

# Lenses (UV FS, BK7, CaF<sub>2</sub>)

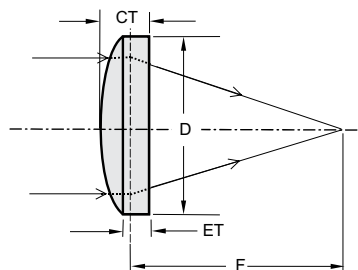
## PLANO-CONVEX LENSES

- Positive focal length
- Converge incident light
- Form both real and virtual images
- Very close to the form minimising spherical aberration for infinite conjugate applications

These simplest form lenses have flat surface on one side and spherical surface on the other. They are widely used in telescopes, microscopes, collimators, optical transceivers, magnifiers, condenser systems and eyepieces.

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

Standard lenses have a range of focal lengths – from 25 mm to 10000 mm, and diameters – from 12.5 mm to 50.8 mm.



### SPECIFICATIONS

Material	BK7, UV FS, CaF <sub>2</sub>	
Surface quality	40-20 scratch & dig (MIL-PRF-13830B)	
Clear aperture	90% of the diameter	
Diameter tolerance	+0.00 -0.12 mm	
Thickness tolerance	±0.5 mm	
Surface irregularity	λ/8 @ 633 nm	
Surface irregularity for CaF <sub>2</sub>	λ/4 @ 633 nm	
Concentricity	3 arcmin	
Paraxial focal length	BK7	±2% @ 546 nm
	UV FS	±2% @ 355 nm
	CaF <sub>2</sub>	±2% @ 2940 nm



Most of the Lenses are available for fast off-the-shelf delivery. Check the availability at [www.eksmaoptics.com](http://www.eksmaoptics.com)



*Please contact us if you can not find the lens that you need.  
We can provide a wide range of special focal lengths, diameters and coatings.*

### BK7 Plano-Convex Lenses

Catalogue number BK7	Diameter D, mm		Focal length F, mm	Centre thickness CT, mm	Edge thickness ET, mm	Price, EUR
	Metric	English				
110-0105	12.5	12.7	25.0	4.0	2.7	15
110-0107	12.5	12.7	40.0	3.0	2.3	15
110-0109	12.5	12.7	50.0	3.0	2.4	15
110-0111	12.5	12.7	60.0	3.0	2.5	15
110-0115	12.5	12.7	75.0	3.0	2.6	15
110-0117	12.5	12.7	100.0	3.0	2.7	15
110-0121	12.5	12.7	150.0	3.0	2.8	15
110-0123	12.5	12.7	200.0	3.0	2.8	15
110-0125	12.5	12.7	250.0	3.0	2.9	15
110-0129	12.5	12.7	500.0	2.1	2.0	15
110-0135	12.5	12.7	1000.0	2.1	2.0	15
110-0145	12.5	12.7	1500.0	2.1	2.1	15
110-0205	25.0	25.4	30.0	8.5	2.3	25
110-0207	25.0	25.4	40.0	6.1	2.0	20
110-0209	25.0	25.4	50.0	5.0	2.0	19

### UV FS Plano-Convex Lenses

Catalogue number UV FS	Diameter D, mm		Focal length F, mm	Centre thickness CT, mm	Edge thickness ET, mm	Price, EUR
	Metric	English				
110-1105	12.5	12.7	25.0	4.0	2.2	48
110-1109	12.5	12.7	50.0	3.0	2.2	48
110-1111	12.5	12.7	75.0	3.0	2.4	48
110-1115	12.5	12.7	100.0	3.0	2.5	48
110-1119	12.5	12.7	150.0	3.0	2.7	47
110-1123	12.5	12.7	200.0	3.0	2.8	47
110-1127	12.5	12.7	250.0	3.0	2.8	47
110-1203	25.0	25.4	30.0	9.75	2.0	70
110-1205	25.0	25.4	50.0	6.0	2.3	70
110-1209	25.0	25.4	75.0	4.5	2.2	70
110-1211	25.0	25.4	100.0	4.0	2.3	70
110-1216	25.0	25.4	125.0	4.0	2.4	70
110-1217	25.0	25.4	150.0	4.0	2.8	70
110-1219	25.0	25.4	200.0	4.0	3.2	70
110-1221	25.0	25.4	250.0	4.0	3.3	70

