

No links to other lenses

Lenses for Digital Professional Photography

Apo-Sironar digital / Apo-Macro-Sironar digital

This line of Rodenstock lenses provides the photographer with an exhaustive spectrum of focal lengths for digital shots in the very highest imaging quality with adjustable professional cameras. The fine gradation of focal lengths meets the demands of every motif and all chip or scan back formats. Focal lengths from 35 mm mean that real wide-angle shots are possible, even with the smaller area sensor sizes, while still allowing large movements. All Apo-Sironar digital lenses are characterized by excellent sharpness and brilliance together with total freedom from color fringes in real apo quality.

Due to the small formats on the one hand (which are sensitive to higher diffraction!) and the high illumination requirements of the CCD image sensor on the other, digital photography does not allow the lenses to be stopped down as much as in conventional large-format photography. As a result, these lenses have been optimized for a working aperture of 8 to 11. Because both the surface of the area sensors and the area scanned by the CCD line sensors have greater planarity than conventional roll and sheet films, special attention was given to the correction of the curvature of field. The freedom from distortion, which is so important for product and building photography, and the uniformity of illumination are also excellent.

The Apo-Macro-Sironar digital provides a special macro lens at the same superb performance level of the Rodenstock Apo-Sironar digital series for high-resolution digital photos at reproduction scales from 1:5 to 2:1.

Apo-Sironar digital	Max. recommended format
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35 mm f/4.5	46×58 mm
45 mm f/4.5	72×96 mm
55 mm f/4.5	72×96 mm
90 mm f/5.6	72×96 mm
105 mm f/5.6	72×96 mm
135 mm f/5.6	72×96 mm
150 mm f/5.6	72×96 mm
180 mm f/5.6	72×96 mm

Apo-Macro-Sironar digital	
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120 mm f/5.6	72×96 mm
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Data sheets

► [Formats, dimensions, shutter data, image circles, movement ranges](#)

► [Performance data 1](#)

► [Performance data 2](#)

**Apo-Sironar digital: sharp and brilliant,
with the best flatness of field,
free from color fringes and from distortion**

Apo-Sironar digital / Apo-Macro-Sironar digital

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Formats, shutter sizes, dimensions, weight

Lens	Maximum format	Shutter size	Push-on mount Ø	Filter thread	Rear barrel Ø	Flange foc. length ¹⁾	Flange to lens end	Overall length	Weight w/Copal
35 mm f/4.5	46×56 mm	0	70 mm	M 67 × 0.75	60.0 mm	43.2 mm	24.7 mm	58.8 mm	220 g
45 mm f/4.5	72×96 mm	0	70 mm	M 67 × 0.75	60.0 mm	55.5 mm	30.0 mm	70.5 mm	350 g
55 mm f/4.5	72×96 mm	0	70 mm	M 67 × 0.75	60.0 mm	67.6 mm	32.0 mm	73.8 mm	400 g
90 mm f/5.6	72×96 mm	0	70 mm	M 67 × 0.75	60.0 mm	93.1 mm	33.2 mm	82.0 mm	460 g
105 mm f/5.6	72×96 mm	0	51 mm	M 49 × 0.75	31.5 mm	100.0 mm	13.8 mm	48.6 mm	170 g
135 mm f/5.6	72×96 mm	0	51 mm	M 49 × 0.75	48.0 mm	132.0 mm	19.0 mm	53.6 mm	240 g
150 mm f/5.6	72×96 mm	0	51 mm	M 49 × 0.75	51.0 mm	147.0 mm	22.0 mm	57.4 mm	250 g
180 mm f/5.6	72×96 mm	1	70 mm	M 67 × 0.75	60.0 mm	177.0 mm	25.5 mm	65.2 mm	410 g
120 mm f/5.6	72×96 mm	0	51 mm	M 49 × 0.75	40.5 mm	236.0 mm	16.1 mm	49.8 mm	220 g

¹⁾ With Copal shutter for scale 1:∞, Apo-Macro-Sironar digital 120 mm f/5.6 for scale 1:1

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 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

