No links to other lenses

Lenses for Analog Professional Photography

Apo-Sironar-S

The Apo-Sironar-S is a lens for universal use which has been modified to provide the highest image reproduction quality. Like the Apo-Sironar-N, its applications are almost unlimited. Its special strengths can be seen when complex, fine structures in the outer part of the image circle have to be reproduced.

Its field angle has been increased to 75° and so permits even more generous shifts. Therefore, the Apo-Sironar-S is also the ideal standard lens for applications which require particularly large parallel shifts to correct the perspective. For instance, the Apo-Sironar-S 150 mm f/5.6 permits up to 10 mm more lateral or vertical shift than the equivalent Apo-Sironar-N lens.

As a result of the elimination of the secondary spectrum thanks to the use of ED glass materials with anomalous dispersion (ED = extra low dispersion), no visible color fringing occurs even at edges with extreme contrast. In addition, the light fall-off towards the image corners (vignetting) has been reduced for a more uniform illumination.

Thanks to this high optical performance in the edges of the field, the six-element Apo-Sironar-S can be used with f-stop 16 as its working aperture – a special advantage for outdoor shots due to the shorter exposure time this allows.

Apo-Sironar-S	Max. recommended film format
100 mm f/5.6	6×9 cm
135 mm f/5.6	9×12 cm / 4×5 in.
150 mm f/5.6	9×12 cm / 4×5 in.
180 mm f/5.6	13×18 cm / 5×7 in.
210 mm f/5.6	13×18 cm / 5×7 in.
240 mm f/5.6	13×18 cm / 5×7 in.
300 mm f/5.6	18×24 cm / 8×10 in.
360 mm f/6.8	18×24 cm / 8×10 in.

Data sheets

- Formats, dimensions, shutter data, image circles, movement ranges
- Performance data

Apo-Sironar-S: the ultimate large format lens with extensive adjustment reserves

Apo-Sironar-S

Back to lens description

Formats, shutter sizes, dimensions, weight

Lens	Max. recommended film format	Shutter size	Push-on mount Ø	Filter thread	Rear barrel Ø	Flange focal length [1]	Overall length	Weight w/Copal
100 mm f/5.6	6×9 cm	0	51 mm	M 49 × 0.75	31.5 mm	99.0 mm	42.6 mm	190 g
135 mm f/5.6	9×12 cm / 4×5 in.	0	51 mm	M 49 × 0.75	48.0 mm	132.0 mm	47.5 mm	240 g
150 mm f/5.6	9×12 cm / 4×5 in.	0	51 mm	M 49 × 0.75	51.0 mm	147.0 mm	51.5 mm	250 g
180 mm f/5.6	13×18 cm / 5×7 in.	1	70 mm	M 67 × 0.75	60.0 mm	177.0 mm	60.5 mm	410 g
210 mm f/5.6	13×18 cm / 5×7 in.	1	75 mm	M 72 × 0.75	65.0 mm	202.0 mm	69.5 mm	490 g
240 mm f/5.6	13×18 cm / 5×7 in.	3	90 mm	M 86 × 1	80.0 mm	230.0 mm	82.0 mm	980 g
300 mm f/5.6	18×24 cm / 8×10 in.	3	105 mm	M 100 × 1	80.0 mm	277.0 mm	98.5 mm	1210 g
360 mm f/6.8	18×24 cm / 8×10 in.	3	117 mm	M 112 × 1.5	80.0 mm	330.0 mm	120.0 mm	1560 g

