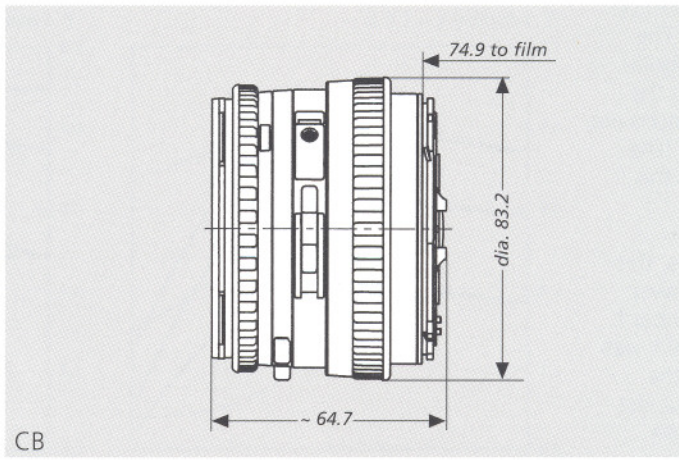
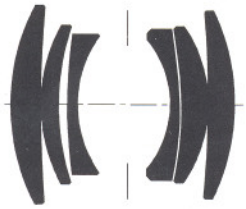
80 mm **Planar**® T* f/2.8



HASSELBLAD



The legendary Carl Zeiss 80 mm **Planar**® T* f/2.8 CB lens is an all-round, high-speed lens for use with all Hasselblad cameras of the 200 and 500 type. Its extremely flat field (hence the name "Planar") makes it suitable for virtually all fields of photography. New knowledge in the mathematics of lens design and the use of novel technologies made it possible to implement this optical setup with 6 lens elements. At the same time, Carl Zeiss has markedly reduced the amount of scattered light in this lens. Its design incorporates new ergonomic features. The legibility of the scale lettering has been considerably improved over that of the lenses of the previous CF line. The shutter-speed setting ring provides considerably more grip. All grip controls can be operated with gloves and are rounded for greater comfort. The flash terminal features a lock for the flash lead connector. A new, low-friction focusing mechanism allows exceptionally precise, sensitive focusing. The front bayonet has been designed as a smooth-action type and ensures smooth mounting of high-quality filters, lens hoods and effects boxes. The bayonet will retain its matte black color and absorbs any knocks or bangs on the front edge of the lens. Due to the new, broader structure of the camera connection bayonet of the CB lens, it has been possible to markedly increase the rigidity of this bayonet compared with the previous CF-type. The integrated between-lens shutter ensures exact interaction with the mechanical functions of cameras and accessories. In addition, the use of new materials has made it possible to increase the service life of the lens bayonet even further.

Cat. No. of lens:	**102212**	Focusing range:	∞ to 0.9 m
Number of elements:	6	Weight:	approx. 550 g
Number of groups:	5	Entrance pupil*:	
Max. aperture:	f/2.8	Position:	26.4 mm behind the first lens vertex
Focal length:	81.5 mm	Diameter:	28.6 mm
Negative size:	55 x 55 mm	Exit pupil*:	
Angular field 2w*:	51.9°	Position:	27.1 mm in front of the last lens vertex
Spectral range:	visible spectrum	Diameter:	34.7 mm
Aperture scale:	2.8 – 4 – 5.6 – 8 – 11 – 16 – 22	Position of principal planes*:	
Mount:	coupling system for automatic diaphragm function	H:	39.5 mm behind the first lens vertex
		H':	11.4 mm in front of the last lens vertex
Shutter:	Prontor CB	Back focal distance:	70.1 mm
Filter connection:	bayonet for Hasselblad series 60	Distance between first and last lens vertex*:	44.3 mm

* at ∞

ZEISS

Performance data:
80 mm **Planar**® T* f/2.8
No. 10 22 12

1. MTF Diagrams

The image height u – calculated from the image center – is entered in mm on the horizontal axis of the graphs. The modulation transfer T (MTF = **M**odulation **T**ransfer **F**actor) is entered on the vertical axis. Parameters of the graphs 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.

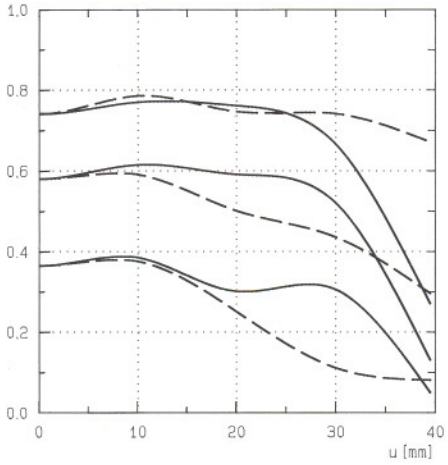
Unless otherwise indicated, the performance data refer to large object distances, for which normal photographic lenses are primarily used.

2. Relative illuminance

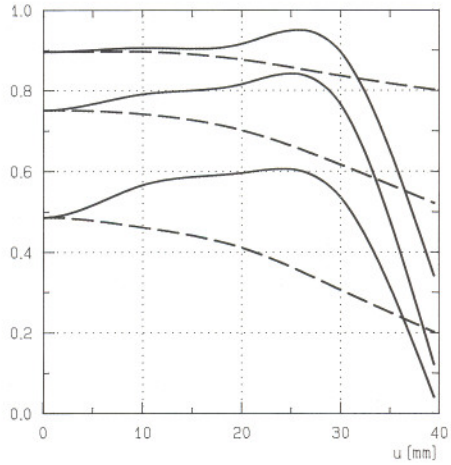
In this diagram the horizontal axis gives the image height u in mm and the vertical axis the relative illuminance E, both for full aperture and a moderately stopped-down lens. The values for E are determined taking into account vignetting and natural light decrease.

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

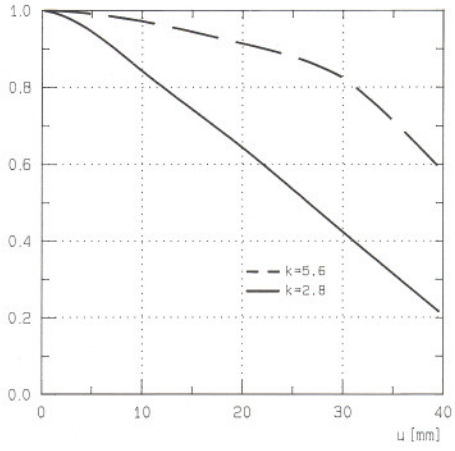
T f-number k = 2.8 at ∞



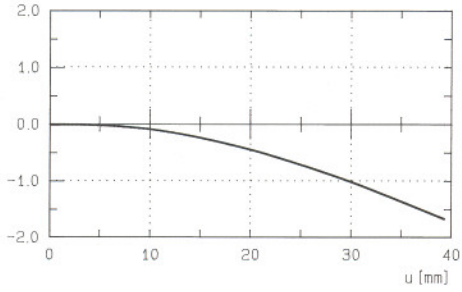
T f-number k = 5.6 at ∞



E Relative illuminance



V Distortion in % of image height u



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.

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