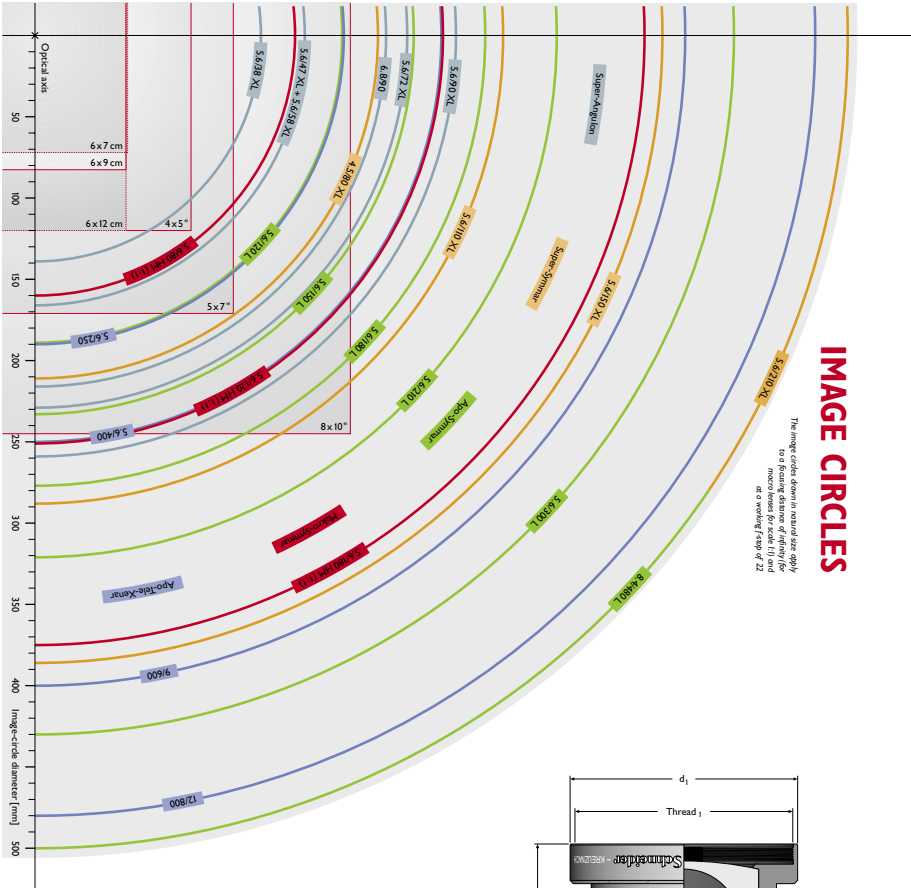


IMAGE CIRCLES

The image circle diameters in rounded data apply to the following lens models for model (I) and (II) at a working f-stop of 22.



