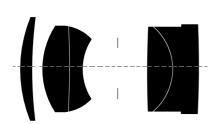
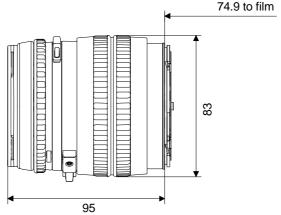
Sonnar® T* 4/150 CFi





HASSELBLAD

The Sonnar® T* 4/150 CFi lens has been the classical portrait lens in the Hasselblad system. With a focal length approximately twice the image frame diagonal the Sonnar® T* 4/150 CFi lens delivers the ideal perspective for classic head and shoulder portraits. The built-in Prontor shutter allows for flash synchronisation up to 1/500 s providing the photographer with the freedom to balance flash and ambient light very creatively.

The Sonnar® T* 4/150 CFi lens is very compact and, together with a Hasselblad camera body, it makes for a unit that can be easily used for handheld photography. On the other hand the Sonnar® T* 4/150 CFi lens offers an optical performance so high, that its sharpness can be fully exploited only with a very good tripod.

Preferred use: portraits of all kinds, fashion, scenic landscapes

Cat. No. of lens 10 11 36 - 9901

Number of elements 5
Number of groups 3
Max. aperture f/4
Focal length 151.5 mm
Negative size 55 x 55 mm
Angular field 2w* width 21°, height 21°,

diagonal 29°

Min. aperture 32
Camera mount CFi
Shutter Prontor CFi
Filter connection bayonett series 60
Focussing range infinity to 1.4 m
Working distance (between mechanical front end of

lens and subject) 1.2 m

Close limit field size 389 mm x 389 mm

Max. scale 1:7.1

Entrance pupil*

Position 67.4 mm behind the first lens vertex

Diameter 37.8 mm

Exit pupil*

Position 30.2 mm in front of the last lens vertex

Diameter 27.7 mm

Position of principal planes*

H 11.7 mm behind the first lens vertex

d' 70.9 mm in front of the last lens vertex

Back focal distance 80.5 mm

Distance between first

and last lens vertex 83.4 mm Weight 850 g

*at infinity



Performance data:

Sonnar[®] T* 4/150 CFi Cat. No. 10 11 36 - 9901

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.

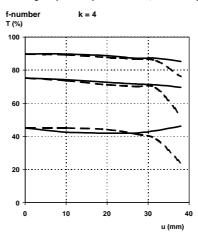
2. Relative illuminance

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.

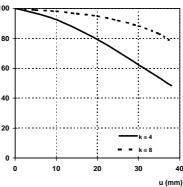
Modulation transfer T as a function of image height u.
White light. Spatial frequencies R = 10, 20 and 40 cycles/mm



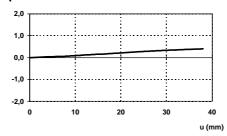
Slit orientation:

Relative illuminance





Distortion in % of image height u



Subject to change.
Printed in Germany 20.06.2002



Carl Zeiss

Camera Lens Division
73446 Oberkochen
Germany
Telephone ++49-7364-20-6175
Fax ++49-7364-20-4045
eMail: photo@zeiss.de
http://www.zeiss.de/photo