

## Bi-Convex Lenses

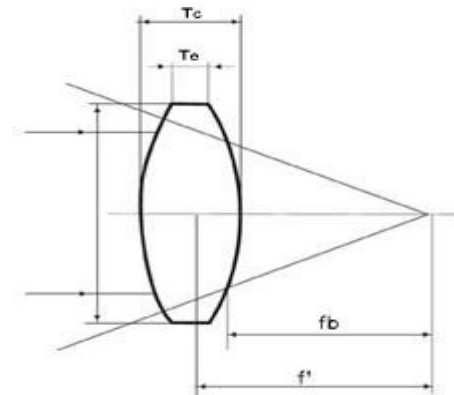
These lenses have large range of lengths and are the optimum shape for producing real images at 1:1 magnification. In a single lens application you should consider using them in preference to a single plano-convex lens if the magnification lies in the region  $-5 < -0.2$ . They are widely used in telescopes, collimators, optical transceivers, magnifiers, radiometers and condensers.



### BK7 Bi-Convex Lenses

#### Specifications:

- Material: **BK7 Grade A Fine Annealed**
- Design Wavelength: 633nm
- Design Index:  $N_d=1.515082$
- Diameter Tolerance:  $+0/-0.1\text{mm}$
- Focal Length:  $\pm 1\%$
- Centration: 3 arc minutes
- Clear Aperture:  $>90\%$
- Surface Quality: 60/40
- Surface Accuracy:  $2\lambda$
- Bevel:  $0.25\text{mm} \times 45^\circ$



Dia.(mm)	EFL(mm)	R1=R2(mm)	CT(mm)	ET(mm)	BFL(mm)	Part No.
6.00	10.00	9.87	2.43	1.50	9.16	LBCV1001
6.00	12.00	11.97	2.76	1.50	11.73	LBCV1002
6.00	15.00	15.09	2.1	1.50	14.29	LBCV1003
6.00	30.00	30.6	1.79	1.50	29.40	LBCV1004
9.00	12.00	11.72	3.6	1.80	10.75	LBCV1005
9.00	20.00	20.11	2.82	1.80	19.05	LBCV1006
12.70	15.00	14.61	4.7	1.80	13.36	LBCV1007
12.70	20.00	19.92	3.8	1.80	18.68	LBCV1008
12.70	25.00	25.16	3.43	1.80	23.84	LBCV1009
12.70	30.00	30.36	3.14	1.80	28.95	LBCV1010
12.70	40.00	40.72	2.8	1.80	39.07	LBCV1011
12.70	50.00	51.06	2.59	1.80	49.14	LBCV1012
12.70	100.00	102.64	2.19	1.80	99.27	LBCV1013
25.40	25.40	24.54	8.98	1.80	22.24	LBCV1014

25.40	30.00	29.53	7.74	2.00	27.33	LBCV1015
25.40	35.00	34.86	6.79	2.00	37.68	LBCV1016
25.40	40.00	40.14	6.12	2.00	37.93	LBCV1017
25.40	50.00	50.6	5.24	2.00	48.24	LBCV1018
25.40	60.00	61.01	4.67	2.00	58.44	LBCV1019
25.40	75.00	76.56	4.12	2.00	73.62	LBCV1020
25.40	100.00	102.4	3.58	2.00	98.81	LBCV1021
25.40	125.00	128.21	3.26	2.00	123.92	LBCV1022
25.40	190.00	154	3.05	2.00	148.99	LBCV1023
25.40	175.00	179.78	2.9	2.00	174.04	LBCV1024
25.40	200.00	205.56	2.79	2.00	199.06	LBCV1025
25.40	250.00	257.09	2.63	2.00	249.13	LBCV1026
25.40	300.00	308.62	2.52	2.00	299.17	LBCV1027
25.40	400.00	411.66	2.39	2.00	399.21	LBCV1028
25.40	500.00	514.69	2.31	2.00	499.34	LBCV1029
25.40	750.00	772.25	2.21	2.00	749.27	LBCV1030
25.40	1000.00	1029.8	2.16	2.00	999.29	LBCV1031
50.80	60.00	59.25	14.44	3.00	55.03	LBCV1032
50.80	75.00	75.19	11.84	3.00	70.99	LBCV1033
50.80	100.00	101.38	9.47	3.00	96.82	LBCV1034
50.80	125.00	127.38	8.12	3.00	122.29	LBCV1035
50.80	150.00	153.28	7.24	3.00	147.59	LBCV1036
50.80	175.00	139.15	6.62	3.00	172.80	LBCV1037
50.80	200.00	204.98	6.16	3.00	197.96	LBCV1038
50.80	250.00	256.6	5.52	3.00	248.17	LBCV1039
50.80	300.00	308.16	5.1	3.00	298.31	LBCV1040
50.80	400.00	411.29	4.57	3.00	398.49	LBCV1041
50.80	500.00	514.36	4.26	3.00	498.59	LBCV1042
50.80	750.00	771.97	3.84	3.00	748.73	LBCV1043
50.80	1000.00	1029.55	3.63	3.00	998.80	LBCV1044