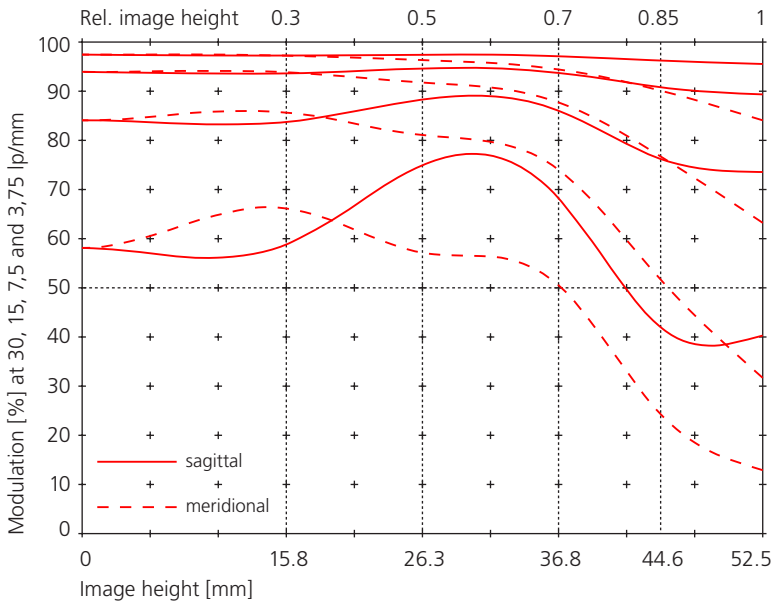
Lens	Image scale	Working f-stop	Image angle	Image circle diameter	Movement range [mm] ²⁾ vertical/horizontal (landscape format)					
					24×36 mm	37×37 mm	37×49 mm	46×58 mm	72×88 mm	72×96 mm
35 mm f/4.5	1:∞	8-11	111°	105 mm	37 / 33	31 / 31	29 / 25	21 / 18		
45 mm f/4.5	1:∞	8-11	107°	125 mm	48 / 43	41 / 41	40 / 36	32 / 29	8 / 7	4 / 3
55 mm f/4.5	1:∞	8-11	95°	125 mm	48 / 43	41 / 41	40 / 36	32 / 29	8 / 7	4 / 3
90 mm f/5.6	1:∞	8-11	70°	125 mm	48 / 43	41 / 41	40 / 36	32 / 29	8 / 7	4 / 3
105 mm f/5.6	1:∞	8-11	62°	125 mm	48 / 43	41 / 41	40 / 36	32 / 29	8 / 7	4 / 3
135 mm f/5.6	1:∞	8-11	58°	150 mm	61 / 56	54 / 54	53 / 49	46 / 42	25 / 22	21 / 18
150 mm f/5.6	1:∞	8-11	53°	150 mm	61 / 56	54 / 54	53 / 49	46 / 42	25 / 22	21 / 18
180 mm f/5.6	1:∞	8-11	45°	150 mm	61 / 56	54 / 54	53 / 49	46 / 42	25 / 22	21 / 18
120 mm f/5.6	1:5 - 2:1	8-11	55° - 24°	150 mm	61 / 56	54 / 54	53 / 49	46 / 42	25 / 22	21 / 18

