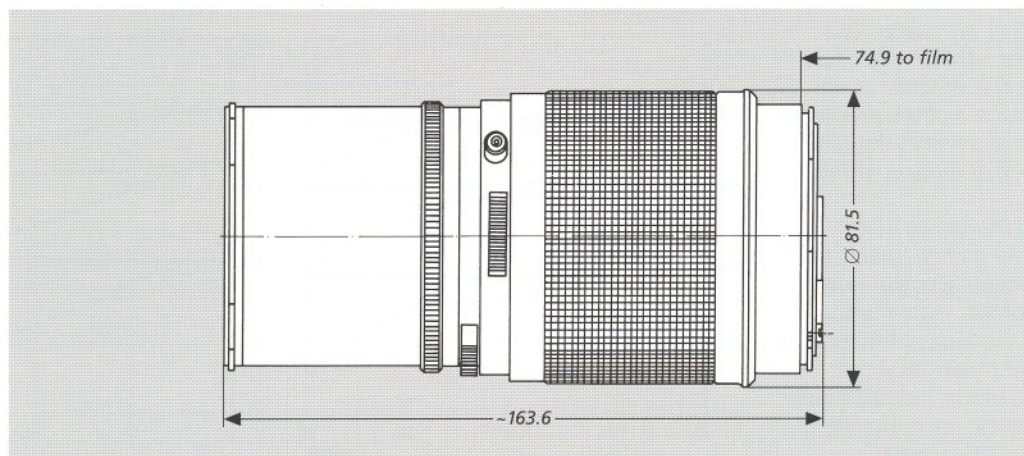
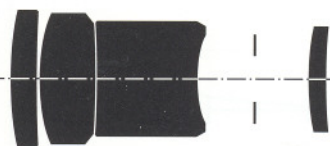


# Sonnar® T\* f/5.6 – 250 mm



H A S S E L B L A D



Even at full aperture the 250 mm **Sonnar® T\* f/5.6** lens features such excellent image quality that stopping down is not required. Despite its long focal length and remarkable telephoto effect, this lens is compact and allows hand-held photography.

The 250 mm **Sonnar® T\* f/5.6** lens is used for portraiture, long-range, press, sports and stage photography. In outdoor portraiture, the shallow depth-of-field range can be used to advantage to separate the model from an unsteady background.

<b>Cat. No. of lens:</b>	<b>10 11 15</b>	Close-limit field size:	437 x 437 mm
Number of elements:	4	Entrance pupil:	
Number of groups:	3	Position:	125.5 mm behind the first lens vertex
Max. aperture:	f/5.6	Diameter:	44.8 mm
Focal length:	248.4 mm	Exit pupil:	
Negative size:	56.5 x 56.5 mm	Position:	21.3 mm in front of the last lens vertex
Angular field 2w:	diagonal 18°, side 13°	Diameter:	25.6 mm
Spectral range:	visible spectrum	Position of principal planes:	
Aperture scale:	5.6 – 8 – 11 – 16 – 22 – 32 – 45	H:	62.8 mm behind the first lens vertex
Mount:	Prontor CF	H':	23.0 mm in front of the last lens vertex
Filter connection:	bayonet for Hasselblad series 60	Back focal distance:	120.0 mm
Weight:	approx. 1,000 g	Distance between first and last lens vertex:	105.5 mm
Focusing range:	∞ to 2.5 m		
Reproduction ratio:	0 to 1:7.8		

**Planar**  
100 Years



# Performance data: Sonnar® T\* f/5.6 f = 250 mm No. 101115

## 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.

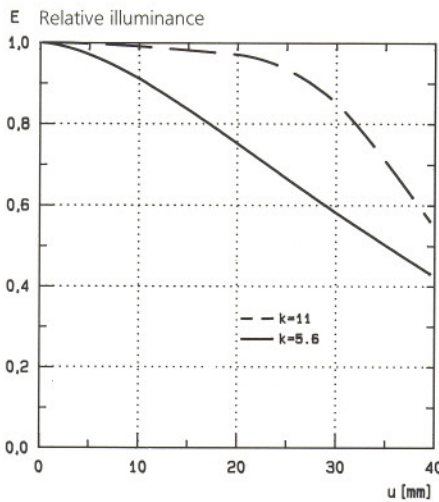
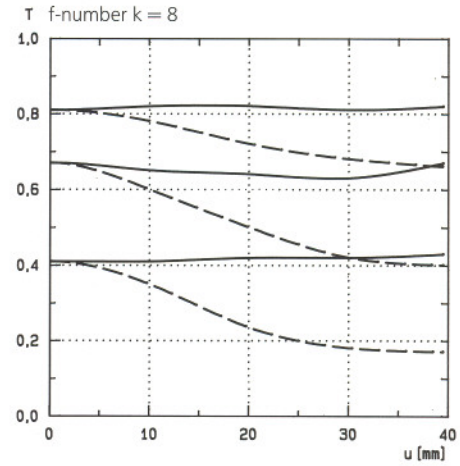
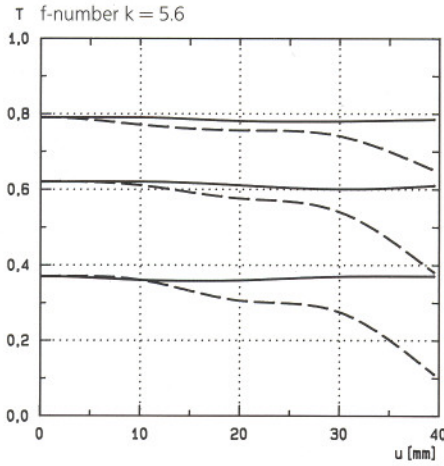
The lowest spatial frequency corresponds to the upper pair of curves, the highest spatial frequency to the lower pair. Above each graph, the f-number  $k$  is given for which the measurement was made. "White" light means that the measurement was made with a subject illumination having the approximate 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.

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



## 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.



### Carl Zeiss

Photoobjektive  
D-73446 Oberkochen  
Tel.: (0 73 64) 20-61 75  
Fax: (0 73 64) 20 40 45

For advice, please contact