## Fused Silica Bi-Convex Lenses

### Specifications:

- Material: UV Fused Silica
- Design Wavelength: 588nm
- Design Index: Nd=1.46008

- Diameter Tolerance:  $\pm 0/-0.1$ mm
- Focal Length:  $\pm 1\%$
- Centration: 3 arc minutes
- Clear Aperture:  $>90\%$
- Surface Quality: 60/40
- Surface Accuracy:  $2\lambda$
- Bevel: 0.25mm x  $45^\circ$

Dia.(mm)	EFL(mm)	R1=R2(mm)	CT(mm)	ET(mm)	BFL(mm)	Part No.
12.70	15.00	12.90	5.30	2.00	13.10	LBCV2001
12.70	20.00	17.69	4.40	2.00	18.40	LBCV2002
12.70	25.00	22.38	3.80	2.00	23.70	LBCV2003
12.70	30.00	27.04	3.50	2.00	28.80	LBCV2004
12.70	40.00	36.31	3.10	2.00	38.90	LBCV2005
25.40	25.00	21.22	10.40	2.00	21.10	LBCV2006
25.40	35.00	30.99	7.40	2.00	32.40	LBCV2007
25.40	50.00	45.10	5.70	2.00	48.00	LBCV2008
25.40	75.00	68.36	4.40	2.00	73.50	LBCV2009
25.40	100.00	91.47	3.80	2.00	98.70	LBCV2010
25.40	150.00	137.52	3.20	2.00	148.90	LBCV2011
25.40	200.00	183.58	2.90	2.00	199.00	LBCV2012
25.40	250.00	229.61	2.70	2.00	249.10	LBCV2013
25.40	300.00	275.64	2.60	2.00	299.10	LBCV2014
25.40	500.00	459.71	2.40	2.00	499.20	LBCV2015

### Other Bi-Convex Lenses

#### Specifications:

- Material: **B270, SF11, SF5**
- Diameter Tolerance:  $\pm 0/-0.1$ mm
- Focal Length:  $\pm 1\%$
- Centration: 3 arc minutes
- Clear Aperture:  $>90\%$
- Surface Quality: 60/40
- Bevel: 0.25mm x  $45^\circ$

Dia.(mm)	EFL(mm)	R1=R2(mm)	CT(mm)	ET(mm)	Material	Part No.
3.00	3.00	3.50	2.30	1.64	SF5	LBCV3001

6.00	6.00	7.59	2.54	1.29	SF5	LBCV3002
6.00	9.70	9.79	2.00	1.10	B270	LBCV3003
9.00	9.00	11.38	3.45	1.60	SF5	LBCV3004
10.00	9.80	9.65	3.30	0.50	B270	LBCV3005
11.00	50.00	51.78	3.00	2.40	B270	LBCV3006
12.00	12.00	15.34	3.85	1.40	SF5	LBCV3007
13.00	17.00	17.14	3.60	1.50	B270	LBCV3008
15.00	15.00	22.51	4.50	1.91	SF11	LBCV3009
15.00	19.00	19.14	4.10	1.20	B270	LBCV3010
15.00	22.50	34.36	4.20	2.53	SF11	LBCV3011
20.00	25.00	25.26	5.00	1.00	B270	LBCV3012
25.00	25.00	31.94	8.00	2.90	SF5	LBCV3013
25.00	38.10	38.80	6.00	1.80	B270	LBCV3014
25.00	54.00	55.67	4.70	1.90	B270	LBCV3015
25.00	63.50	65.84	3.40	1.00	B270	LBCV3016
30.00	38.10	38.52	7.50	1.50	B270	LBCV3017
30.00	63.50	65.38	6.00	2.50	B270	LBCV3018
30.00	90.00	93.38	4.40	2.00	B270	LBCV3019
40.00	75.00	77.16	7.40	2.50	B270	LBCV3020
40.00	100.00	103.67	5.40	1.70	B270	LBCV3021
50.00	50.00	74.78	16.00	7.39	SF11	LBCV3022
50.00	75.00	75.85	11.00	1.30	B270	LBCV3023
50.00	80.00	82.09	9.10	1.30	B270	LBCV3024
50.00	90.00	92.64	8.60	1.70	B270	LBCV3025
60.00	100.00	102.72	10.80	2.20	B270	LBCV3026
60.00	150.00	155.50	8.20	2.40	B270	LBCV3027
60.00	175.00	181.82	7.20	2.20	B270	LBCV3028
75.00	175.00	181.32	10.00	2.80	B270	LBCV3029