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

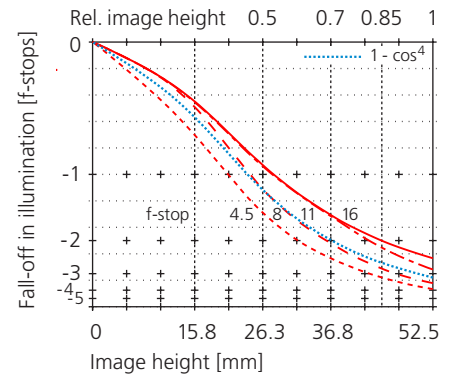
Apo-Sironar digital 35 mm f/4.5

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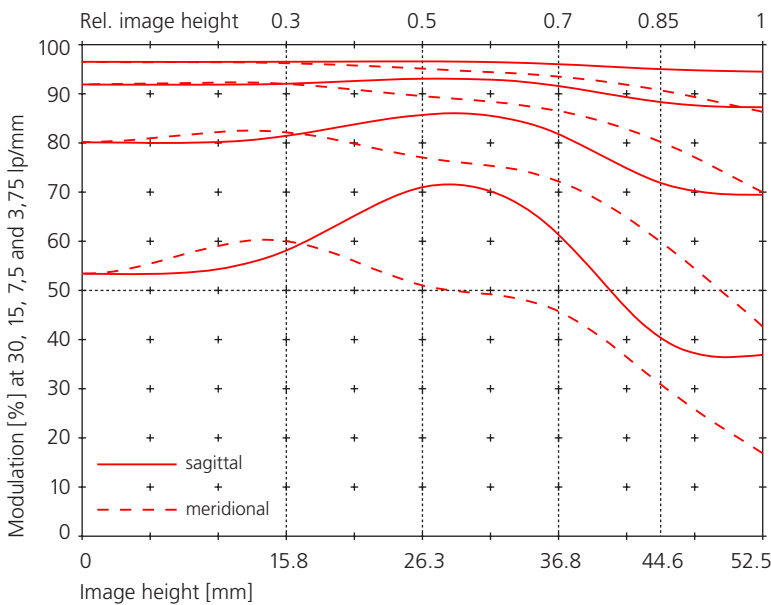
Modulation transfer function Scale 0.02x f-stop 8



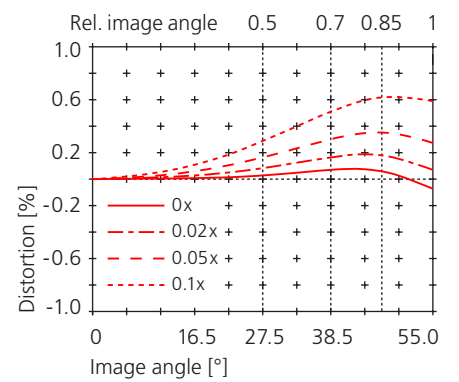
Fall-off in illumination Scale 0.02x



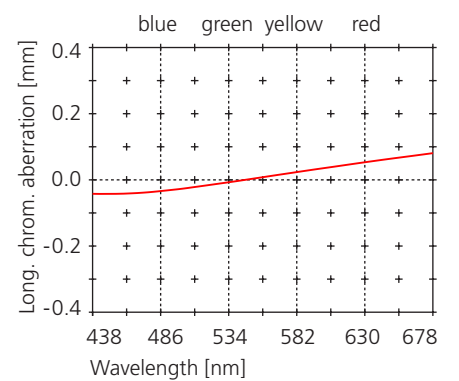
Modulation transfer function Scale 0.02x f-stop 11



