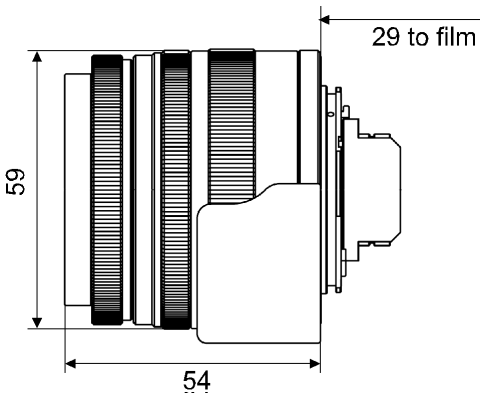
Vario-**Sonnar**® T* 3.5-5.6/35-70



CONTAX® G mount

The Carl Zeiss **Vario-Sonnar**® T* 3.5-5.6/35-70 lens is an easy-to-carry zoom lens for the Contax G 2 rangefinder system camera.
It is the first “real” zoom lens in the world with continuous focal length setting for a rangefinder system camera with interchangeable lenses. The built-in zoom viewfinder of the Contax G 2 camera automatically adjusts to the **Vario-Sonnar**® T* 3.5-5.6/35-70 lens zoom setting.
With the range of focal length from 35 mm to 70 mm the **Vario-Sonnar**® T* 3.5-5.6/35-70 lens covers a broad range of uses from wide angle 35 mm and standard 50 mm focal lengths for natural subject renditions to medium-telephoto 70 mm focal length allowing easy shooting with natural-looking perspective and relative distance between objects.
Thus the **Vario-Sonnar**® T* 3.5-5.6/35-70 lens is the ”natural travelling companion” in the Contax G-system world.
Preferred use: action, travel, photojournalism

Cat. No. of lens	**10 47 65**
Number of elements	13
Number of groups	8
Max. aperture	f/3.5-5.6
Focal length	W = 36.5 mm, T = 68.2 mm
Negative size	24 x 36 mm
Angular field*	W = width 53°, height 36°, diagonal 2w 62° T = width 29°, height 20°, diagonal 2w 35°
Min. aperture	22
Camera mount	Contax G
Filter connection	M 46 x 0.75
Focusing range	infinity to 1 m
Working distance (between mechanical front end of lens and subject)	0.9 m
Close limit field size	W = 661 x 1012 mm T = 339 x 506 mm
Max. scale	W = 1:27 T = 1:14

Entrance pupil*		
Position	W = 14.9 mm behind the first lens vertex T = 26.4 mm behind the first lens vertex
Diameter	W = 10.1 mm T = 11.8 mm
Exit pupil*		
Position	W = 11.9 mm in front of the last lens vertex T = 10.6 mm in front of the last lens vertex
Diameter	W = 7.0 mm T = 8.0 mm
Position of principal planes*		
H	W = 1.5 mm behind the first lens vertex T = 5.5 mm behind the first lens vertex
H'	W = 23.2 mm in front of the last lens vertex T = 32.3 mm in front of the last lens vertex
Back focal distance	W = 13.3 mm T = 35.9 mm
Distance between first and last lens vertex*	W = 55.0 mm T = 60.1 mm
Weight	290 g

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*at infinity W = Wide, T = Tele

Performance data:
Vario-**Sonnar**® T* 3.5-5.6/35-70
Cat. No. 10 47 65

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 = M odulation 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.

