



# LEICA **SUMMICRON-S** 100 mm f/2 ASPH.

Technical Data.



Illustration 1:2

## TECHNICAL DATA

<b>Order no.</b>	11056
<b>Field angle</b> (diagonal, horizontal, vertical)	approx. 29°, 24,7°, 16,4°, corresponds to approx. 80 mm focal length in 35 mm format
<b>Optical design</b>	
Number of lenses/groups	7 / 5
Aspherical surfaces	2
Entrance pupil position (at infinity / close up limit)	13/38 mm (in direction of light incidence, in front of bayonet mounting surface)
<b>Distance setting</b>	
Working range	0,7m bis ∞
scales	Combined metric / imperial measures
Smallest object field / Maximum scale	approx. 144 x 217 mm / 1:5
<b>Aperture</b>	
Setting / Function	Electronically controlled aperture, set using turn/push wheel on camera, including half values
Lowest value	22
<b>Bayonet fitting</b>	Leica S quick-change bayonet with contact strip for Leica S models
<b>Filter mount</b>	External bayonet fitting for lens hood (included), internal thread for E82 filters, filter mount does not rotate
<b>Finish</b>	Black anodized
<b>Dimensions and weight</b>	
Length to bayonet mount	approx. 102/146mm (without/with lens hood)
Largest diameter	approx. 91/104mm (without/with lens hood)
Weight	approx. 910/965g (without/with lens hood)



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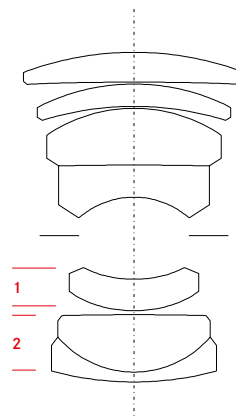
Technical Data.

## ENGINEERING DRAWING



Illustration 1:2

## LENS SHAPE



- 1 ASPH.
- 2 FLOATING ELEMENT

The fastest lens for the S-System is a practically perfect portrait lens with creative versatility and shallow depth of field comparable with the Summilux lenses for 35 mm cameras and optical performance previously unattained in medium-format photography. Its exceptional imaging performance remains at a constantly high level at all apertures and from infinity to its closest focusing distance. At the same time, its high speed and optimum flare suppression guarantee enormous flexibility in even the most critical lighting scenarios.

Of its seven lens elements in five groups, one is a double-sided aspherical that minimises monochromatic aberrations. Three glasses with anomalous partial dispersion ensure extremely well-balanced chromatic correction. As a floating element, the rearmost cemented element ensures exceptional contrast at all distance settings. The particularly sophisticated multilayer coating used in the lens guarantees perfectly neutral rendition of colours.

Although the Summicron-S 100 mm f/2 ASPH. features full-system focusing, its special construction provides a constant barrel length that ensures extreme resilience by sealing the system effectively against dust and moisture. The particularly hard glasses of the front and rear lens elements contribute to a long working life, even under unfavourable conditions. The optimised lens hood can be reversed and slipped over the lens barrel to save space in the camera case or bag.



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Lens with lens hood, illustration 1:2



Lens hood in transport position, illustration 1:2

## SCOPE OF DELIVERY

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Lens cover (Order no. 16020), Rear lens cover (Order no. 16019),  
Lens pouch (Order no. 439-606.101-000), Lens hood (Order no. 12405)

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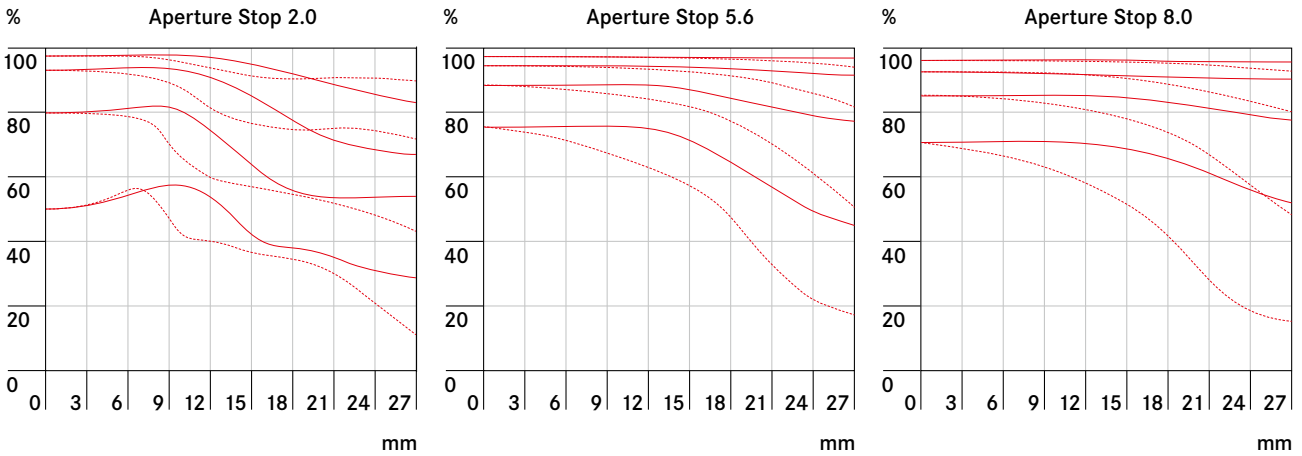


