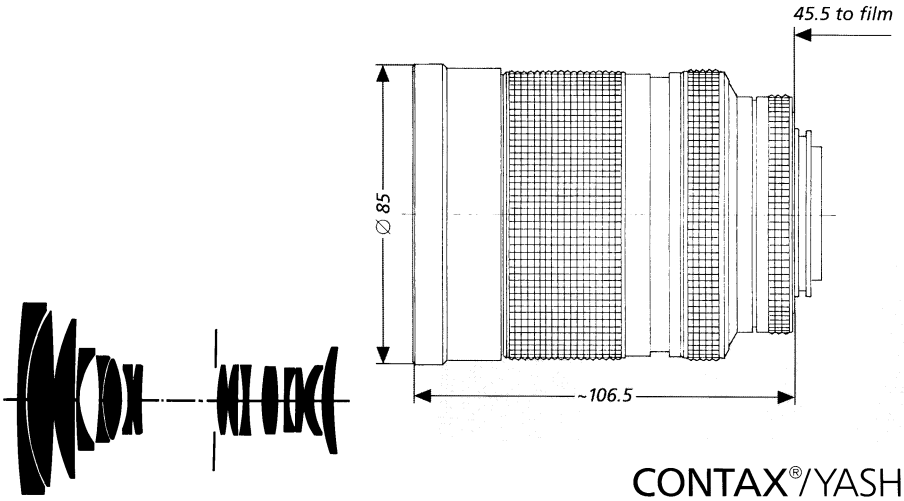
Vario-**Sonnar**® T* f/3.3-4.5 35 - 135 mm



CONTAX®/YASHICA® mount

The 35-135 mm Vario-**Sonnar**® T* f/3.3-4.5 lens from Carl Zeiss is a 3.8x zoom lens. Its superb image quality makes it another valuable addition to the existing range of Carl Zeiss Vario-**Sonnar**® lenses for the **Contax**® SLR Camera System. The image quality is very good even at the shortest focusing distance of 1.2 m.
This Vario lens has also been manufactured using the one-touch zoom design patented by Carl Zeiss, i.e. the same ring is used for focusing and zooming.

The large focal range starting at 35 mm allows the use of this lens for almost all applications in architectural, landscape, portrait and sports photography.
Furthermore, the macro setting permits pictures to be taken down to a reproduction ratio of 1:4.

Cat. No. of lens:	**10 47 39**
Number of elements:	16
Number of groups:	15
Max. aperture:	f/3.3-4.5
Focal length*:	35.9-131.3 mm
Negative size:	24 x 36 mm
Angular field 2w*:	63º -18º
Mount:	focusing mount with bayonet; TTL metering either at full aperture or in stopped-down position. Aperture priority/Shutter priority/ Automatic programs (Multi-Mode Operation).
Aperture scale:	3.3 - 4 - 5.6 - 8 - 11 - 16 - 22
Filter connection:	screw-in type, thread M 82 x 0.75 mm clip-on type, diameter 85 mm
Weight:	approx. 860 g
Focusing range:	∞ to 1.2 m, Macro setting

Entrance pupil*:		
Position:	a)	35.7 mm behind first lens vertex
	b)	108.8 mm behind first lens vertex
Diameter:	a)	10.5 mm
	b)	27.6 mm
Exit pupil*:		
Position:	a)	29.9 mm in front of last lens vertex
	b)	82.5 mm in front of last lens vertex
Diameter:	a)	22.5 mm
	b)	27.2 mm
Position of principal planes*:		
H:	a)	54.6 mm behind first lens vertex
	b)	105.8 mm in front of first lens vertex
H':	a)	10.1 mm in front of last lens vertex
	b)	85.3 mm in front of last lens vertex
Back focal distance:		46 mm
Distance between first and last lens vertex*:		99.2 mm

