

## PLANO-CYLINDRICAL LENSES

### Features

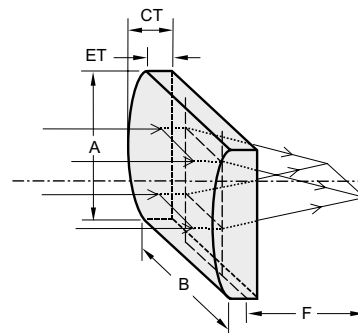
- Condense or expand light in one dimension only
- Ideal for producing line images, for scanning and projection

We offer a selection of cylindrical lenses that are either plano-convex or plano-concave in form and rectangular in shape. These lenses are used to focus light to a thin line in laser scanners, spectroscopy, dye lasers, acousto-optics, optical processors and other similar applications. They are the best for circularisation of diode laser outputs, energy collection for linear detectors or for coupling to a slit input.

Earlier remarks made about plano-convex and plano-concave spherical lenses with regard to aberrations and conjugate ratios are also applicable to cylindrical lenses.

A variety of anti-reflection coatings is available for these lenses. For an appropriate coating, please refer to the *Coatings Section*.

Please contact us for other size, focus or precision requirements. We can supply custom cutting, edging, coating or complete fabrication if required.



### Specifications

Material	BK7, UV FS	
Surface quality	40 – 20 scratch & dig (MIL-PRF-13830B)	
Clear aperture	90% of the diameter	
Size tolerance	±0.5 mm	
Thickness tolerance	±0.5 mm	
Surface irregularity	λ/4 @ 633 nm	
Paraxial focal length	BK7	±2% @ 546 nm
	UV FS	±2% @ 355 nm

### BK7 PLANO-CONVEX CYLINDRICAL LENSES

Focal length F, mm	Dimensions		Centre thickness CT, mm	Edge thickness ET, mm	Radius, mm	Catalogue number	Price, EUR
	A, mm	B, mm					
15	12.7	12.7	4.8	1.5	7.8	120-0105E	40
25	19.1	25.4	6.1	2.0	13.0	120-0110E	60
25	25.4	25.4	14	2.5	13.0	120-0202E	60
30	25.4	25.4	8.5	2.0	15.6	120-0201E	60
40	25.4	25.4	6.4	2.0	20.7	120-0203E	60
50	25.4	25.4	5.2	2.0	25.9	120-0204E	55
50	25.4	50.8	5.2	2.0	25.9	120-0205E	85
75	25.4	25.4	4.1	2.0	38.9	120-0209E	55
75	25.4	50.8	4.1	2.0	38.9	120-0210E	85
100	25.4	25.4	3.5	2.0	51.9	120-0214E	55
100	25.4	50.8	3.5	2.0	51.9	120-0215E	85
150	25.4	25.4	3.0	2.0	77.8	120-0219E	55
150	25.4	50.8	3.0	2.0	77.8	120-0220E	85
200	25.4	25.4	2.8	2.0	103.7	120-0224E	55
200	25.4	50.8	2.8	2.0	103.7	120-0225E	85
300	25.4	25.4	2.5	2.0	155.6	120-0229E	55
300	25.4	50.8	2.5	2.0	155.6	120-0230E	85
500	25.4	25.4	2.4	2.0	259.4	120-0234E	59
500	25.4	50.8	2.4	2.0	259.4	120-0235E	95
1000	25.4	25.4	2.3	2.0	518.7	120-0239E	59
1000	25.4	50.8	2.3	2.0	518.7	120-0240E	95
1500	25.4	25.4	2.2	2.0	778.1	120-0244E	59
1500	25.4	50.8	2.2	2.0	778.1	120-0245E	95

## UV FS PLANO-CONVEX CYLINDRICAL LENSES

Focal length F, mm	Dimensions		Centre thickness CT, mm	Edge thickness ET, mm	Radius, mm	Catalogue number	Price, EUR
	A, mm	B, mm					
15	12.7	12.7	4.9	2.0	7.1	120-1104E	69
25	19.1	25.4	8.0	3.0	11.9	120-1105E	97
30	25.4	25.4	10.0	2.5	14.3	120-1201E	97
40	25.4	25.4	8.0	3.1	19.0	120-1203E	97
50	25.4	25.4	7.1	3.5	23.8	120-1204E	95
50	25.4	50.8	7.1	3.5	23.8	120-1205E	170
75	25.4	25.4	5.6	3.3	35.7	120-1209E	91
75	25.4	50.8	5.6	3.3	35.7	120-1210E	170
100	25.4	25.4	4.7	3.0	47.6	120-1214E	87
100	25.4	50.8	4.7	3.0	47.6	120-1215E	161
125	25.4	25.4	4.4	3.0	59.4	120-1217E	87
150	25.4	25.4	4.1	3.0	71.3	120-1219E	87
150	25.4	50.8	4.1	3.0	71.3	120-1220E	161
200	25.4	25.4	4.3	3.5	95.1	120-1224E	87
200	25.4	50.8	4.3	3.5	95.1	120-1225E	161
250	25.4	25.4	4.2	3.5	118.9	120-1226E	87
250	25.4	50.8	4.2	3.5	118.9	120-1227E	161
300	25.4	25.4	4.1	3.5	142.7	120-1229E	87
300	25.4	50.8	4.1	3.5	142.7	120-1230E	161
500	25.4	25.4	3.8	3.5	237.8	120-1234E	95
500	25.4	50.8	3.8	3.5	237.8	120-1235E	177
1000	25.4	25.4	2.5	2.3	475.5	120-1239E	95
1000	25.4	50.8	2.5	2.3	475.5	120-1240E	177
1500	25.4	25.4	2.2	2.0	713.3	120-1244E	95
1500	25.4	50.8	2.2	2.0	713.3	120-1245E	177