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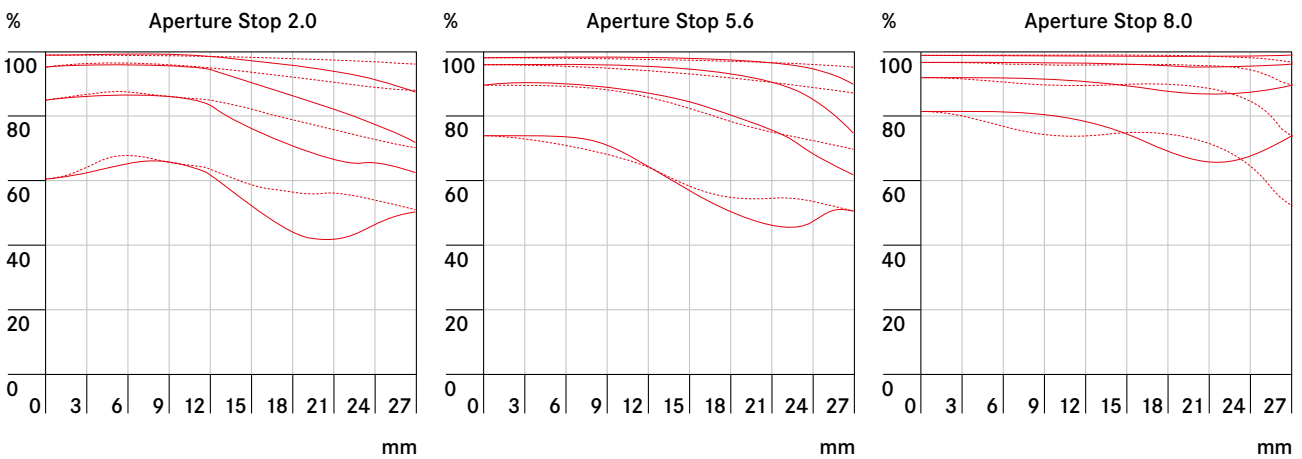
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### MTF DIAGRAMS

#### Focusing distance



#### Infinity ( $\infty$ )



— Sagittal structures  
 ..... Tangential structures

### MTF GRAPHS

The MTF is indicated both at full aperture and at f/5.6 and f/8 at long taking distances (infinity). Shown is the contrast in percentage for 5, 10, 20 and 40 lp/mm across the height of the 35 mm film format, for tangential (dotted line) and sagittal (solid line) structures, in white light. The 5 and 10 lp/mm will give an indication regarding the contrast ratio for large object structures. The 20 and 40 lp/mm records the resolution of finer and finest object structures.

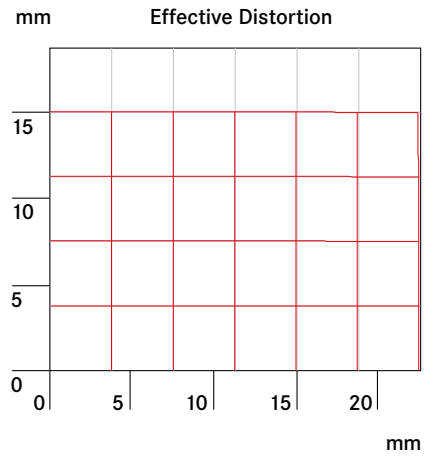
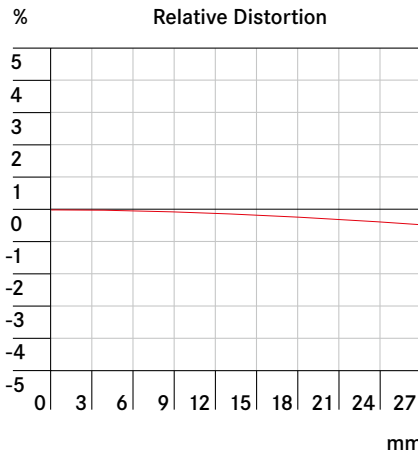
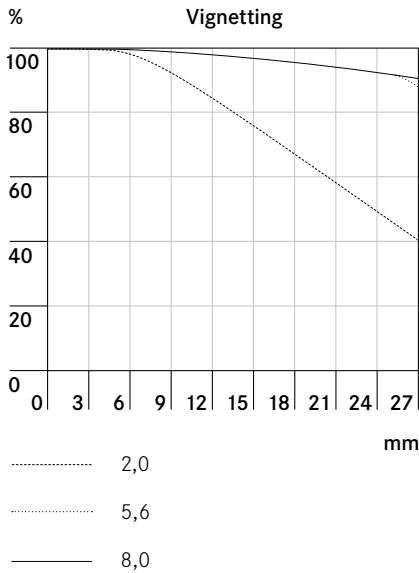


