



Product Information

LEICA VARIO-ELMAR-R 21–35 mm f/3.5–4 ASPH.



An increasing number of photographers have come to appreciate the many advantages of zoom lenses. They each replace several fixed focal length lenses, reducing the equipment to a size that is much more convenient and easier to carry. In many cases, they make a change of lens redundant, which means that their readiness for use is significantly improved and the photographer can react more quickly to unexpected situations. Photographers will be pleased to learn that the renowned range of Leica zoom lenses, which combine versatility with optimum performance, is now being extended to include the wide-angle sector. The LEICA VARIO-ELMAR-R 21–35 mm f/3.5–4 ASPH. is a compact and lightweight zoom lens that covers the complete range of the most often used wide-angle focal lengths. It also has out-

standing imaging quality. Even at full stop, sharpness and contrast are comparable with the corresponding fixed focal lengths and its susceptibility for reflexes is only low for a wide-angle lens. The unavoidable vignetting with short and very short wide angle lenses amounts to only 1.3 stops in the corners at full opening and 35 mm or 2 stops at 21 mm. Stopping down by only 2–3 stops significantly reduces vignetting (by approx. half), so that it is only visible on uniform or bright backgrounds. The – barrel-shaped – distortion is low for a wide-angle zoom, amounting to only around 1% at 35 mm, around 2% at 25 mm and around 3% at 21 mm. Apart from at the shortest focal length and for associated critical subjects such as architecture, this is negligible in practical photographic terms.

The performance of the LEICA VARIO-ELMAR-R 21–35 mm f/3.5–4 ASPH. is based on an optical design consisting of 2 systems with 9 lens elements in 8 groups. Focusing is done using the first system, while adjustment of the focal length is achieved by simultaneous movement of both systems towards (35 mm) – or away from one another (21 mm).

The use of two aspherical lens surfaces and two lens elements each of highly refractive glass and with anomalous partial dispersion results in extraordinary lens performance with a compact design. The aspherical surfaces are produced using a state of the art “precision grinding process”.

Like the other Leica zoom lenses, the LEICA VARIO-ELMAR-R 21–35 mm f/3.5–4 ASPH. is a



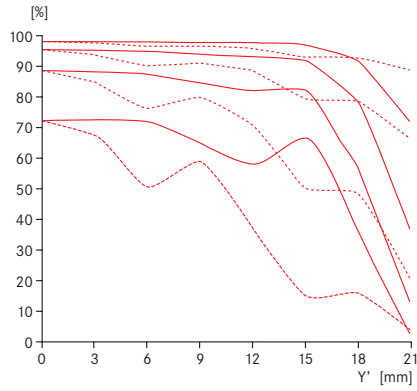
two-ring zoom, on which the focus (front) and the focal length (rear) are set using separate rings. This design provides reliable protection against accidental resetting. However, the principle of this kind of two-ring zoom means that it cannot be equipped with a depth of field scale. The manual for the lens therefore contains appropriate tables for the four most important focal lengths – 21, 24, 28 and 35 mm. The LEICA VARIO-ELMAR-R 21-35 mm f/3.5-4 ASPH. is delivered with a scalloped lens hood perfectly matched to the angles of view. Thanks to its symmetrical bayonet it can be attached quickly and easily including in reverse position for space-saving storage.

The two larger petals are cut off straight so that the lens can be placed face down on flat surfaces. The LEICA VARIO-ELMAR-R 21-35 mm f/3.5-4 ASPH. allows the use of screw-in type filters, size E67. A corresponding UVa-filter (Order No. 13 386) is available from Leica. In order to avoid vignetting, only low-profile polarizing filters, that is without front internal (“female”) filter threads of their own should be employed. They are available from, e. g. B&W, 55513 Bad Kreuznach and termed “slim”. The Leica circular polarizing filter with front filter thread (Order No. 13 407) should not be used.

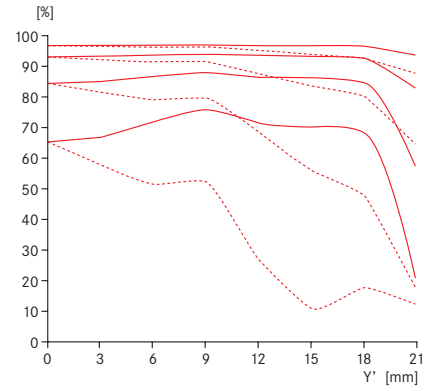
Summary:

Thanks to its practical range of focal lengths and its outstanding imaging performance, the LEICA VARIO-ELMAR-R 21-35 mm f/3.5-4 ASPH. is well suited for almost all situations which, until now, would have called for the use of up to 4 different wide-angle lenses, from capturing a person and their immediate surroundings to sweeping landscape photographs with impressive depth. As a wide-angle zoom, it allows you to put together a powerful complete system that is both convenient to carry and to use with only two other lenses, e. g. the VARIO-ELMAR-R 35-70 mm f/4 in the “normal” focal length range and the VARIO-ELMAR-R 80-200 mm f/4 for telephoto purposes.

