

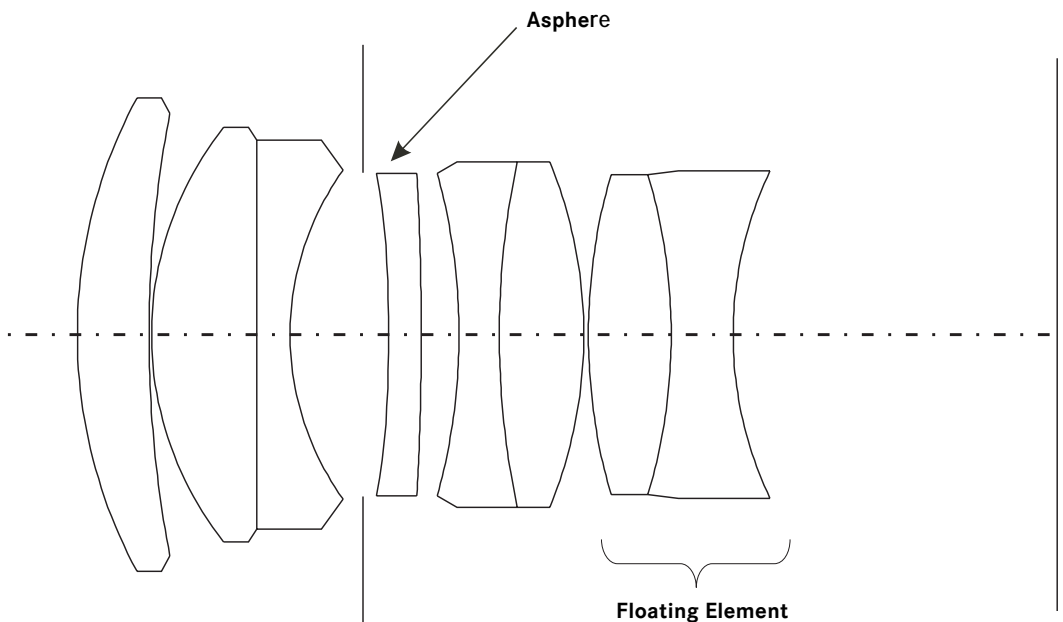


LEICA SUMMILUX-M 50 mm f/1.4 ASPH.



Leica Camera AG has unveiled a new highspeed standard lens for the Leica M System offering maximum imaging performance: the new LEICA SUMMILUX-M 50mm f/1.4 ASPH. It supersedes the predecessor lens with the same speed, which, notwithstanding a few minor modifications, had been part of our range since 1962. The aim of this new development was to create a reference lens to push the technical boundaries of photography using standard focal lengths into new dimensions. The LEICA SUMMILUX-M 50mm f/1.4 ASPH. delivers virtually the same outstanding performance throughout all apertures and focus settings. Whether using selective focus at close range, high-contrast available light applications or an extended depth of field to capture landscapes, the LEICA SUMMILUX-M 50mm f/1.4 ASPH. handles every situation with ease. It therefore delivers on its promise to be a genuine universal lens in impressive fashion. Every innovation currently available in lens technology – aspherical lenses, glass with anomalous partial dispersion, glass with a high refraction index and a floating element – has been combined to create a lens that sets the new standard in this focal length class.

