

BK-7 Cylindrical Plano Concave Lenses

- Wide variety of focal lengths in both precision BK7 (pages 75-77) and fused silica (pages 82-84)
- Ideal for producing line images for scanning and projection
- Available with our complete range of Anti-Reflection coatings
- Special aspect ratios available for small and large quantities

We offer a selection of very precise cylindrical lenses, both positive and negative, in glass and fused silica.

These lenses are well suited for applications which require magnification in one dimension only.

Examples include energy collection for linear detectors or for coupling to a slit input, source generation for barcode scanners, circularization of diode laser outputs, one-dimensional image compression, and other similar applications.



Cylindrical lenses are more difficult to manufacture than spherical lenses but we take great care to ensure that the lens power is confined to a single axis and that the lenses are tightly specified so that you can use them with confidence in a complex imaging system. The lenses we offer here represent some of the more general requirements of our customers. But please call if you need a different shape or size. The lenses are uncoated but our standard coatings may be applied by choice of the appropriate coating suffix (see pages 18 and 19).

Specifications & Tolerances

Focal length: $\pm 3\%$ @546.1nm

Dimensions: <60 +0, -0.1mm, 61-80 +0, -0.15mm
81-100 +0, -0.2mm

Thickness: ± 0.2 mm

Centration: ≤ 3 arcmin and ≤ 0.1 mm*

Surface quality: 20-10

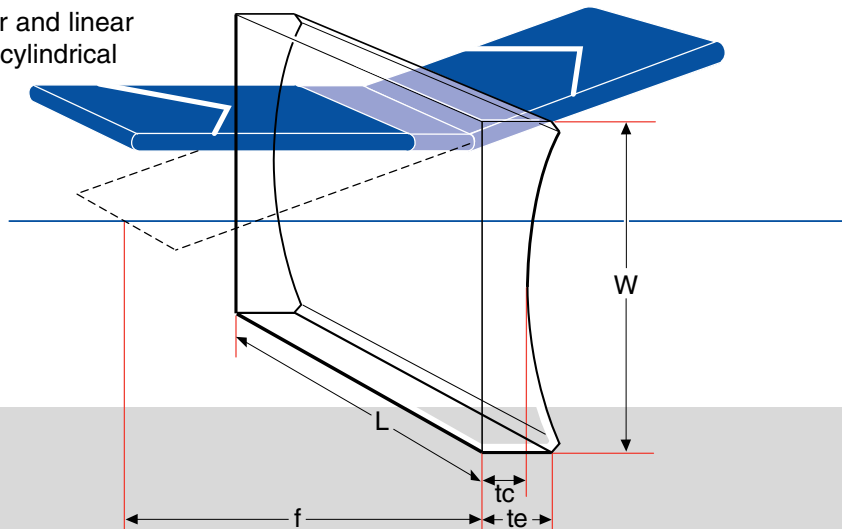
Bevel: 0.2mm @45° typical

Material: BK7

Coating: Optional broadband AR 425-675nm

(for other wavelengths see pages 18-19)

* Note that centration includes both an angular and linear component for cylindrical lenses