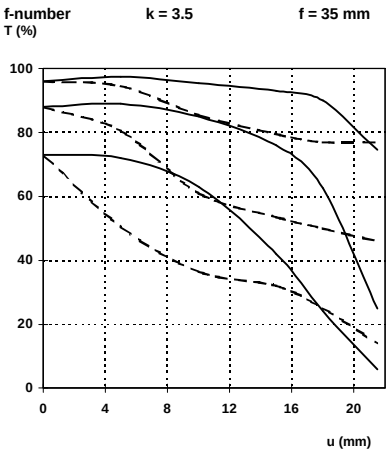
2. Relative illuminance

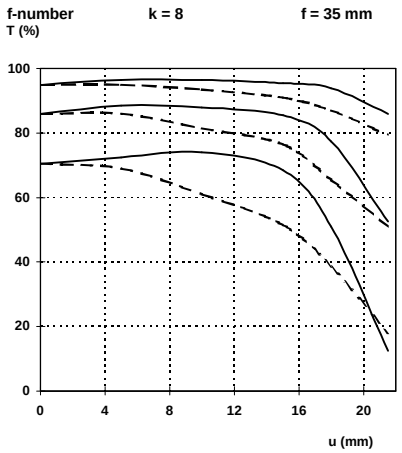
In this diagram the horizontal axis gives the image height u in mm and the vertical axis the relative illuminance E, both for full aperture and a moderately stopped-down lens. The values for E are determined taking into account vignetting and natural light decrease.

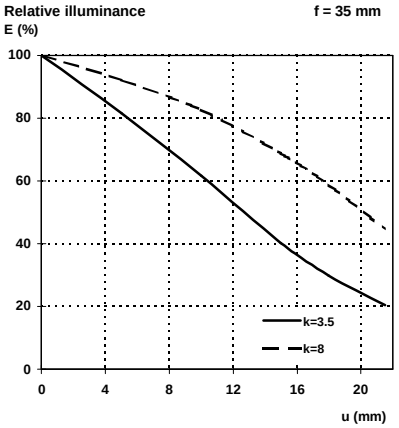
3. Distortion

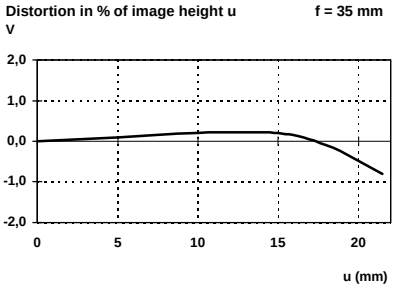
Here again the image height u is entered on the horizontal axis in mm. The vertical axis gives the distortion V in % of the relevant image height. A positive value for V means that the actual image point is further from the image center than with perfectly distortion-free imaging (pincushion distortion);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

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









Performance data:
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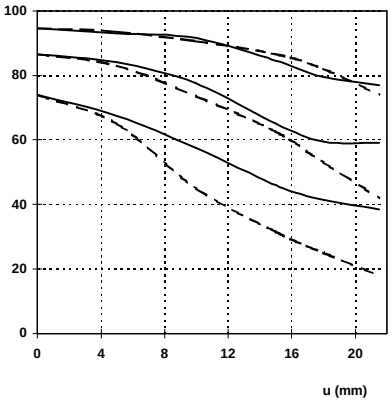
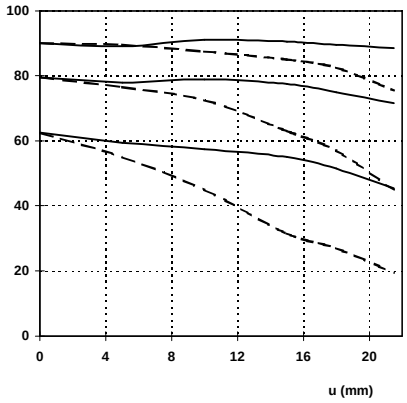
Cat. No. 10 47 65

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

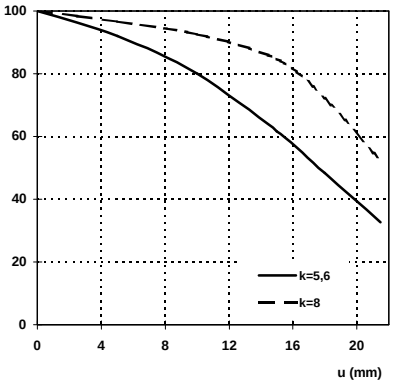
f-number **k = 5,6** **f = 70 mm**
T (%)



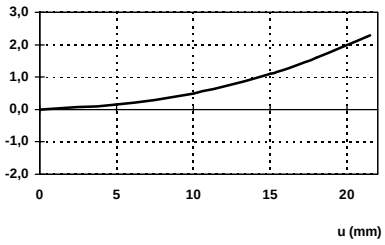
f-number **k = 8** **f = 70 mm**
T (%)



Relative illuminance **f = 70 mm**
E (%)



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



Subject to change.
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