— Lens shape





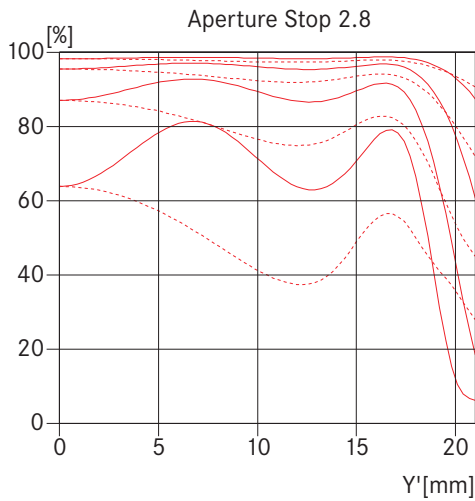
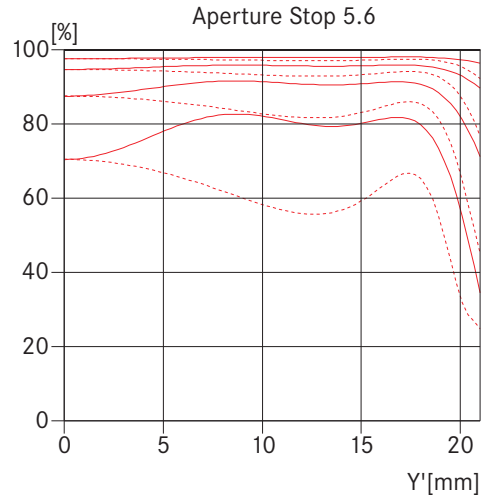
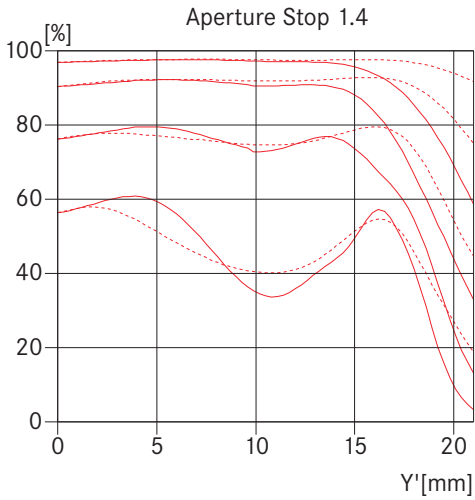
— Engineering drawing

Technical Data

Angle of view (diagonal, horizontal, vertical)	47°, 40°, 27°
Optical design	Number of elements / groups: 8 / 5 Focal length: 51.6 mm Entrance pupil: 25.7 mm (related to the first lens surface in light direction) Focusing range: 0.7 m to Infinity
Distance setting	Scale: combined meter/feet-increments Smallest object field: 271 x 407 mm Highest reproduction ratio: 1:11.3
Diaphragm	Setting / Type: Preset, with click-stops, half values available Smallest aperture: f/16
Bayonet	Leica M quick-change bayonet
Filter (type)	Internal thread for screw-on filters size E46, non-rotating
Lens hood	Built-in, telescopic, lockable
Dimensions and weight	Length: 52.5 mm Largest diameter: 53.5 mm Weight: approx. 335 g



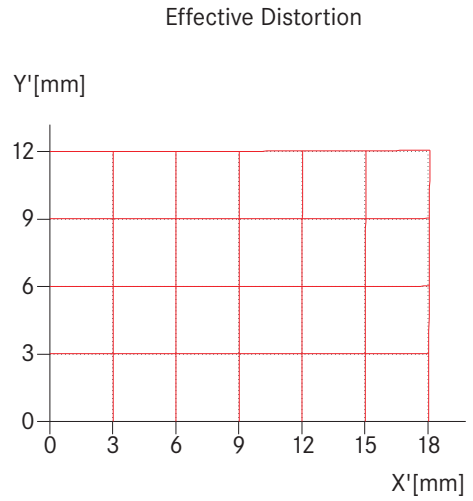
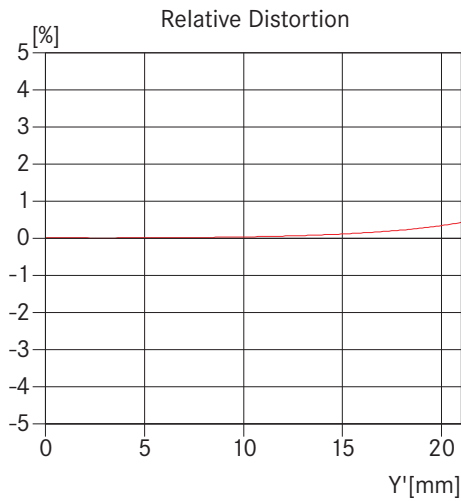
— MTF graphs