[1] With Copal shutter for scale 1:∞

Shutter data

Shutter type and size	Shutter speeds range	Manual cocking	Self cocking	Mechanical	Electronic	x-synchronized	Smallest f-stop increments	Screw thread	Lens board opening	Lens board thickness	Accessories required
Copal 0	B, T, 1/500 s … 1 s	•		•		•		M 32.5 × 0.5	34.8 mm	1.5 … 4.0 mm	
Copal 1	B, T, 1/400 s … 1 s	•		•		•		M 39 × 0.75	41.8 mm	1.5 … 3.0 mm	
Copal 3	B, 1/125 s … 1 s	•		•		•		M 62 × 0.75	65.3 mm	1.5 … 5.0 mm	
Copal Press 0	B, 1/125 s … 1 s		•	•		•		M 32.5 × 0.5	34.8 mm	1.5 … 3.0 mm	
Copal Press 1	B, 1/125 s … 1 s		•	•		•		M 39 × 0.75	41.8 mm	1.5 … 2.0 mm	
Rollei Electron. 0	B, 1/500 s … 30 s				•	•	1/10	M 39 × 0.75	41.8 mm	1.5 … 3.0 mm	Control Unit
Rollei Electron. 1	B, 1/300 s … 30 s				•	•	1/10	M 39 × 0.75	41.8 mm	1.5 … 3.0 mm	Control Unit

Working apertures, image angles, image circles and movement ranges

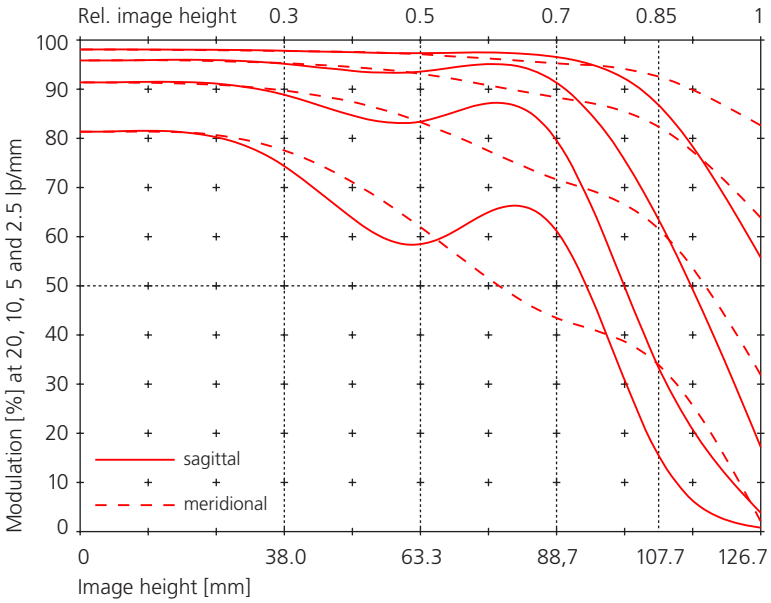
Lens	Image scale	Working f-stop	Image angle	Image circle diameter	Movement range [mm] [2] vertical/horizontal (landscape format) 6×7 cm	6×9 cm	6×12 cm	4×5 in.	5×7 in.	8×10 in.
100 mm f/5.6	1:∞	11-22	75°	155 mm	41 / 38	36 / 28	24 / 13	1 / 1		
135 mm f/5.6	1:∞	11-22	75°	208 mm	77 / 66	66 / 56	59 / 43	37 / 32		
150 mm f/5.6	1:∞	11-22	75°	231 mm	82 / 78	79 / 68	72 / 55	51 / 45	17 / 13	
180 mm f/5.6	1:∞	16-32	75°	276 mm	105 / 101	103 / 91	98 / 78	76 / 69	48 / 39	
210 mm f/5.6	1:∞	16-32	75°	316 mm	126 / 121	124 / 112	119 / 98	98 / 90	73 / 61	3 / 2
240 mm f/5.6	1:∞	16-32	75°	372 mm	155 / 150	153 / 140	149 / 127	128 / 120	105 / 91	43 / 36
300 mm f/5.6	1:∞	22-45	75°	448 mm	193 / 188	192 / 179	189 / 165	168 / 159	147 / 131	90 / 79
360 mm f/6.8	1:∞	22-45	68°	468 mm	203 / 198	202 / 188	199 / 175	178 / 169	157 / 141	102 / 90

