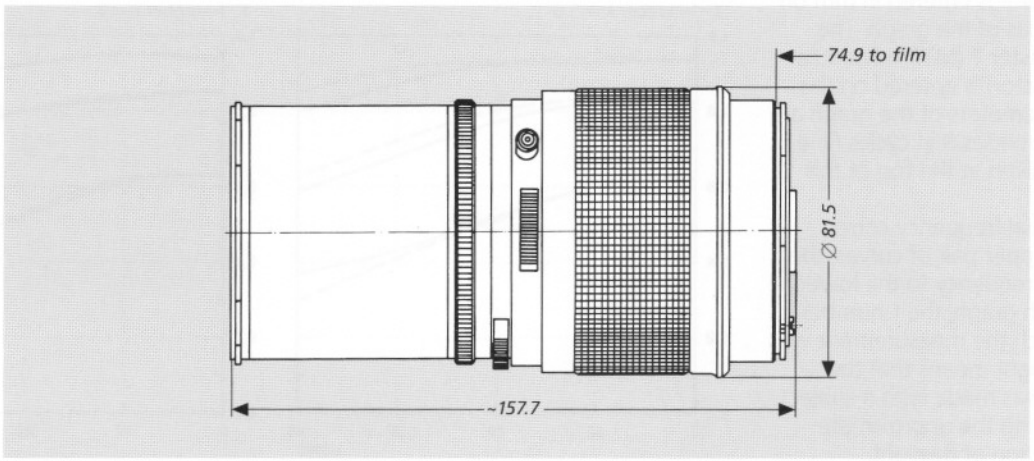
Sonnar
Superachromat® f/5.6 – 250



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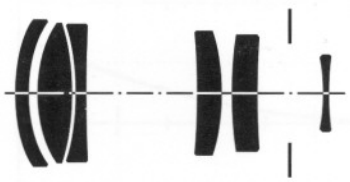


This lens features a so far unachieved correction of chromatic aberrations. The secondary spectrum which is the dominating aberration of lenses of long focal length has been corrected for the entire spectral range between approx. 400 and 1000 nm.
Visual focusing in visible light guarantees optimum sharpness even on IR or false-color film.
The 250 mm **Sonnar Superachromat®** f/5.6 lens is ideal for taking photographs which are to be considerably re-enlarged and is primarily applied in technical and scientific IR photography. Special effects in landscape and architectural photography, geology, hydrology and archaeological documentation with the aid of aerial photographs, botany, plant pathology, environmental control and multispectral photography are examples of the wide range of application of this extraordinary lens.
As the focusing ring has no ∞-stop position, focusing for long-range work must also be performed using the camera's focusing screen.

Cat. No. of lens:	**10 45 32**
Number of elements:	6
Number of groups:	6
Max. aperture:	f/5.6
Focal length:	249.6 mm
Negative size:	56.5 x 56.5 mm
Angular field 2w:	diagonal 18°, side 13°
Spectral range:	400 to 1000 mm
Aperture scale:	5.6 – 8 – 11 – 16 – 22 – 32 – 45
Mount:	focusing mount with bayonet; coupling system for automatic diaphragm function
Shutter:	Prontor CF
Filter connection:	bayonet for Hasselblad series 60
Weight:	approx. 985 g

Focusing range:	∞[1] to approx. 3 m
Reproduction ratio:	0 to 1:9.6
Close-limit field size:	approx. 541 x 541 mm
Entrance pupil:	
Position:	130.5 mm behind the first lens vertex
Diameter:	44.6 mm
Exit pupil:	
Position:	5.1 mm in front of the last lens vertex
Diameter:	23.0 mm
Position of principal planes:	
H:	107.0 mm in front of the first lens vertex
H':	27.9 mm in front of the first lens vertex
Back focal distance:	122.1 mm
Distance between first and last lens vertex:	98.7 mm

[1] no stop position for ∞

Planar
100 Years

ZEISS

Performance data:
Sonnar Superachromat® f/5.6 – 250 mm
No. 104532

1. MTF Diagrams

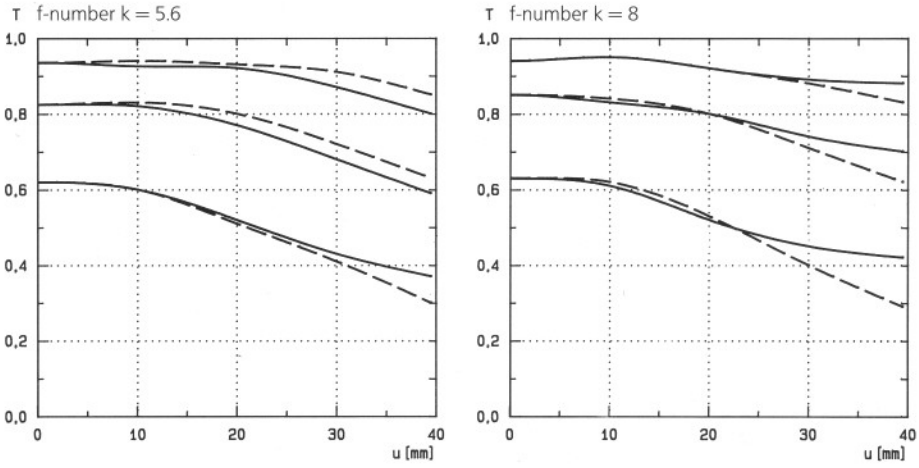
The image height u – calculated from the image center – is entered in mm on the horizontal axis of the graph. The modulation transfer T (MTF = **M**odulation **T**ransfer **F**actor) is entered on the vertical axis. Parameters of the graph are the spatial frequencies R in cycles (line pairs) per mm given 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.

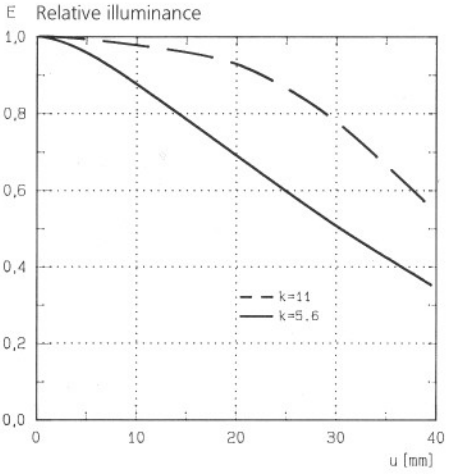
Unless otherwise indicated, the performance data refer to large object distances, for which normal photographic lenses are primarily used.

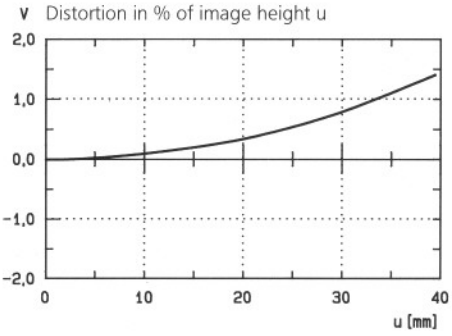
2. Relative illuminance

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.

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Subject to change.

H 10-45-32 e Printed in Germany AW-TS-VI/96 No Printed on environment-friendly paper, bleached without the use of chlorine