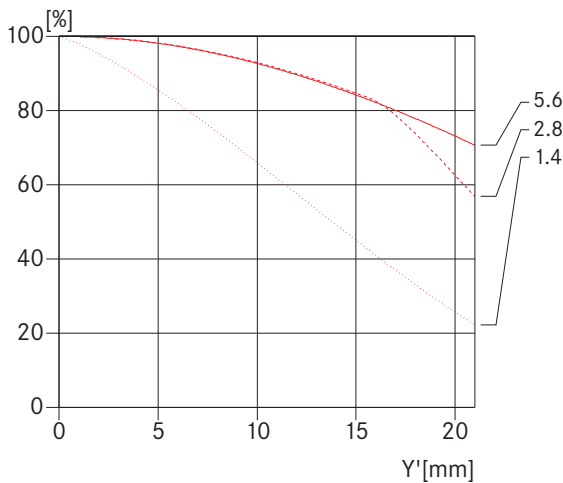
The MTF is indicated both at full aperture and at f/5.6 at long taking distances (infinity). Shown is the contrast in percentage for 5, 10, 20 and 40 lp/mm across the height of the 35 mm film format, for tangential (dotted line) and sagittal (solid line) structures, in white light. The 5 and 10 lp/mm 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.

- sagittal structures
- - - tangential structures

— 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 21.6mm is the radial distance between the edge and the middle of the image field for the format 24mm x 36mm. 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 lost of illumination over the image height. 100% means no vignetting.



Depth of field table

Distance Setting [m]	Aperture Stop								Magnification
	1,4	2	2,8	4	5,6	8	11	16	
0,7	0,693 - 0,708	0,690 - 0,710	0,686 - 0,715	0,680 - 0,721	0,673 - 0,730	0,661 - 0,744	0,648 - 0,762	0,627 - 0,794	1/11,3
0,8	0,790 - 0,810	0,787 - 0,814	0,781 - 0,820	0,774 - 0,828	0,764 - 0,840	0,749 - 0,859	0,732 - 0,884	0,704 - 0,929	1/13,3
1	0,984 - 1,016	0,978 - 1,023	0,970 - 1,032	0,958 - 1,046	0,942 - 1,066	0,919 - 1,098	0,892 - 1,140	0,851 - 1,218	1/17,2
1,2	1,177 - 1,224	1,168 - 1,233	1,156 - 1,247	1,138 - 1,269	1,116 - 1,299	1,083 - 1,347	1,045 - 1,412	0,988 - 1,537	1/21,0
1,5	1,463 - 1,539	1,450 - 1,554	1,431 - 1,576	1,403 - 1,612	1,368 - 1,661	1,319 - 1,742	1,262 - 1,855	1,178 - 2,081	1/26,9
2	1,934 - 2,070	1,910 - 2,099	1,877 - 2,141	1,829 - 2,208	1,768 - 2,304	1,685 - 2,466	1,591 - 2,704	1,458 - 3,225	1/36,6
3	2,852 - 3,164	2,799 - 3,232	2,726 - 3,336	2,624 - 3,505	2,499 - 3,759	2,333 - 4,218	2,155 - 4,983	1,912 - 7,154	1/56,0
5	4,598 - 5,480	4,459 - 5,693	4,274 - 6,027	4,024 - 6,611	3,734 - 7,593	3,370 - 9,776	3,005 - 15,29	2,548 - 278,8	1/94,8
∞	56,14 - ∞	40,33 - ∞	28,82 - ∞	20,19 - ∞	14,44 - ∞	10,12 - ∞	7,375 - ∞	5,087 - ∞	1/∞