## BK7 PLANO-CONCAVE CYLINDRICAL LENSES

Focal length F, mm	Dimensions		Centre thickness CT, mm	Edge thickness ET, mm	Radius, mm	Catalogue number	Price, EUR
	A, mm	B, mm					
-15	12.7	12.7	1.4	3.7	-7.8	122-0105E	40
-25	19.1	25.4	2.0	6.0	-13.0	122-0110E	60
-50	25.4	25.4	2.0	5.2	-25.9	122-0204E	55
-50	25.4	50.8	2.0	5.2	-25.9	122-0205E	85
-75	25.4	25.4	2.0	4.1	-38.9	122-0209E	55
-75	25.4	50.8	2.0	4.1	-38.9	122-0210E	85
-100	25.4	25.4	2.0	3.5	-51.9	122-0214E	55
-100	25.4	50.8	2.0	3.5	-51.9	122-0215E	85
-150	25.4	25.4	2.0	3.0	-77.8	122-0219E	55
-150	25.4	50.8	2.0	3.0	-77.8	122-0220E	85
-200	25.4	25.4	2.0	2.8	-103.7	122-0224E	55
-200	25.4	50.8	2.0	2.8	-103.7	122-0225E	85
-250	25.4	25.4	2.0	2.7	-129.7	122-0226E	55
-250	25.4	50.8	2.0	2.7	-129.7	122-0227E	85
-300	25.4	25.4	2.0	2.5	-155.6	122-0229E	55
-300	25.4	50.8	2.0	2.5	-155.6	122-0230E	85
-500	25.4	25.4	2.0	2.4	-259.4	122-0234E	59
-500	25.4	50.8	2.0	2.4	-259.4	122-0235E	95

## UV FS PLANO-CONCAVE CYLINDRICAL LENSES

Focal length F, mm	Dimensions		Centre thickness CT, mm	Edge thickness ET, mm	Radius, mm	Catalogue number	Price, EUR
	A, mm	B, mm					
-15	12.7	12.7	2.0	4.9	-7.1	122-1104E	69
-25	19.1	25.4	3.0	8.0	-11.9	122-1105E	97
-30	25.4	25.4	2.5	10.0	-14.3	122-1201E	97
-50	25.4	25.4	3.5	7.1	-23.8	122-1204E	95
-50	25.4	50.8	3.5	7.1	-23.8	122-1205E	199
-75	25.4	25.4	3.3	5.6	-35.7	122-1209E	95
-75	25.4	50.8	3.3	5.6	-35.7	122-1210E	199
-100	25.4	25.4	3.0	4.7	-47.6	122-1214E	95
-100	25.4	50.8	3.0	4.7	-47.6	122-1215E	199
-150	25.4	25.4	3.0	4.1	-71.3	122-1219E	95
-150	25.4	50.8	3.0	4.1	-71.3	122-1220E	199
-200	25.4	25.4	3.8	4.6	-95.1	122-1224E	95
-200	25.4	50.8	3.8	4.6	-95.1	122-1225E	199
-300	25.4	25.4	3.5	4.1	-142.7	122-1229E	95
-300	25.4	50.8	3.5	4.1	-142.7	122-1230E	199
-500	25.4	25.4	3.5	3.8	-237.8	122-1234E	113
-500	25.4	50.8	3.5	3.8	-237.8	122-1235E	209

### Ordering of Coated Lenses

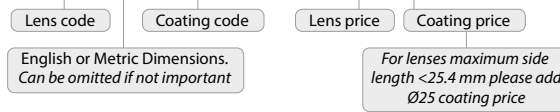
Please choose relevant coating from anti-reflection coatings section (pages 1.5 - 1.6). The coating code and price should be added to the lens code and price.

#### Example:

BK7 pl/cx cylindrical lens, dimensions: 10x10 mm, F = 15 mm, coated AR/AR @ 400-700 nm, AOI=0°

Code: **120-0105 E + ARB550**,

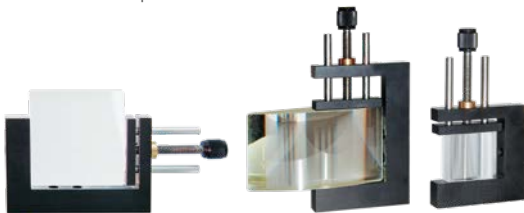
Price: 40 + 67 EUR= 107 EUR/pc.



### Housing accessories

Rectangular Optics Holders 830-0100, 830-0110

Find more at EksmaOptics.com



For applications where fine adjustment is required, use Prism Holders 840-0160, 840-0170

Find more at EksmaOptics.com