Angle of view, image circles, and range of lens displacements															
Lens name	Rel. aperture / focal length [mm]	Recommended centerfilter type	Angle of view at full aperture [degree]	Image-circle diameter at full aperture [mm]	Angle of view at f-stop 22 [degree]	Image-circle diameter at f-stop 22 [mm]	Max. lens displacement at f-stop 22 and landscape format (for portrait format the values are to be reversed) in focus on infinity (standard lenses) or for scale 1:1 (macro lenses)								
							vertical [mm]	horizontal [mm]	vertical [mm]	horizontal [mm]	vertical [mm]	horizontal [mm]	vertical [mm]	horizontal [mm]	vertical [mm]
STANDARD LENSES (set on infinity)							6 x 7 cm	6 x 9 cm	6 x 12 cm	4 x 5"	5 x 7"	8 x 10"			
Super-Angulon	5.6/38 XL	IIa	101°	96	120°	139	↑ 31 → 28	↑ 28 → 22	↑ 7 → 4						
	5.6/47 XL	IIIc	98°	110	120°	166	↑ 47 → 42	↑ 44 → 37	↑ 29 → 18	↑ 9 → 8					
	5.6/58 XL	IIIb	96°	129	110°	166	↑ 47 → 42	↑ 44 → 37	↑ 29 → 18	↑ 9 → 8					
	5.6/72 XL	IVb	98°	166	115°	229	↑ 81 → 75	↑ 79 → 70	↑ 70 → 51	↑ 50 → 44	↑ 16 → 12				
	5.6/90 XL	IVa	96°	201	110°	259	↑ 96 → 90	↑ 95 → 85	↑ 87 → 66	↑ 67 → 60	↑ 37 → 30				
	6.8/90	IIIb	92°	188	100°	216	↑ 74 → 68	↑ 72 → 63	↑ 62 → 44	↑ 42 → 37	↑ 6 → 4				
Super-Symmar Aspheric	4.5/80 XL	IIIb	86°	150	105°	211	↑ 71 → 66	↑ 69 → 60	↑ 59 → 42	↑ 39 → 34	↑ 2 → 1				
	5.6/110 XL	IIIb	80°	186	105°	288	↑ 111 → 105	↑ 110 → 100	↑ 103 → 81	↑ 83 → 76	↑ 56 → 46				
	5.6/150 XL	IVa	80°	248	105°	386	↑ 162 → 155	↑ 161 → 150	↑ 155 → 131	↑ 135 → 127	↑ 113 → 98	↑ 52 → 44			
	5.6/210 XL	VI	81°	357	100°	500	↑ 219 → 212	↑ 219 → 207	↑ 215 → 188	↑ 195 → 185	↑ 175 → 158	↑ 121 → 108			
Apo-Symmar	5.6/120 L		62°	148	75°	189	↑ 59 → 54	↑ 57 → 49	↑ 45 → 30	↑ 25 → 21					
	5.6/150 L		62°	182	75°	233	↑ 83 → 77	↑ 81 → 72	↑ 72 → 53	↑ 52 → 46	↑ 19 → 15				
	5.6/180 L		62°	217	75°	277	↑ 106 → 100	↑ 104 → 94	↑ 97 → 76	↑ 77 → 70	↑ 48 → 40				
	5.6/210 L		62°	251	75°	321	↑ 128 → 122	↑ 127 → 117	↑ 121 → 98	↑ 101 → 93	↑ 76 → 64	↑ 7 → 5			
	5.6/300 L		62°	356	72°	430	↑ 184 → 177	↑ 183 → 172	↑ 178 → 153	↑ 158 → 150	↑ 137 → 121	↑ 80 → 69			
	8.4/480 L		44°	384	56°	500	↑ 219 → 212	↑ 219 → 207	↑ 215 → 188	↑ 195 → 185	↑ 175 → 158	↑ 121 → 108			
Apo-Tele-Xenar	5.6/250		38°	171	42°	190	↑ 60 → 55	↑ 58 → 49	↑ 46 → 31	↑ 26 → 22					
	5.6/400		36°	250	36°	250	↑ 92 → 86	↑ 90 → 81	↑ 82 → 62	↑ 62 → 55	↑ 31 → 24				
	9/600		29°	312	37°	400	↑ 169 → 162	↑ 168 → 157	↑ 163 → 138	↑ 143 → 134	↑ 121 → 106	↑ 61 → 52			
	12/800		28°	400	34°	480	↑ 209 → 202	↑ 208 → 197	↑ 204 → 178	↑ 184 → 175	↑ 164 → 147	↑ 109 → 97			
MACRO LENSES (set for scale M)							6 x 7 cm	6 x 9 cm	6 x 12 cm	4 x 5"	5 x 7"	8 x 10"			
Makro-Symmar	5.6/80 HM	1:2	47°	106	52°	120	↑ 20 → 17	↑ 15 → 12							
		1:1	47°	141	52°	160	↑ 43 → 39	↑ 40 → 34	↑ 25 → 15	↑ 4 → 4					
		2:1	47°	212	52°	239	↑ 85 → 80	↑ 83 → 75	↑ 75 → 56	↑ 55 → 49	↑ 23 → 18				
5.6/120 HM	1:2	47°	157	55°	188	↑ 58 → 54	↑ 56 → 48	↑ 44 → 30	↑ 23 → 20						
	1:1	47°	210	55°	251	↑ 92 → 86	↑ 91 → 81	↑ 82 → 62	↑ 61 → 55	↑ 30 → 24					
	2:1	47°	313	55°	375	↑ 156 → 149	↑ 155 → 144	↑ 150 → 125	↑ 129 → 121	↑ 106 → 92	↑ 44 → 37				
5.6/180 HM	1:2	47°	234	55°	281	↑ 107 → 102	↑ 106 → 96	↑ 99 → 78	↑ 79 → 72	↑ 51 → 41					
	1:1	47°	313	55°	375	↑ 156 → 149	↑ 155 → 144	↑ 150 → 125	↑ 129 → 121	↑ 106 → 92	↑ 44 → 37				
	2:1	47°	468	55°	562	↑ 250 → 244	↑ 250 → 238	↑ 247 → 220	↑ 226 → 216	↑ 207 → 189	↑ 155 → 141				