a) f=35 mm, b) f=135 mm,* at ∞

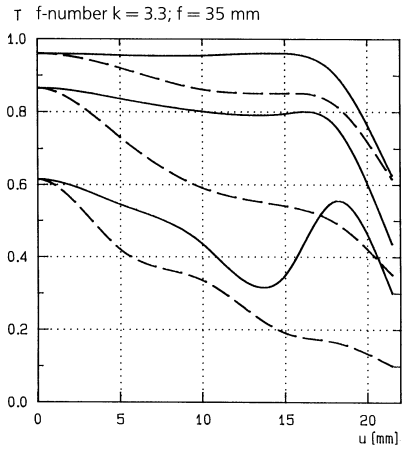
Performance data:
Vario-**Sonnar**® T* f/3.3- 4.5 35 - 135 mm
Cat. No. 10 47 39

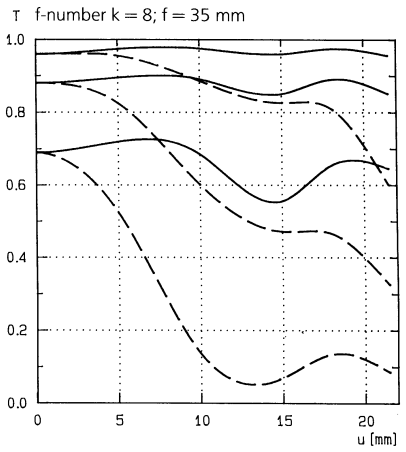
1. MTF Diagrams
The image height u - calculated from the image center - is entered in mm on the horizontal axis of the graph. The modulation transfer T (MTF = Modulation Transfer Factor) is entered on the vertical axis. Parameters of the graph are the spatial frequencies R in cycles (line pairs) per mm given at the top of this page. The lowest spatial frequency corresponds to the upper pair of curves, the highest spatial frequency to the lower pair. Above each graph, the f-number k is given for which the measurement was made. "White" light means that the measurement was made with a subject illumination having the approximate spectral distribution of daylight. Unless otherwise indicated, the performance data refer to large object distances, for which normal photographic lenses are primarily used.

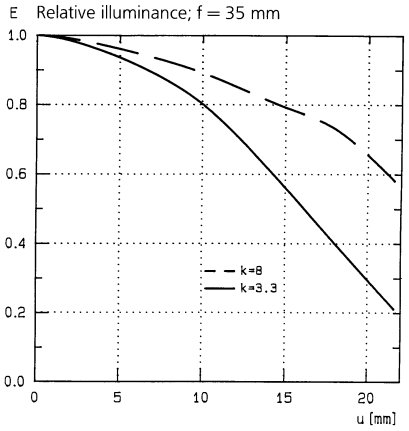
2. Relative illuminance
In this diagram the horizontal axis gives the image height u in mm and the vertical axis the relative illuminance E, both for full aperture and a moderately stopped-down lens. The values for E are determined taking into account vignetting and natural light decrease.

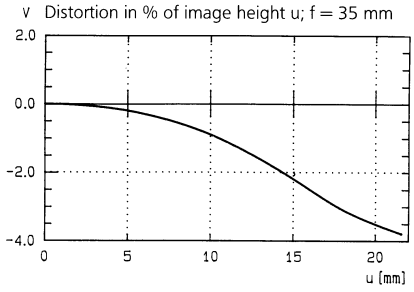
3. Distortion
Here again the image height u is entered on the horizontal axis in mm. The vertical axis gives the distortion V in % of the relevant image height. A positive value for V means that the actual image point is further from the image center than with perfectly distortion-free imaging (pincushion distortion); a negative V indicates barrel distortion.

