UV-Sonnar f/4.3–105 mm Cat. No. 104201

HASSELBLAD

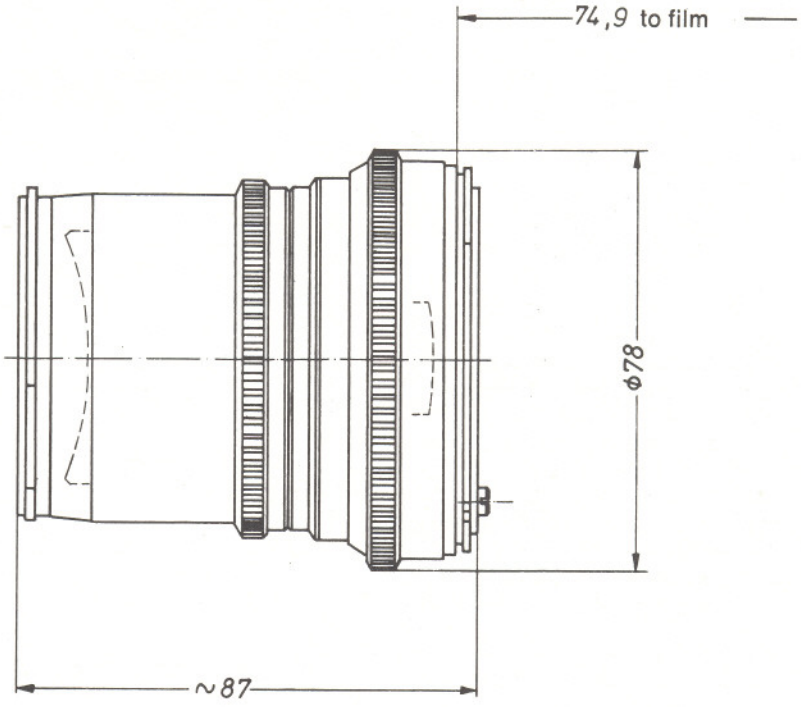
ZEISS

Carl Zeiss
D-7082 Oberkochen
West Germany

The UV-Sonnar f/4.3–105 mm is a special lens consisting of fluorite and quartz lens elements with excellent light transmission in the UV spectral range and chromatic correction in the UV as well as the visible spectral range. The lens thus lends itself to photography in the UV as well as in the visible ranges.

Over the wide range from far UV up to the visible spectral range, the UV-Sonnar features high performance and excellent distortion correction. For UV photographs, focusing can be made with visible light without any further adjustment.

The lens finds wide application in applied technical-cum-scientific photography including studies of textiles, printing forgeries, and materials of all kinds. It is of special interest for extraterrestrial UV photography.



Number of lens elements:	7
Number of components:	7
f-number:	4.3
Focal length:	107.2 mm
Negative size:	56.5 x 56.5 mm
Angular field 2w:	diagonal 41°, side 30°
Spectral range:	215–700 nm
f-stop scale:	4.3 - 5.6 - 8 - 11 - 16 - 22 - 32
Mount:	Compur interchangeable reflex shutter size 0 with automatic iris diaphragm
Filter mounting:	bayonet for Hasselblad series 50
Weight:	670 g

Distance range:	∞ to 1.8 m
Automatic depth-of-field indication for z = 0.06 mm *)	
Position of entrance pupil:	39.8 mm behind the first lens vertex
Diameter of entrance pupil:	24.6 mm
Position of exit pupil:	10.8 mm in front of the last lens vertex
Diameter of exit pupil:	21.1 mm
Position of principal plane H:	20.8 mm behind the first lens vertex
Position of principal plane H′:	26.8 mm in front of the last lens vertex
Distance between first and last lens vertex:	65.2 mm

