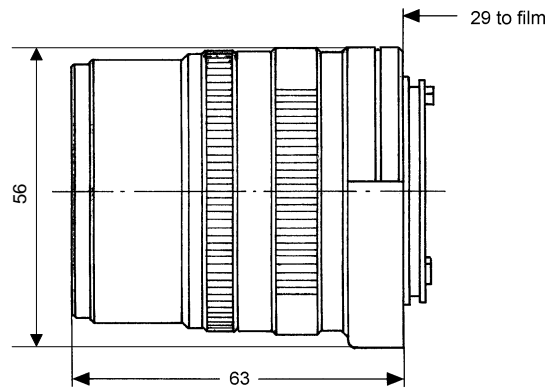
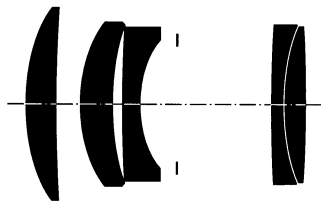


Sonnar[®] T* 2.8/90



CONTAX[®] G mount

This lens features not only outstanding sharpness and brilliance, but also excellent field illumination even at full aperture. The **Sonnar[®] T* 2.8/90** lens with its field angle of 27° has been designed for the Contax G compact camera. The lens is particularly suitable for portrait photography, allowing successful head-and-shoulders and full-length portraits with a natural perspective.

In addition to portraiture, this lens can also be recommended for taking photographs at sporting events and the theater. The **Sonnar[®] T* 2.8/90** lens has been designed for use with the autofocus connection of the Contax G compact cameras.

Cat. No. of lens	10 11 31	Close limit field size	216 mm x 324 mm
Number of elements	5	Max. scale	1 : 9.0
Number of groups	4	Entrance pupil*	
Max. aperture	f/2.8	Position	35.9 mm behind the first lens vertex
Focal length	90.0 mm	Diameter	31.7 mm
Negative size	24 x 36 mm	Exit pupil*	
Angular field*	width 23°, height 15°, diagonal 2w 27°	Position	22.0 mm in front of the last lens vertex
Min. aperture	22	Diameter	23.5 mm
Camera mount	Contax G	Position of principal planes*	
Filter connection	M 46 x 0.75	H	2.5 mm behind the first lens vertex
Focusing range	infinity to 1.0 m	H'	46.3 mm in front of the last lens vertex
Working distance (between mechanical front end of lens and subject)	0.91 m	Back focal distance	43.7 mm
		Distance between first and last lens vertex	45.9 mm
		Weight	240 g

* at infinity

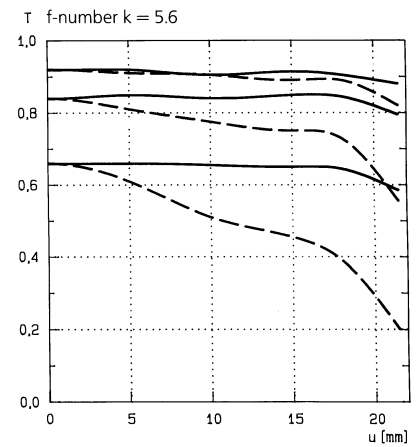
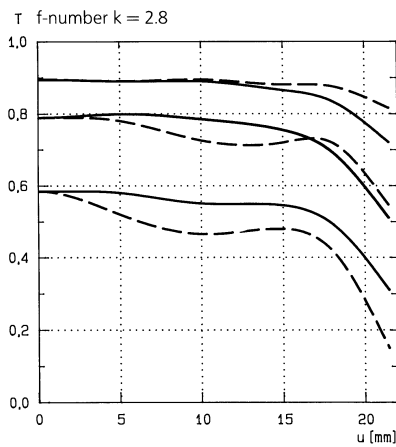


Performance data
Sonnar® T* 2.8/90
 Cat. No. 10 11 31

1. MTF Diagrams

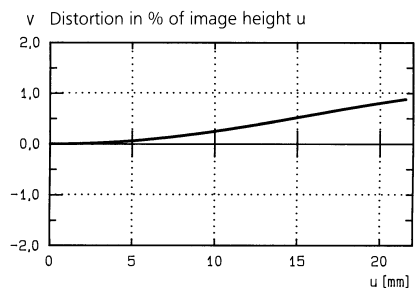
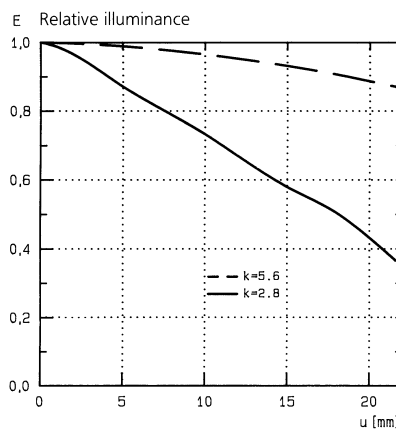
The image height u - calculated from the image center - is entered in mm on the horizontal axis of the graph. The modulation transfer T (MTF = Modulation Transfer Factor) is entered on the vertical axis. Parameters of the graph are the spatial frequencies R in cycles (line pairs) per mm given at the 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.

Subject to change.
 Printed in Germany 31.07.2000



Carl Zeiss
 Photoobjektive
 D-73446 Oberkochen
 Telephone (07364) 20-6175
 Fax (07364) 20-4045
 eMail: photo@zeiss.de
 http://www.zeiss.de