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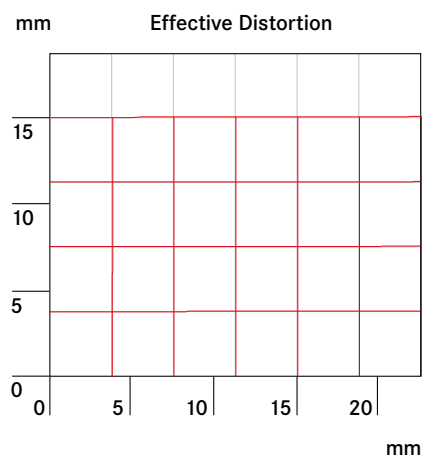
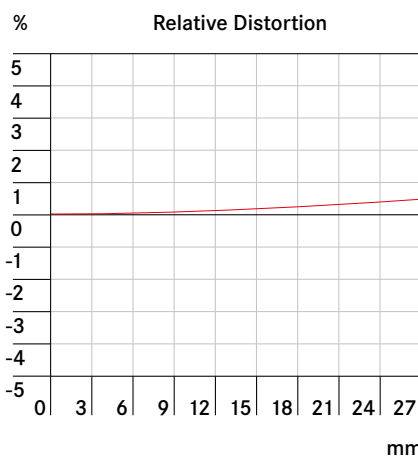
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### VIGNETTING-/DISTORTION DIAGRAM

#### Focusing distance



#### Infinity ( $\infty$ )



#### DISTORTION & VIGNETTING

Distortion is the deviation of the real image height (in the picture) from the ideal image height. The relative distortion is the percentage deviation. The ideal image height results from the object height and the magnification. The image height of 27.04 mm is the radial distance between the edge and the middle of the image field for the format 30 mm × 45 mm. The graph of the effective distortion illustrates the appearance of straight horizontal and vertical lines in the picture.

Vignetting is a continuous decrease of the illumination to the edges of the image field. The graph shows the percentage loss of illumination over the image height. 100 % means no vignetting.



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DEPTH OF FIELD TABLE

	Aperture Stop							Magnification
	2,0	2,8	4	5,6	8	11	16	
0,7	0,697-0,703	0,697-0,703	0,695-0,705	0,694-0,707	0,691-0,709	0,688-0,713	0,682-0,719	1/4,8
0,8	0,797-0,804	0,796-0,804	0,794-0,806	0,791-0,809	0,788-0,813	0,783-0,818	0,776-0,826	1/5,8
0,9	0,896-0,905	0,894-0,906	0,892-0,908	0,889-0,912	0,884-0,917	0,878-0,924	0,868-0,935	1/6,8
1	0,994-1,006	0,993-1,007	0,990-1,011	0,985-1,015	0,979-1,022	0,972-1,030	0,960-1,044	1/7,8
1,2	1,192-1,209	1,189-1,211	1,184-1,216	1,178-1,223	1,169-1,233	1,158-1,245	1,140-1,267	1/9,8
2	1,975-2,025	1,968-2,033	1,954-2,048	1,936-2,068	1,910-2,099	1,879-2,139	1,829-2,208	1/17,7
3	2,944-3,059	2,926-3,078	2,895-3,113	2,855-3,161	2,797-3,235	2,728-3,333	2,621-3,511	1/27,6
5	4,843-5,168	4,793-5,226	4,709-5,330	4,602-5,474	4,451-5,707	4,275-6,027	4,012-6,650	1/47,2
10	9,384-10,704	9,193-10,964	8,885-11,438	8,506-12,137	7,995-13,362	7,438-15,294	6,664-20,160	1/96,2
$\infty$	150,121- $\infty$	112,164- $\infty$	78,509- $\infty$	56,106- $\infty$	39,300- $\infty$	28,602- $\infty$	19,685- $\infty$	1/ $\infty$



Set distance [m]