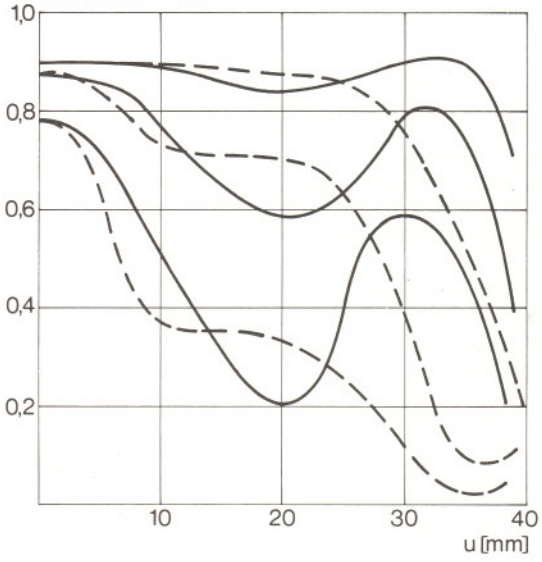
*) z = circle-of-confusion diameter

Performance data: UV-Sonnar f/4.3–105 mm Cat. No. 104201

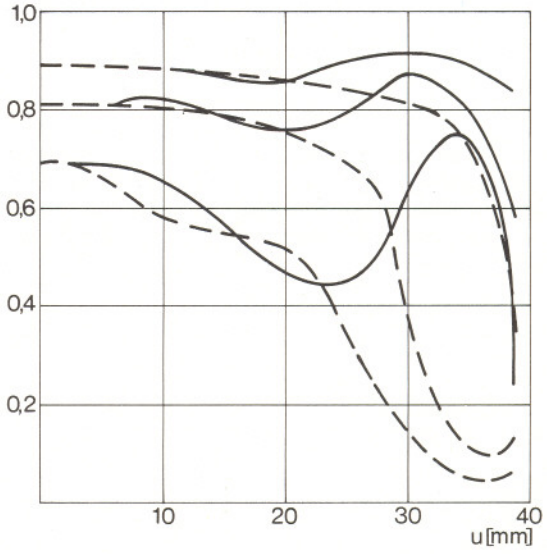
Modulation transfer T as a function of image height u
Slit orientation tangential — — — —
sagittal ————

λ = 436 nm
Spatial frequencies R = 10, 20 and 40 cycles/mm

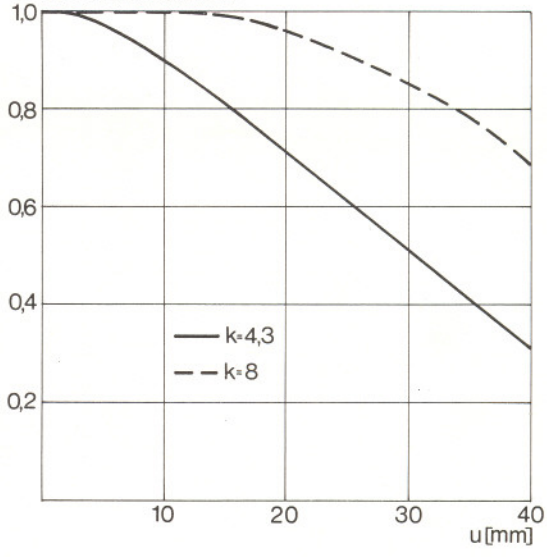
T f-number k = 4.3



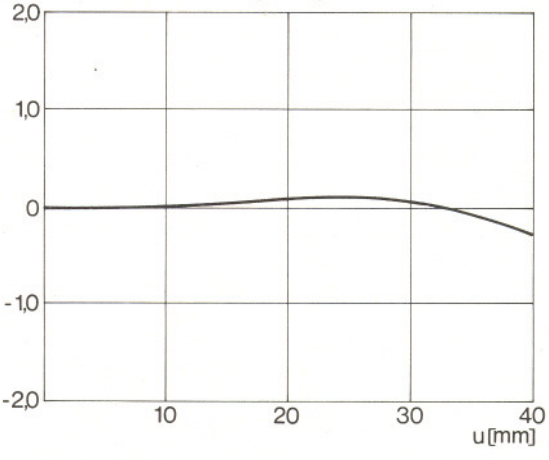
T f-number k = 8



E Relative illuminance



V Distortion in % of image height u



1. MTF Diagrams
The image height u – reckoned 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 right hand above the diagrams.
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 technical amendment