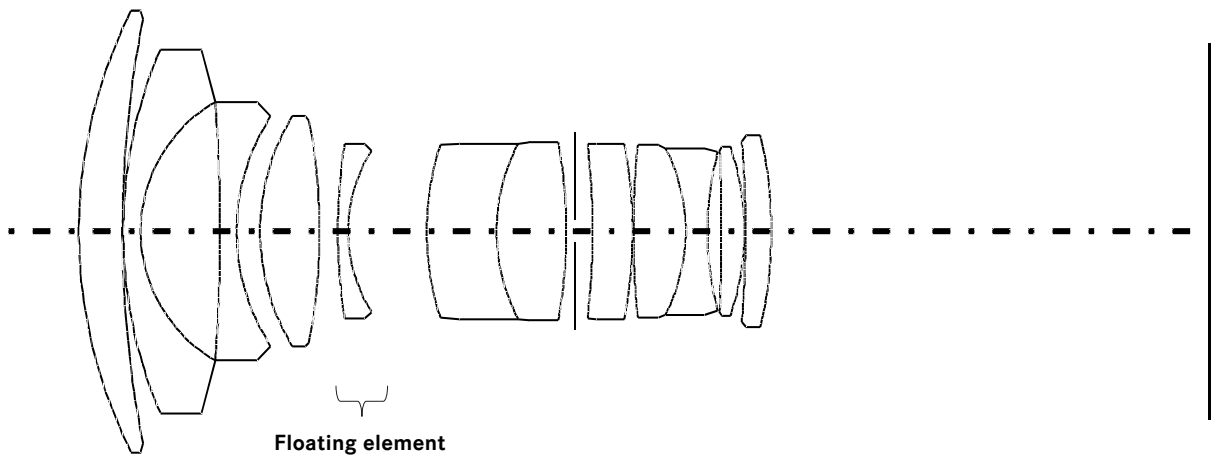




Because of its enlarged image circle of 62 mm, this lens can be shifted from the optical axis by up to 11 mm. Its special mount permits rotation in 45° steps to permit perspective corrections in vertical and horizontal formats. In this specially designed lens mount the aperture is set in accordance with the classic working aperture method. A preset lever facilitates stopping down the aperture to the pre-selected value. A floating element ensures high imaging performance into the 30 cm (12 in) near-focusing range. This special lens is unsurpassed for architectural photography because it eliminates the converging lines of conventional lenses. Shifting its optical axis permits a stepless perspective correction until a pleasant natural overall image is achieved.

— Lens shape





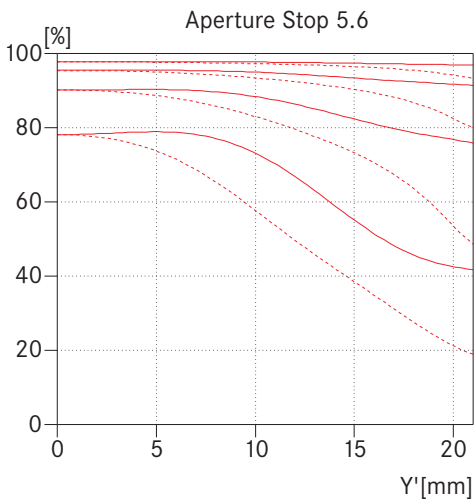
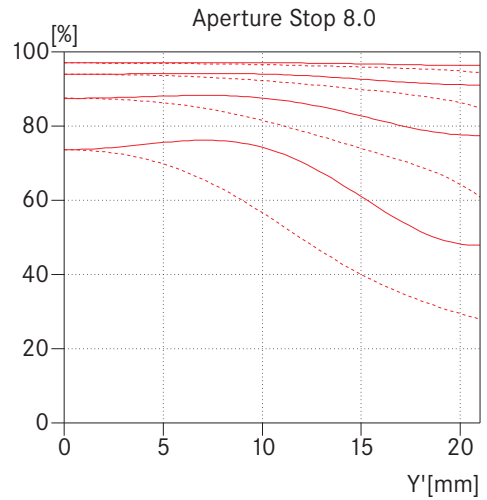
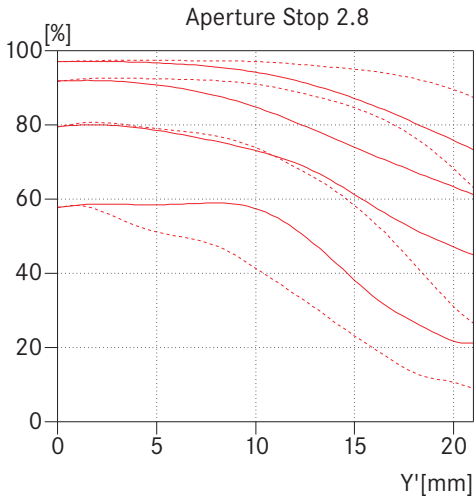
— Engineering drawing

Technical Data

| | |
|--|--|
| Angle of view (diagonal, unshifted, maximum offset) | 73°, 93° |
| Optical design | Number of elements / groups: 12 / 10 Focal length: 29.2 mm Entrance pupil: 25.6 mm (related to the first lens surface in light direction) Focusing range: 0.3 m to Infinity |
| Distance setting | Scale: Combined meter/feet-increments Smallest object field: 146 mm x 219 mm Highest reproduction ratio: 1:6 |
| Diaphragm | Setting / Type: Diaphragm with clickstops (including half values), Manual diaphragm Smallest aperture: f/22 |
| Bayonet | LEICA R quick-change bayonet for LEICA R3 to LEICA R8 with mechanical exposure control and stop-down metering |
| Filter (type) | Internal thread for screw-in type filters EW 67, unset glass filters 74 mm (for special wide-angle filter mounting in lens hood, as well as special polarizing filter 67 EW) |
| Lens hood | Separate, screw-in type, also serves as holder for special 67 EW filters |
| Dimensions and weight | Length: 84 mm Largest diameter: 75 mm Weight: approx. 600 g |