[2] These values apply to the recommended working aperture at the given scale; with increasing scale image circle and movement ranges increase

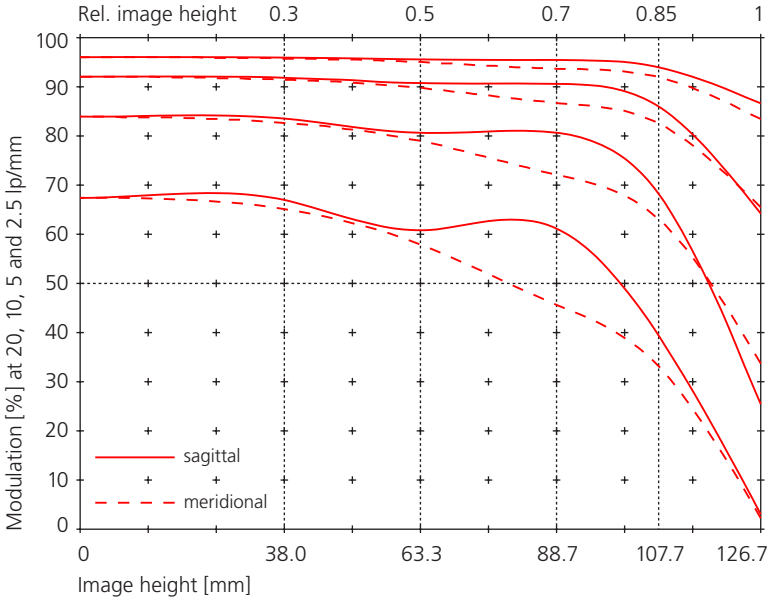
Apo-Sironar-S 150 mm f/5.6

Back to lens description

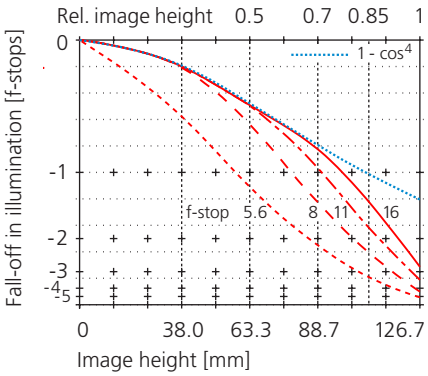
Modulation transfer function Scale 0.1x f-stop 11



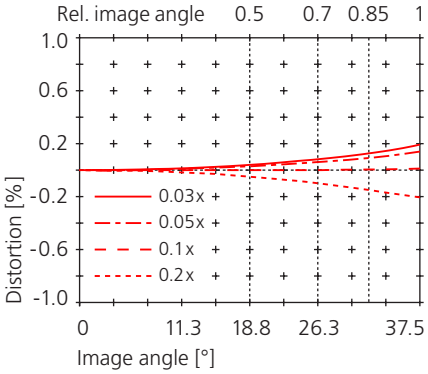
Modulation transfer function Scale 0.1x f-stop 22



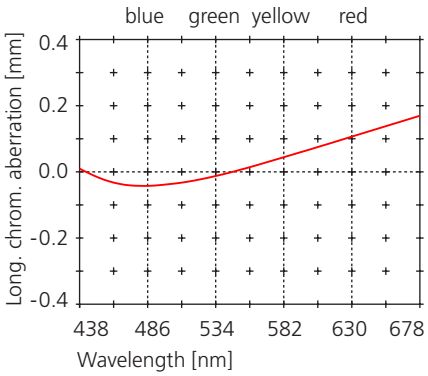
Fall-off in illumination Scale 0.1x



Distortion Scale 0.03x ... 0.2x



Long. chrom. aberration Scale 0.1x



All spatial frequencies [line pairs/mm], image heights [mm] and scales are related to the film or sensor side