CYLINDRICAL PLANO CONCAVE LENS

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Multi-Element

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Mirrors

Prisms

Substrates & Windows

Beamsplitters

Polarizers

Filter & Apertures

BK-7 Cylindrical Plano Concave Lenses

UNCOATED

AR COATED
425-675nm

| | f (mm) | W X L (mm) | te (mm) | tc (mm) | fb (mm) | r (mm) | Price | PART NUMBER | Price | PART NUMBER |
|--|-----------|---------------|------------|------------|------------|-----------|-------|----------------|-------|----------------|
| | -15.0 | 10 x 10 | 4.0 | 2.2 | -16.4 | 7.79 | | 022-1110 | | 022-1110-A55 |
| | -15.0 | 10 x 20 | 4.0 | 2.2 | -16.4 | 7.79 | | 022-1120 | | 022-1120-A55 |
| | -20.0 | 10 x 10 | 3.0 | 1.7 | -21.1 | 10.38 | | 022-1130 | | 022-1130-A55 |
| | -20.0 | 10 x 20 | 3.0 | 1.7 | -21.1 | 10.38 | | 022-1131 | | 022-1131-A55 |
| | -20.0 | 15 x 15 | 5.0 | 1.8 | -21.2 | 10.38 | | 022-1139 | | 022-1139-A55 |
| | -20.0 | 15 x 25 | 5.0 | 1.8 | -21.2 | 10.38 | | 022-1140 | | 022-1140-A55 |
| | -25.0 | 10 x 10 | 3.0 | 2.0 | -26.3 | 12.98 | | 022-1150 | | 022-1150-A55 |
| | -25.0 | 10 x 20 | 3.0 | 2.0 | -26.3 | 12.98 | | 022-1151 | | 022-1151-A55 |
| | -25.0 | 15 x 15 | 5.0 | 2.6 | -26.7 | 12.98 | | 022-1159 | | 022-1159-A55 |
| | -25.0 | 15 x 25 | 5.0 | 2.6 | -26.7 | 12.98 | | 022-1160 | | 022-1160-A55 |
| | -25.0 | 20 x 20 | 7.0 | 2.3 | -26.5 | 12.98 | | 022-1170 | | 022-1170-A55 |
| | -25.0 | 20 x 40 | 7.0 | 2.3 | -26.5 | 12.98 | | 022-1180 | | 022-1180-A55 |
| | -30.0 | 10 x 10 | 3.0 | 2.2 | -31.4 | 15.57 | | 022-1190 | | 022-1190-A55 |
| | -30.0 | 10 x 20 | 3.0 | 2.2 | -31.4 | 15.57 | | 022-1191 | | 022-1191-A55 |
| | -30.0 | 15 x 15 | 4.0 | 2.1 | -31.4 | 15.57 | | 022-1218 | | 022-1218-A55 |
| | -30.0 | 15 x 25 | 4.0 | 2.1 | -31.4 | 15.57 | | 022-1220 | | 022-1220-A55 |
| | -30.0 | 20 x 20 | 6.0 | 2.4 | -31.6 | 15.57 | | 022-1225 | | 022-1225-A55 |
| | -30.0 | 20 x 40 | 6.0 | 2.4 | -31.6 | 15.57 | | 022-1230 | | 022-1230-A55 |
| | -40.0 | 10 x 10 | 3.0 | 2.4 | -41.6 | 20.76 | | 022-1240 | | 022-1240-A55 |
| | -40.0 | 10 x 20 | 3.0 | 2.4 | -41.6 | 20.76 | | 022-1243 | | 022-1243-A55 |
| | -40.0 | 15 x 15 | 4.0 | 2.6 | -41.7 | 20.76 | | 022-1247 | | 022-1247-A55 |
| | -40.0 | 15 x 25 | 4.0 | 2.6 | -41.7 | 20.76 | | 022-1250 | | 022-1250-A55 |
| | -40.0 | 20 x 20 | 5.0 | 2.4 | -41.6 | 20.76 | | 022-1255 | | 022-1255-A55 |
| | -40.0 | 20 x 40 | 5.0 | 2.4 | -41.6 | 20.76 | | 022-1260 | | 022-1260-A55 |
| | -50.0 | 20 x 20 | 4.0 | 2.0 | -51.3 | 25.95 | | 022-1270 | | 022-1270-A55 |
| | -50.0 | 20 x 40 | 4.0 | 2.0 | -51.3 | 25.95 | | 022-1280 | | 022-1280-A55 |
| | -50.0 | 30 x 30 | 7.0 | 2.2 | -51.5 | 25.95 | | 022-1283 | | 022-1283-A55 |
| | -50.0 | 30 x 40 | 7.0 | 2.2 | -51.5 | 25.95 | | 022-1285 | | 022-1285-A55 |
| | -60.0 | 20 x 20 | 4.0 | 2.4 | -61.5 | 31.14 | | 022-1290 | | 022-1290-A55 |
| | -60.0 | 20 x 40 | 4.0 | 2.4 | -61.5 | 31.14 | | 022-1295 | | 022-1295-A55 |
| | -60.0 | 30 x 30 | 6.0 | 2.1 | -61.4 | 31.14 | | 022-1320 | | 022-1320-A55 |
| | -60.0 | 30 x 40 | 6.0 | 2.1 | -61.4 | 31.14 | | 022-1330 | | 022-1330-A55 |
| | -70.0 | 20 x 20 | 4.0 | 2.6 | -71.7 | 36.33 | | 022-1332 | | 022-1332-A55 |
| | -70.0 | 20 x 40 | 4.0 | 2.6 | -71.7 | 36.33 | | 022-1334 | | 022-1334-A55 |
| | -70.0 | 30 x 30 | 5.0 | 1.8 | -71.2 | 36.33 | | 022-1335 | | 022-1335-A55 |
| | -70.0 | 30 x 40 | 5.0 | 1.8 | -71.2 | 36.33 | | 022-1336 | | 022-1336-A55 |
| | -80.0 | 20 x 20 | 4.0 | 2.8 | -81.8 | 41.52 | | 022-1340 | | 022-1340-A55 |
| | -80.0 | 20 x 40 | 4.0 | 2.8 | -81.8 | 41.52 | | 022-1345 | | 022-1345-A55 |
| | -80.0 | 30 x 30 | 5.0 | 2.2 | -81.4 | 41.52 | | 022-1347 | | 022-1347-A55 |
| | -80.0 | 30 x 40 | 5.0 | 2.2 | -81.4 | 41.52 | | 022-1350 | | 022-1350-A55 |
| | -100.0 | 20 x 20 | 4.0 | 3.0 | -102.0 | 51.90 | | 022-1360 | | 022-1360-A55 |
| | -100.0 | 20 x 30 | 4.0 | 3.0 | -102.0 | 51.90 | | 022-1361 | | 022-1361-A55 |
| | -100.0 | 20 x 50 | 4.0 | 3.0 | -102.0 | 51.90 | | 022-1363 | | 022-1363-A55 |
| | -100.0 | 30 x 30 | 5.0 | 2.8 | -101.8 | 51.90 | | 022-1364 | | 022-1364-A55 |
| | -100.0 | 30 x 50 | 5.0 | 2.8 | -101.8 | 51.90 | | 022-1370 | | 022-1370-A55 |
| | -130.0 | 20 x 20 | 4.0 | 3.3 | -132.1 | 67.47 | | 022-1371 | | 022-1371-A55 |
| | -130.0 | 20 x 30 | 4.0 | 3.3 | -132.1 | 67.47 | | 022-1372 | | 022-1372-A55 |
| | -130.0 | 20 x 50 | 4.0 | 3.3 | -132.1 | 67.47 | | 022-1374 | | 022-1374-A55 |