### BK7 Plano-Convex Lenses

Catalogue number BK7	Diameter D, mm		Focal length F, mm	Centre thickness CT, mm	Edge thickness ET, mm	Price, EUR
	Metric	English				
110-0211	25.0	25.4	60.0	4.4	2.0	19
110-0215	25.0	25.4	75.0	4.0	2.0	19
110-0219	25.0	25.4	100.0	3.5	2.0	19
110-0223	25.0	25.4	125.0	3.2	2.0	19
110-0227	25.0	25.4	150.0	3.0	2.0	19
110-0231	25.0	25.4	200.0	3.0	2.2	18
110-0235	25.0	25.4	250.0	3.0	2.4	18
110-0239	25.0	25.4	300.0	3.0	2.5	18
110-0241	25.0	25.4	350.0	3.0	2.5	18
110-0243	25.0	25.4	400.0	3.0	2.5	18
110-0245	25.0	25.4	450.0	3.0	2.7	18
110-0247	25.0	25.4	500.0	3.0	2.7	18
110-0251	25.0	25.4	700.0	3.0	2.8	18
110-0255	25.0	25.4	800.0	3.0	2.8	18
110-0259	25.0	25.4	1000.0	3.0	2.8	18
110-0263	25.0	25.4	1200.0	3.0	2.9	18
110-0265	25.0	25.4	1300.0	3.0	2.9	18
110-0267	25.0	25.4	1500.0	3.0	2.9	18
110-0271	25.0	25.4	2000.0	3.0	2.9	18
110-0275	25.0	25.4	2500.0	3.0	2.9	18
110-0281	25.0	25.4	3000.0	3.0	2.9	18
110-0285	25.0	25.4	4000.0	3.0	3.0	18
110-0289	25.0	25.4	5000.0	3.0	3.0	18
110-0295	25.0	25.4	10000.0	3.0	3.0	18
110-0405	40.0	38.1	50.0	12.0	3.0	37
110-0407	40.0	38.1	75.0	7.3	2.5	32
110-0409	40.0	38.1	100.0	6.5	2.5	29
110-0411	40.0	38.1	150.0	5.1	2.5	29
110-0415	40.0	38.1	200.0	4.3	2.5	29
110-0417	40.0	38.1	250.0	4.0	2.5	29
110-0419	40.0	38.1	300.0	4.0	2.7	29
110-0423	40.0	38.1	400.0	4.0	3.1	29
110-0427	40.0	38.1	500.0	4.0	3.4	29
110-0435	40.0	38.1	700.0	4.0	3.5	28
110-0445	40.0	38.1	1000.0	4.0	3.6	28
110-0455	40.0	38.1	5000.0	4.0	3.8	28
110-0502	50.0	50.8	75.0	12.3	3.0	55
110-0505	50.0	50.8	100.0	10.4	3.0	49
110-0507	50.0	50.8	150.0	7.2	3.0	46
110-0509	50.0	50.8	200.0	6.1	3.0	45
110-0511	50.0	50.8	250.0	5.4	3.0	45
110-0515	50.0	50.8	300.0	5.0	3.0	45
110-0519	50.0	50.8	350.0	4.7	3.0	45
110-0523	50.0	50.8	400.0	5.5	4.0	45
110-0525	50.0	50.8	500.0	5.2	4.0	45
110-0527	50.0	50.8	600.0	5.0	4.0	45
110-0529	50.0	50.8	700.0	5.0	4.1	45
110-0531	50.0	50.8	800.0	5.0	4.2	45
110-0535	50.0	50.8	1000.0	5.0	4.4	45
110-0545	50.0	50.8	2000.0	5.0	4.7	45
110-0555	50.0	50.8	5000.0	5.0	4.9	45
110-0565	50.0	50.8	10000.0	5.0	4.9	45

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

### UV FS Plano-Convex Lenses

Catalogue number UV FS	Diameter D, mm		Focal length F, mm	Centre thickness CT, mm	Edge thickness ET, mm	Price, EUR
	Metric	English				
110-1223	25.0	25.4	300.0	4.0	3.4	70
110-1227	25.0	25.4	400.0	4.0	3.6	70
110-1233	25.0	25.4	500.0	4.0	3.6	70
110-1239	25.0	25.4	750.0	4.0	3.7	70
110-1245	25.0	25.4	1000.0	4.0	3.8	69
110-1255	25.0	25.4	1500.0	4.0	3.9	69
110-1265	25.0	25.4	2000.0	4.0	3.9	69
110-1275	25.0	25.4	5000.0	4.0	4.0	69
110-1405	40.0	38.1	50.0	13.5	2.5	113
110-1409	40.0	38.1	75.0	8.6	2.5	113
110-1411	40.0	38.1	100.0	6.9	2.5	113
110-1415	40.0	38.1	150.0	5.4	2.5	113
110-1419	40.0	38.1	200.0	4.0	2.8	113
110-1423	40.0	38.1	250.0	4.0	2.2	113
110-1427	40.0	38.1	300.0	4.0	2.5	111
110-1431	40.0	38.1	400.0	4.0	2.9	111
110-1435	40.0	38.1	500.0	4.0	3.1	111
110-1439	40.0	38.1	600.0	4.0	3.2	111
110-1445	40.0	38.1	1000.0	4.0	3.5	111
110-1455	40.0	38.1	1500.0	4.0	3.7	111
110-1475	40.0	38.1	5000.0	4.0	3.9	111
110-1505	50.0	50.8	75.0	12.2	2.0	141
110-1509	50.0	50.8	100.0	9.6	2.0	138
110-1511	50.0	50.8	150.0	6.5	2.0	138
110-1515	50.0	50.8	200.0	6.0	2.5	138
110-1517	50.0	50.8	250.0	6.0	3.3	138
110-1519	50.0	50.8	300.0	6.0	3.7	138
110-1523	50.0	50.8	400.0	6.0	4.3	138
110-1527	50.0	50.8	500.0	6.0	4.7	138
110-1531	50.0	50.8	600.0	6.0	4.9	138
110-1535	50.0	50.8	800.0	6.0	4.8	138
110-1545	50.0	50.8	1000.0	6.0	5.3	138
110-1555	50.0	50.8	2000.0	6.0	5.7	138
110-1565	50.0	50.8	2500.0	6.0	5.7	138

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

We can supply custom cutting, edging, coating or complete fabrication if required.

If you do not find what you need in our list of stock items, please send your specification or drawings for a custom quotation.

### HOUSING ACCESSORIES

Self-Centering Lens Mounts  
830-0010, 830-0020

See page 8.46



### Coated Lenses Ordering Information

Please choose relevant coating from anti-reflection coatings section (pages 1.5 - 1.6). The coating code and price should be added to the lens code and price.

#### Example:

BK7 pl/cx lens Ø12.7 mm, F=1500 mm, coated AR/AR@400-700 nm, AOI=0°  
Code: **110-0145 E + 3217-i0**, Price: 15 + 56 EUR= 71 EUR/pc.

