		012-0418
40.0	-100.0	6.6	2.0	-101.4	46.00	≤ 1	20 - 10		012-0420
40.0	-120.0	5.8	2.0	-121.4	55.20	≤ 1	20 - 10		012-0422
40.0	-150.0	5.0	2.0	-151.4	69.00	≤ 1	20 - 10		012-0424
40.0	-170.0	4.6	2.0	-171.4	78.20	≤ 1	20 - 10		012-0426
40.0	-200.0	4.2	2.0	-201.4	92.00	≤ 1	20 - 10		012-0428
40.0	-220.0	4.0	2.0	-221.4	101.20	≤ 1	20 - 10		012-0429
40.0	-250.0	3.8	2.0	-251.4	115.00	≤ 1	20 - 10		012-0430
50.0	-70.0	14.9	3.0	-72.1	32.20	≤ 1	20 - 10		012-0440
50.0	-80.0	12.8	3.0	-82.1	36.80	≤ 1	20 - 10		012-0445
50.0	-90.0	11.4	3.0	-92.1	41.40	≤ 1	20 - 10		012-0447
50.0	-100.0	10.4	3.0	-102.1	46.00	≤ 1	20 - 10		012-0450
50.0	-120.0	9.0	3.0	-122.1	55.20	≤ 1	20 - 10		012-0455
50.0	-150.0	7.7	3.0	-152.1	69.00	≤ 1	20 - 10		012-0460
50.0	-170.0	7.1	3.0	-172.1	78.20	≤ 1	20 - 10		012-0465
50.0	-200.0	6.5	3.0	-202.1	92.00	≤ 1	20 - 10		012-0470
50.0	-220.0	6.1	3.0	-222.1	101.20	≤ 1	20 - 10		012-0472
50.0	-250.0	5.8	3.0	-252.1	115.00	≤ 1	20 - 10		012-0475
50.0	-300.0	5.3	3.0	-302.1	138.00	≤ 1	20 - 10		012-0480
50.8	-70.0	15.4	3.0	-72.1	32.20	≤ 1	20 - 10		012-0540
50.8	-80.0	13.2	3.0	-82.1	36.80	≤ 1	20 - 10		012-0550
50.8	-90.0	11.7	3.0	-92.1	41.40	≤ 1	20 - 10		012-0555
50.8	-100.0	10.6	3.0	-102.1	46.00	≤ 1	20 - 10		012-0560
50.8	-150.0	7.8	3.0	-152.1	69.00	≤ 1	20 - 10		012-0570
50.8	-200.0	6.6	3.0	-202.1	92.00	≤ 1	20 - 10		012-0580
50.8	-250.0	5.8	3.0	-252.1	115.00	≤ 1	20 - 10		012-0585
50.8	-300.0	5.4	3.0	-302.1	138.00	≤ 1	20 - 10		012-0590

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