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UNCOATED

AR COATED
425-675nm

| f (mm) | W X L (mm) | te (mm) | tc (mm) | fb (mm) | r (mm) | Price | PART NUMBER | Price | PART NUMBER |
|-----------|---------------|------------|------------|------------|-----------|-------|----------------|-------|----------------|
| -130.0 | 30 x 30 | 5.0 | 3.3 | -132.2 | 67.47 | | 022-1375 | | 022-1375-A55 |
| -130.0 | 30 x 50 | 5.0 | 3.3 | -132.2 | 67.47 | | 022-1377 | | 022-1377-A55 |
| -150.0 | 20 x 20 | 4.0 | 3.4 | -152.2 | 77.85 | | 022-1381 | | 022-1381-A55 |
| -150.0 | 20 x 30 | 4.0 | 3.4 | -152.2 | 77.85 | | 022-1382 | | 022-1382-A55 |
| -150.0 | 20 x 50 | 4.0 | 3.4 | -152.2 | 77.85 | | 022-1384 | | 022-1384-A55 |
| -150.0 | 30 x 30 | 5.0 | 3.5 | -152.3 | 77.85 | | 022-1385 | | 022-1385-A55 |
| -150.0 | 30 x 50 | 5.0 | 3.5 | -152.3 | 77.85 | | 022-1380 | | 022-1380-A55 |
| -200.0 | 20 x 20 | 4.0 | 3.5 | -202.3 | 103.80 | | 022-1391 | | 022-1391-A55 |
| -200.0 | 20 x 30 | 4.0 | 3.5 | -202.3 | 103.80 | | 022-1392 | | 022-1392-A55 |
| -200.0 | 20 x 50 | 4.0 | 3.5 | -202.3 | 103.80 | | 022-1394 | | 022-1394-A55 |
| -200.0 | 30 x 30 | 5.0 | 3.9 | -202.6 | 103.80 | | 022-1395 | | 022-1395-A55 |
| -200.0 | 30 x 50 | 5.0 | 3.9 | -202.6 | 103.80 | | 022-1390 | | 022-1390-A55 |
| -250.0 | 20 x 20 | 4.0 | 3.6 | -252.4 | 129.75 | | 022-1411 | | 022-1411-A55 |
| -250.0 | 20 x 30 | 4.0 | 3.6 | -252.4 | 129.75 | | 022-1412 | | 022-1412-A55 |
| -250.0 | 20 x 50 | 4.0 | 3.6 | -252.4 | 129.75 | | 022-1414 | | 022-1414-A55 |
| -250.0 | 30 x 30 | 5.0 | 4.1 | -252.7 | 129.75 | | 022-1415 | | 022-1415-A55 |
| -250.0 | 30 x 50 | 5.0 | 4.1 | -252.7 | 129.75 | | 022-1410 | | 022-1410-A55 |
| -300.0 | 20 x 20 | 4.0 | 3.7 | -302.4 | 155.70 | | 022-1441 | | 022-1441-A55 |
| -300.0 | 20 x 30 | 4.0 | 3.7 | -302.4 | 155.70 | | 022-1442 | | 022-1442-A55 |
| -300.0 | 20 x 50 | 4.0 | 3.7 | -302.4 | 155.70 | | 022-1444 | | 022-1444-A55 |
| -300.0 | 30 x 30 | 5.0 | 4.3 | -302.8 | 155.70 | | 022-1445 | | 022-1445-A55 |
| -300.0 | 30 x 50 | 5.0 | 4.3 | -302.8 | 155.70 | | 022-1440 | | 022-1440-A55 |

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Filter & Apertures

For other Anti-Reflection coatings append appropriate suffix (see pages 18 and 19).
We can supply special shapes and sizes plus a wide range of alternate focal lengths on special request.



Price and availability are just a keystroke away. Call us if you need a lens quickly, chances are we'll have it in stock. Our goal is your satisfaction so that we can continue to work for you over many years to come.

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