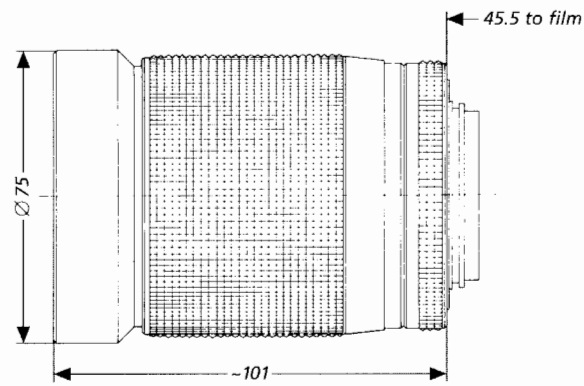
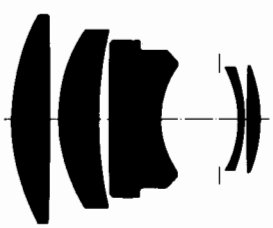
Planar® T* f/2 – 135 mm



CONTAX®/YASHICA® mount



The 135 mm **Planar**® T* f/2 lens for the 35 mm format with its 5 detached elements is a mature **Planar**® lens in every respect. The performance and the image field illumination are such that the high speed can be utilized to full advantage.
Although this **Planar**® lens has all advantages of the Gauss type, its overall length is surprisingly small. Measured from the front lens vertex to the image plane, it is only 7% longer than the focal length. The distance between the exit pupil and the back focal point is only 50% of the focal length. This guarantees good illumination of the finder area while the focusing screen used for the standard focal length of the reflex camera is retained. The 135 mm **Planar**® T* f/2 lens is thus the ideal medium focal length lens for the 35 mm format for all applications where its high speed is of advantage.

Cat. No. of lens:	**102146**	Weight:	approx. 790 g
Number of elements:	5	Focusing range:	∞ to 1.5 m
Number of groups:	5	Entrance pupil:	
Max. aperture:	f/2	Position:	131.7 mm behind the first lens vertex
Focal length:	132.8 mm	Diameter:	64.6 mm
Negative size:	24 x 36 mm	Exit pupil:	
Angular field 2w*:	18.5° diagonal	Position:	12.2 mm in front of the last lens vertex
Mount:	focusing mount with bayonet; TTL metering either at full aperture or in stopped-down position. Aperture priority/Shutter priority/ Automatic programmes (Multi-Mode Operation)	Diameter:	36.9 mm
		Position of principal planes:	
		H:	24.6 mm behind the first lens vertex
		H':	71.4 mm in front of the last lens vertex
		Back focal distance*:	61.4 mm
		Distance between first and last lens vertex:	80.7 mm
Aperture scale:	2 – 2.8 – 4 – 5.6 – 8 – 11 – 16 – 22		
Filter connection:	clip-on filter, diameter 75 mm screw-in type, thread M 72 x 0.75		

* at ∞

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Performance data:
Planar® T* f/2 – 135 mm
No. 102146

1. MTF Diagrams

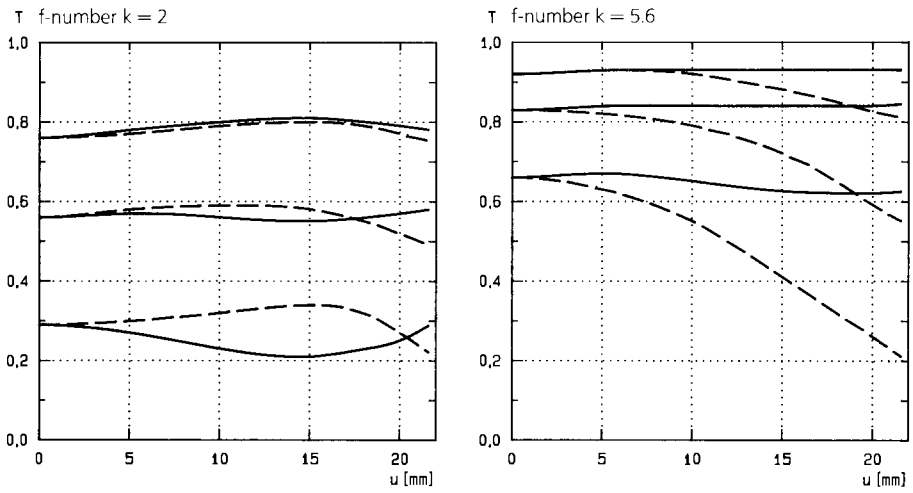
The image height u – calculated from the image center – is entered in mm on the horizontal axis of the graph. The modulation transfer T (MTF = Modulation Transfer Factor) is entered on the vertical axis. Parameters of the graph are the spatial frequencies R in cycles (line pairs) per mm given at the 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.

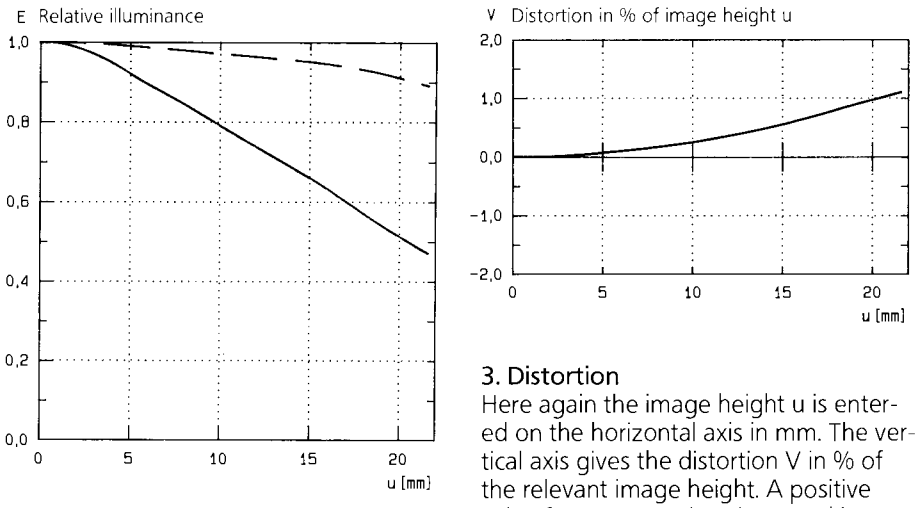
Unless otherwise indicated, the performance data refer to large object distances, for which normal photographic lenses are primarily used.

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.

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Subject to change.

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