Aspheric Glass Lenses - Overview

Aspheric lenses are used to correct spherical aberrations. Instead of having to use multiple lenses such aberrations can be reduced to a minimum by using a single aspheric lens. Typical applications of these lenses include the collimation of laser diodes and the focusing of a collimated beam into an optical fiber. Since output power levels continue to increase, common plastic lenses can sometimes no longer be used. LASER COMPONENTS can now offer aspheric lenses made of glass.
Each lens' specification strongly depends on its design. Find below a selection of lenses for collimation.

Lenstype	**ABX-3.0/2.0GL** bi convex	**ABX-6.3/3.1GL** bi convex	**ABX-6.3/4.0GL** bi convex	**ABX-6.3/4.5GL** bi convex	**ABX-7.2/6.2GL** bi convex	**ACX-6.5/7.5GL** meniscus	**ACX-9.9/8.0GL** meniscus	**ACX-7.2/11.0GL** meniscus
Outer dia. [mm]	3.0	6.33	6.33	6.33	7.2	6.5	9.94	7.2
Clear aperture [mm]	2.0 / 1.16	6.3 / 3.9	4.85 / 3.43	4.95 / 3.66	5.0 / 2.9	4.5 / 3.7	8.0 / 6.7	6.59 / 6.05
Center thickness [mm]	1.87	3.19	3.0	2.94	5.36	2.75	3.69	2.2
N.A.	0.5	0.68	0.6	0.55	0.4	0.3	0.5	0.3
EFL [mm]	2.0	3.10	4.0	4.51	6.24	7.5	8.0	11.0
BFL * [mm]	1.1 (0.25)	1.76 (0.25)	2.4 (0.25)	2.9 (0.25)	3.4 (0.275)	5.9 (0.25)	5.9 (0.25)	9.7 (0.275)
RMS wavefront	< 0.05 waves	< 0.1 waves	< 0.05 waves	< 0.1 waves	< 0.1 waves	< 0.05 waves	< 0.15 waves	< 0.1 waves
Surface quality	60-40	60-40	60-40	60-40	60-40	60-40	60-40	60-40
Centration [arcmin]	5′	3′	3′	3′	3′	3′	3′	3′
Wavelength [nm]	400 – 650nm 620 – 1080 nm 1050 – 1500 nm	600 – 1050 nm 1050 – 1500 nm	380 – 580nm	400 - 650nm 600 - 1050 nm 1550 nm possible	400 – 650 nm 600 – 1050 nm 1550 nm possible	600 – 1050 nm 1550 nm possible	600 – 1050 nm	600 – 1050 nm 1550 nm possible

- Low CTE glass
- RoHS compliant
  * the back focal length is calculated with cover glass BK7, thickness is mentioned in the brackets
- for use at other wavelengths please contact us

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