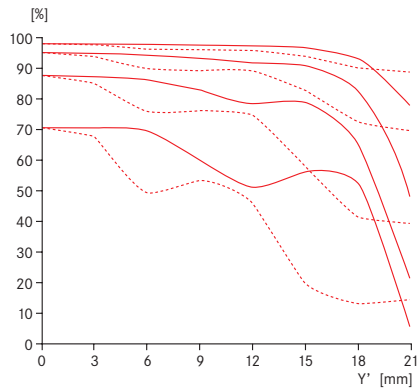
21 mm (f/3.50)



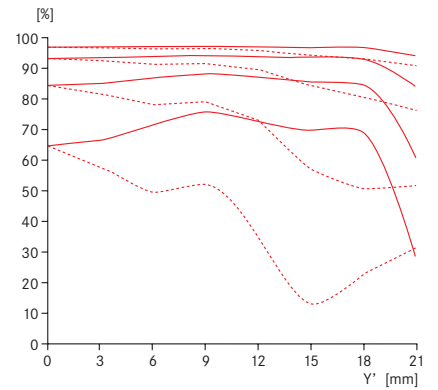
(f/8.00)



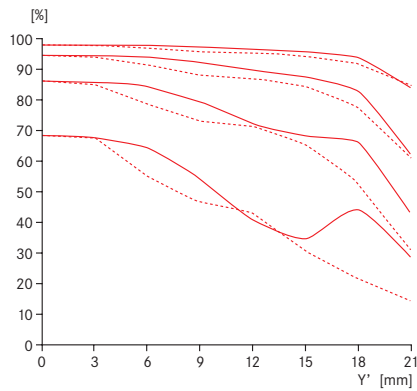
24 mm (f/3.62)



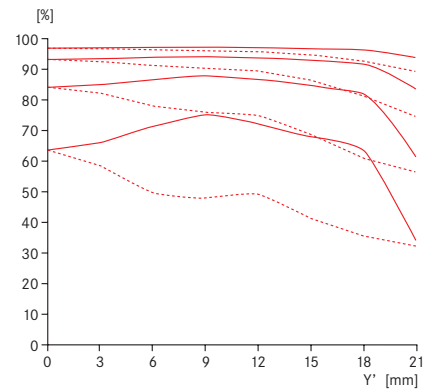
(f/8.00)



28 mm (f/3.85)

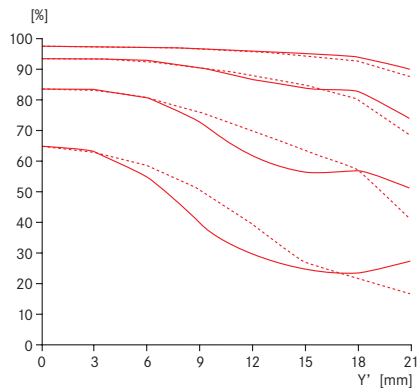


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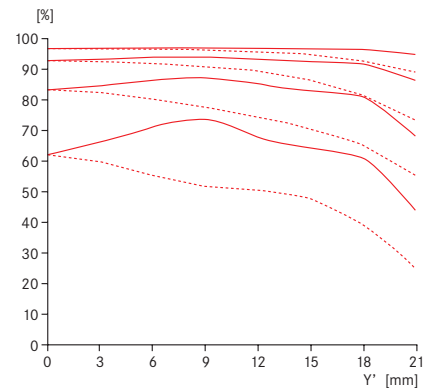


The MTF is indicated both at full stop and at f/8 at long taking distances (infinity). Shown is the contrast in percentage for 5, 10, 20, and 40 lp/mm across the height of the 35mm film format, for tangential (dotted line) and sagittal (solid line) structures, in white light. The 5 and 10 lp/mm will 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.

35 mm (f/4.00)



(f/8.00)





my point of view

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Technical Data

- **Angle of view** (diagonal, horizontal, vertical): at 21 mm: 91.6°, 81.2°, 59.5°,
at 35 mm: 63.4°, 54.4°, 37.8°
- **Optical design**
Number of elements/groups: 9/8
Aspherical surfaces: 2
Internal focusing
- **Distance setting**
Focusing range: 0.5 m to Infinity
Scale: Combined meter/feet-increments
Smallest object field: at 21 mm: 462 x 692 mm,
at 35 mm: 300 x 450 mm
Highest reproduction ratio: at 21 mm: 1:19.2,
at 35 mm: 1:12.5
- **Diaphragm**
Setting: Preset diaphragm with clickstops (including half values)
Type: Fully automatic diaphragm
Smallest aperture: f/22
- **Bayonet:** LEICA R quick-change bayonet for LEICA R3 to LEICA R8 with mechanical, and,
for LEICA R8, additional electronic exposure control
- **Focusing mount:** Non-rotating
- **Filter** (type): Internal thread for screw-in type filters, size E67
- **Lens hood:** Separate, scalloped, can be attached in both directions via bayonet mount
- **Finish:** Black anodized
- **Dimensions and weight**
Length from bayonet flange: 66.3 mm
Front lens diameter: 75 mm
Largest diameter: 75 mm
Weight: approx. 500 g

- **LEICA VARIO-ELMAR-R**
21–35 mm f/3.5–4 ASPH.
black anodized
Order No. 11 274
- **Scope of Delivery**
LEICA VARIO-ELMAR-R
21–35 mm f/3.5–4 ASPH.
with front and rear lens caps,
bayonet lens hood, in a soft
leather case
- **Replacements**
Front lens cap
Order No. 14 291
Rear lens cap
Order No. 14 162
Lens hood
Order No. 12 438
Soft leather case
Order No. 439-606.085-000



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English 92033