

BICONVEX LENSES

- Have positive focal lengths
- Converge incident light
- Form both real and virtual images
- Minimise spherical aberration as well as cancel coma and distortion at a unit conjugate ratio

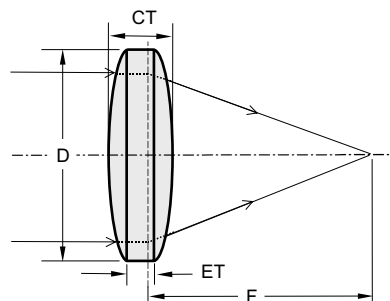
Biconvex lenses are all symmetrical, having equal radii on both sides. They are recommended for virtual imaging of real objects and for positive conjugate ratios from 0.2 up to 5. Outside this ratio range plano-convex lenses are usually more suitable. Biconvex lenses are used as magnifiers, objectives, some condensing systems.

Since both surfaces contribute to the power of biconvex lenses, they have shorter focal lengths than plano-convex lenses of equal diameter and surface radius.

Upon customer's request, lenses may be anti-reflection coated. For a required coating please refer to Coatings section.

*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.*

*Most of the lenses are available
from stock and can be shipped
the same day an order is placed.*



SPECIFICATIONS

Material	BK7, FS, UV FS
Surface quality	40–20 scratch & dig
Clear aperture	90% of the diameter
Diameter tolerance	+0.00 -0.12 mm
Thickness tolerance	±0.5 mm
Surface irregularity	λ/8 @ 633 nm
Paraxial focal length	BK7 ±2% @ 546 nm FS, UV FS ±2% @ 355 nm

BK7 Biconvex Lenses

Catalogue number BK7	Diameter D, mm		Focal length F, mm	Centre thickness CT, mm	Edge thickness ET, mm	Price, EUR
	Metric	English				
111-0104	12.5	12.7	12.7	4.8	1.2	16
111-0108	12.5	12.7	25.0	3.5	1.9	16
111-0114	12.5	12.7	40.0	2.5	2.0	16
111-0116	12.5	12.7	50.0	2.5	2.0	16
111-0118	12.5	12.7	60.0	2.5	2.0	16
111-0120	12.5	12.7	75.0	2.5	2.0	15
111-0124	12.5	12.7	100.0	2.0	1.6	15
111-0128	12.5	12.7	125.0	2.0	1.7	15
111-0132	12.5	12.7	150.0	2.0	1.7	15
111-0136	12.5	12.7	200.0	2.0	1.9	15
111-0140	12.5	12.7	250.0	2.0	1.9	15
111-0144	12.5	12.7	300.0	2.0	1.9	15
111-0148	12.5	12.7	400.0	2.0	1.9	15
111-0204	25.0	25.4	25.0	9.0	2.1	21
111-0206	25.0	25.4	30.0	7.5	2.4	21
111-0208	25.0	25.4	40.0	6.0	3.0	21
111-0210	25.0	25.4	50.0	6.0	3.0	21
111-0214	25.0	25.4	60.0	4.0	1.6	21
111-0216	25.0	25.4	75.0	4.0	2.0	21
111-0218	25.0	25.4	100.0	4.0	2.5	19
111-0222	25.0	25.4	150.0	4.0	3.0	19
111-0226	25.0	25.4	200.0	4.0	3.2	19
111-0228	25.0	25.4	250.0	4.0	3.4	19
111-0234	25.0	25.4	500.0	4.0	3.7	19
111-0240	25.0	25.4	700.0	4.0	3.8	19
111-0250	25.0	25.4	1000.0	4.0	3.8	19
111-0404	40.0	38.1	50.0	10.5	2.2	31
111-0410	40.0	38.1	100.0	6.0	2.0	31
111-0414	40.0	38.1	150.0	5.0	2.6	31
111-0418	40.0	38.1	200.0	5.0	3.0	31
111-0422	40.0	38.1	250.0	5.0	3.4	31
111-0426	40.0	38.1	300.0	5.0	3.7	31

Please add code M to the catalogue number for metric dimensions and code E for English.