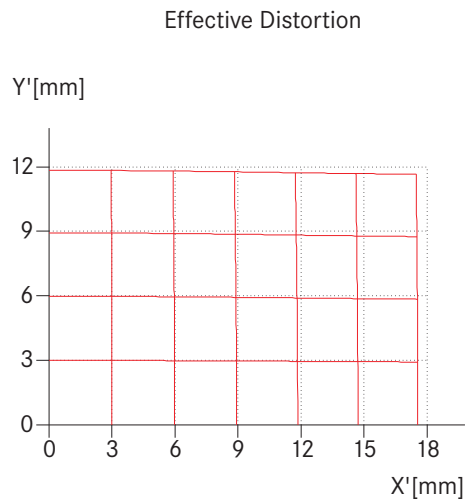
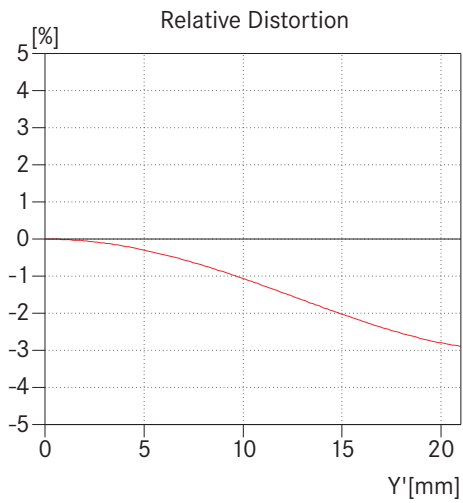
— MTF graphs



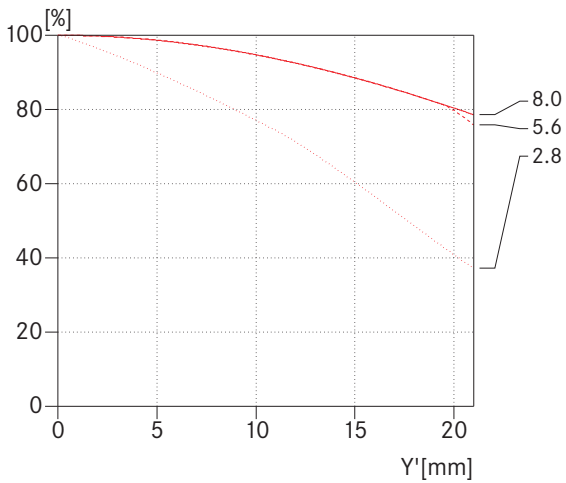
The MTF is indicated both at full aperture and at f/5.6 at long taking distances (infinity). Shown is the contrast in percentage for 5, 10, 20 and 40 lp/mm across the height of the 35 mm film format, for tangential (dotted line) and sagittal (solid line) structures, in white light. The 5 and 10 lp/mm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

- sagittal structures
- - - tangential structures



— Depth of field table

| Distance Setting [m] | Aperture Stop | | | | | | | Magnification |
|----------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| | 2,8 | 4 | 5,6 | 8 | 11 | 16 | 22 | |
| 0,3 | 0,296 - 0,304 | 0,295 - 0,306 | 0,292 - 0,308 | 0,289 - 0,312 | 0,286 - 0,317 | 0,280 - 0,326 | 0,273 - 0,337 | 1/6,12 |
| 0,35 | 0,344 - 0,357 | 0,341 - 0,359 | 0,338 - 0,363 | 0,333 - 0,370 | 0,327 - 0,378 | 0,318 - 0,393 | 0,309 - 0,413 | 1/7,87 |
| 0,4 | 0,391 - 0,410 | 0,387 - 0,414 | 0,383 - 0,420 | 0,376 - 0,429 | 0,368 - 0,442 | 0,355 - 0,465 | 0,342 - 0,497 | 1/9,60 |
| 0,5 | 0,483 - 0,518 | 0,477 - 0,526 | 0,469 - 0,537 | 0,457 - 0,555 | 0,444 - 0,579 | 0,423 - 0,627 | 0,401 - 0,698 | 1/13,0 |
| 0,7 | 0,663 - 0,742 | 0,650 - 0,760 | 0,632 - 0,788 | 0,608 - 0,834 | 0,580 - 0,901 | 0,540 - 1,045 | 0,500 - 1,307 | 1/19,9 |
| 1 | 0,919 - 1,099 | 0,891 - 1,144 | 0,855 - 1,22 | 0,806 - 1,342 | 0,753 - 1,549 | 0,681 - 2,107 | 0,613 - 3,840 | 1/30,2 |
| 3 | 2,292 - 4,39 | 2,105 - 5,343 | 1,885 - 7,852 | 1,633 - 27,56 | 1,403 - ∞ | 1,143 - ∞ | 0,941 - ∞ | 1/98,6 |
| ∞ | 9,056 - ∞ | 6,579 - ∞ | 4,728 - ∞ | 3,341 - ∞ | 2,458 - ∞ | 1,722 - ∞ | 1,281 - ∞ | 1/∞ |

