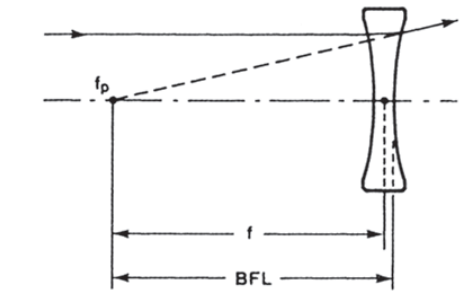
Bi-concave lenses

Bi-concave lenses, like the plano concave lenses diverge collimated light and vice versa. Because both concave surfaces contribute to light refraction bi-concave lenses can be made with shorter focal lengths than the plano concave type. They are often used with other lenses to decrease system focal length.



f = focal length
f_p = focal point
BFL = back focal length

Focal length at other wavelengths

The focal length changes as a function of wavelength (dispersion). To find the focal length at other wavelengths as listed below, multiply the focal length at 589 nm (listed in the ordering info) by the factor in the following table.

Wavelength	Factor	
(nm)	Quartz	Glass
190	0,81	-
250	0,90	-
488	0,99	0,989
633	1,003	1,003
850	1,013	1,014
1050	1,02	1,02
2000	1,046	1,05

Specifications		
Tolerance	diameter:	+0 mm; -0,25 mm
	focal length:	±2%
	back focal length:	±2%
Usable Aperture	95% of diameter	
Substrate	BK 7, Suprasil® 2	
Index of Refraction	BK 7:	1,5167 @ 589 nm
	Suprasil®:	1,4584 @ 589 nm
Surface Accuracy Error	1 – 2 λ	
Centration	within 1 – 2 min	

Ordering Information

Ø (mm)	f nominal @ 589 nm	F-Number	Quartz BFL nominal @ 589 nm	Order No.	Glass BFL nominal @ 589 nm	Order No.
12,7	-13	-1	-13,7	3-41280	-13,7	3-41261
	-25	-2	-25,7	3-41281	-25,6	3-41262
	-38	-3			-38,9	3-41263
	-50	-4	-51,3	3-41282	-51,0	3-41264
25,4	-25	-1	-25,7	3-41283	-25,6	3-41265
	-38	-1,5			-38,9	3-41266
	-50	-2	-51,3	3-41284	-51,0	3-41267
	-100	-4	-101,4	3-41285	-101,0	3-41268
38,1	-38	-1	-39,0	3-41286	-38,9	3-41269
	-50	-1,3			-51,0	3-41270
	-100	-2,6	-101,4	3-41287	-101,0	3-41271
	-250	-6,6	-251,7	3-41288	-251,0	3-41272
50,8	-50	-1	-51,3	3-41289	-51,0	3-41273
	-100	-2			-101,0	3-41274
	-250	-5	-251,5	3-41290	-251,0	3-41275
	-500	-9,8	-502,0	3-41291	-501,9	3-41276

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