Catalogue number BK7	Diameter D, mm		Focal length	Centre thickness	Edge thickness	Price, EUR
	Metric	English	F, mm	CT, mm	ET, mm	
111-0430	40.0	38.1	400.0	5.0	4.0	31
111-0434	40.0	38.1	500.0	5.0	4.2	30
111-0440	40.0	38.1	700.0	5.0	4.5	30
111-0450	40.0	38.1	1000.0	5.0	4.6	30
111-0504	50.0	50.8	50.0	15.0	1.5	51
111-0508	50.0	50.8	75.0	10.0	2.0	48
111-0514	50.0	50.8	200.0	5.0	2.0	47
111-0518	50.0	50.8	300.0	5.0	3.0	47
111-0522	50.0	50.8	400.0	5.0	3.6	47
111-0526	50.0	50.8	500.0	5.0	4.0	47
111-0534	50.0	50.8	750.0	5.0	3.4	47
111-0544	50.0	50.8	1000.0	5.0	4.4	47
111-0550	50.0	50.8	1200.0	5.0	4.5	47

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FS & UV FS Biconvex Lenses

Catalogue number		Diameter D, mm		Focal length	Centre thickness	Edge thickness	Price, EUR
UV FS	FS	Metric	English	F, mm	CT, mm	ET, mm	
111-1104	111-3104	12.5	12.7	12.7	6.0	1.8	49 / 47
111-1108	111-3108	12.5	12.7	25.0	3.5	1.8	48 / 47
111-1114	111-3114	12.5	12.7	50.0	3.0	2.1	48 / 47
111-1118	111-3118	12.5	12.7	75.0	2.5	1.9	48 / 47
111-1122	111-3122	12.5	12.7	100.0	2.3	1.9	48 / 47
111-1126	111-3126	12.5	12.7	150.0	2.2	1.9	48 / 47
111-1204	111-3204	25.0	25.4	25.0	10.0	2.4	71 / 68
111-1207	111-3207	25.0	25.4	40.0	7.1	2.1	71 / 68
111-1210	111-3210	25.0	25.4	50.0	6.0	2.5	71 / 68
111-1214	111-3214	25.0	25.4	75.0	4.0	1.7	70 / 68
111-1218	111-3218	25.0	25.4	100.0	4.0	2.3	70 / 65
111-1222	111-3222	25.0	25.4	150.0	3.2	2.1	70 / 65
111-1226	111-3226	25.0	25.4	200.0	3.0	2.2	70 / 65
111-1230	111-3230	25.0	25.4	250.0	3.0	2.3	69 / 65
111-1234	111-3234	25.0	25.4	300.0	3.0	2.6	69 / 65
111-1238	111-3238	25.0	25.4	400.0	3.0	2.7	69 / 65
111-1240	111-3240	25.0	25.4	500.0	3.0	2.7	69 / 65
111-1250	111-3250	25.0	25.4	750.0	3.0	2.9	69 / 65
111-1260	111-3260	25.0	25.4	1000.0	3.0	2.8	69 / 65
111-1404	111-3404	40.0	38.1	50.0	11.0	1.9	116 / 112
111-1410	111-3410	40.0	38.1	100.0	5.0	1.5	116 / 108
111-1414	111-3414	40.0	38.1	150.0	5.0	2.1	116 / 108
111-1418	111-3418	40.0	38.1	200.0	5.0	2.8	116 / 108
111-1422	111-3422	40.0	38.1	250.0	4.0	2.3	114 / 108
111-1426	111-3426	40.0	38.1	300.0	5.0	3.5	114 / 108
111-1430	111-3430	40.0	38.1	400.0	5.0	3.9	114 / 108
111-1434	111-3434	40.0	38.1	500.0	5.0	4.1	113 / 105
111-1440	111-3440	40.0	38.1	700.0	5.0	4.4	113 / 105
111-1460	111-3460	40.0	38.1	1000.0	4.7	4.3	113 / 105
111-1504	111-3504	50.0	50.8	50.0	16.2	1.0	149 / 145
111-1508	111-3508	50.0	50.8	75.0	10.3	1.1	148 / 145
111-1514	111-3514	50.0	50.8	100.0	10.0	2.9	147 / 145
111-1520	111-3520	50.0	50.8	175.0	6.6	3.0	147 / 145
111-1522	111-3522	50.0	50.8	200.0	7.0	3.5	147 / 144
111-1526	111-3526	50.0	50.8	250.0	6.0	3.8	147 / 144
111-1530	111-3530	50.0	50.8	300.0	6.0	4.0	146 / 144
111-1534	111-3534	50.0	50.8	500.0	6.0	4.8	146 / 144
111-1550	111-3550	50.0	50.8	1000.0	6.0	5.4	146 / 144

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Let us help with your custom requirements.

HOUSING ACCESSORIES

- Self-Centring Lens Mounts 830-0010

See page 5.44