Distortion Scale 0x ... 0.1x



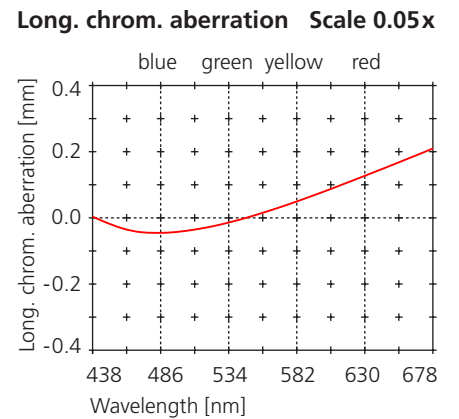
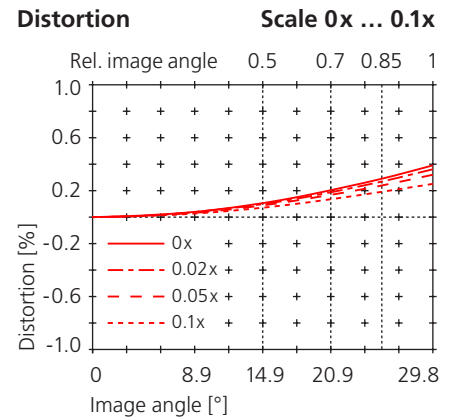
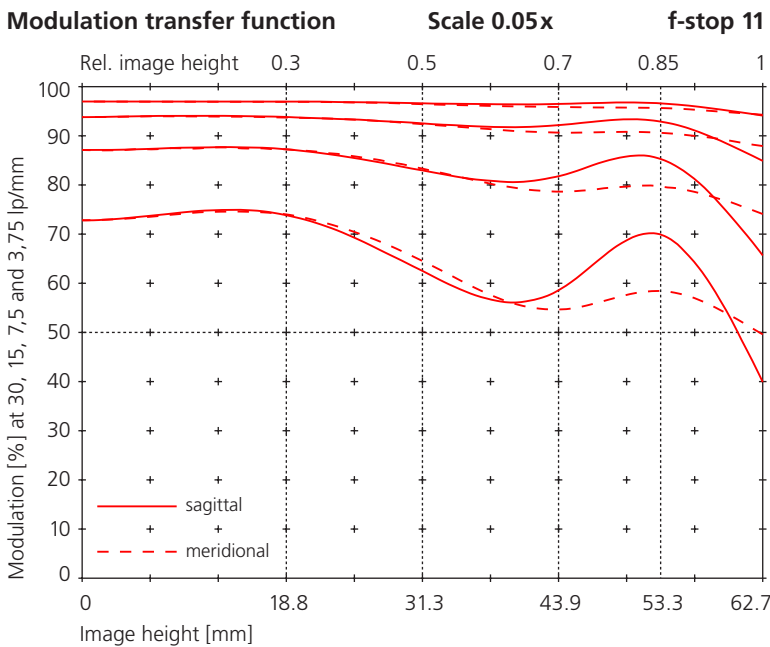
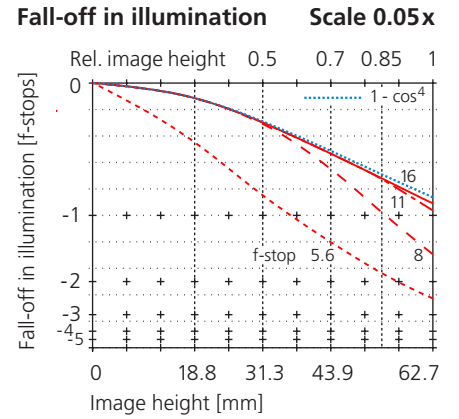
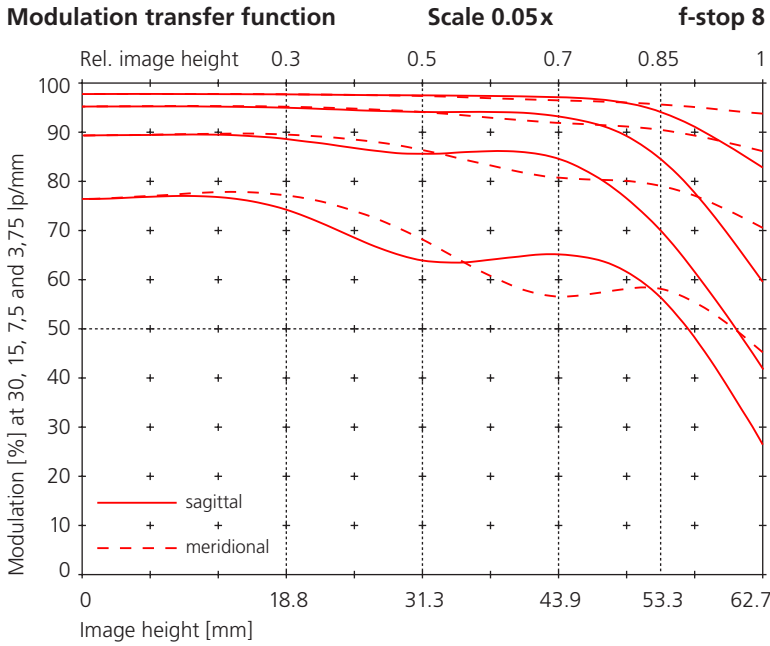
Long. chrom. aberration Scale 0.02x



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

Apo-Sironar digital 105 mm f/5.6

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