Modulation transfer T as a function of image height u. Slit orientation: tangential — — — sagittal ————
White light. Spatial frequencies R = 10, 20 and 40 cycles/mm

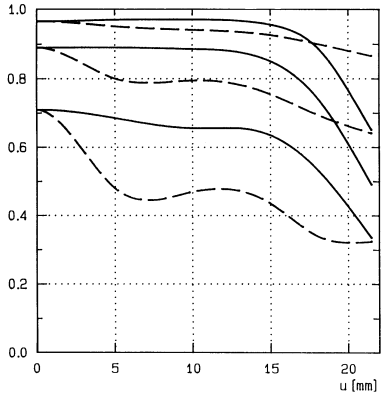




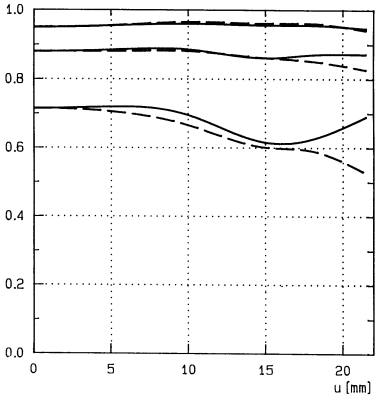




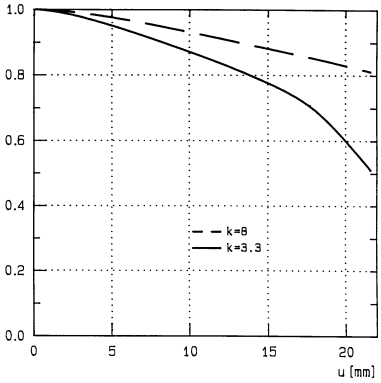
T f-number k = 3.3; f = 70 mm



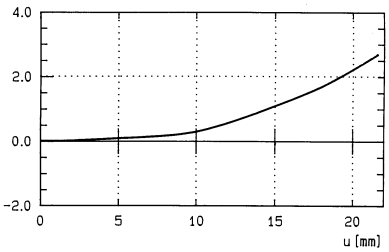
T f-number k = 8; f = 70 mm



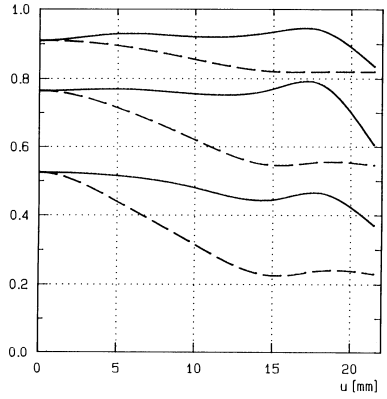
E Relative illuminance; f = 70 mm



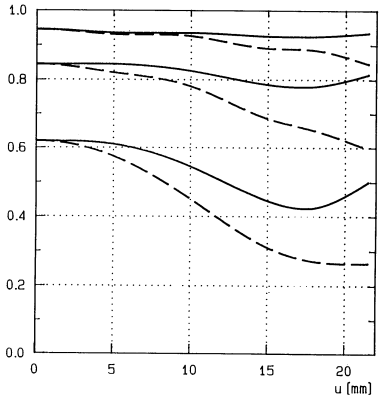
V Distortion in % of image height u; f = 70 mm



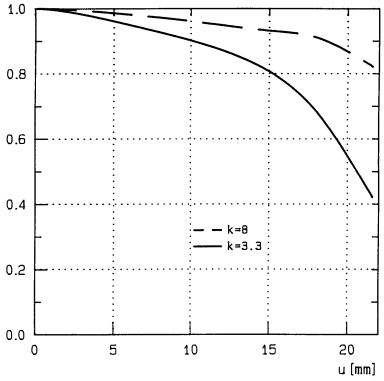
T f-number k = 3.3; f = 135 mm



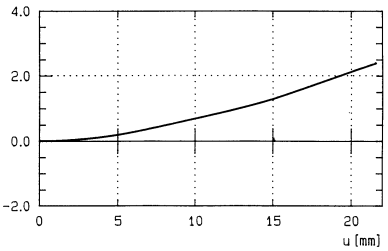
T f-number k = 8; f = 135 mm



E Relative illuminance; f = 135 mm



V Distortion in % of image height u; f = 135 mm



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Subject to change.