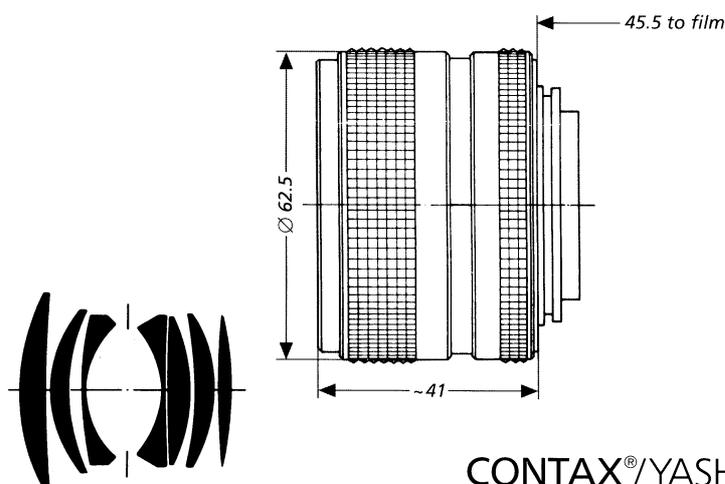


Planar[®] T* f/1.4 - 50 mm



CONTAX[®]/YASHICA[®] mount

Among the Zeiss lenses for 35 mm reflex cameras, the 50 mm **Planar[®]** f/1.4 lens is the fast high-performance lens with the standard focal length. This lens, of course, also incorporates the latest advances made in the development of optical glass and in the correction of aberrations. This 50 mm **Planar[®]** f/1.4 lens may thus be regarded as the leading standard lens.

The glass-to-air surfaces are provided with the multilayer T* coating. Consequently, the high image quality resulting from the excellent correction of all image errors is fully

utilized to create pictures which reproduce the high contrast of the scene observed, unimpaired by reflections.

The lens has a multitude of applications within the field of general photography. The high speed is equally valuable for taking rapid movements with short exposure times and for capturing dusk and dawn atmospheres. The close-range limit at 0.45 m permits reduction ratios down to 1:6.7 without accessories. Thus, format-covering exposures with fields as small as 15 x 23 cm are possible.

Cat. No. of lens:	10 21 44	Weight:	approx. 290 g
Number of elements:	7	Focusing range:	∞ to 0.45 m
Number of groups:	6	Entrance pupil:	
Max. aperture:	f/1.4	Position:	26.8 mm behind the first lens vertex
Focal length:	51.8 mm	Diameter:	36.2 mm
Negative size:	24 x 36 mm	Exit pupil:	
Angular field 2w:	47° diagonal	Position:	28.8 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 programs (Multi-Mode Operation)	Diameter:	49.7 mm
Aperture scale:	1.4 - 2 - 2.8 - 4 - 5.6 - 8 - 11 - 16	Position of principal planes:	
Filter connection:	clip-on filter, dia. 59 mm screw-in type, thread M 55 x 0.75	H:	38.4 mm behind the first lens vertex
		H':	13.6 mm in front of the last lens vertex
		Back focal distance:	38.2 mm
		Distance between first and last lens vertex:	42.2 mm



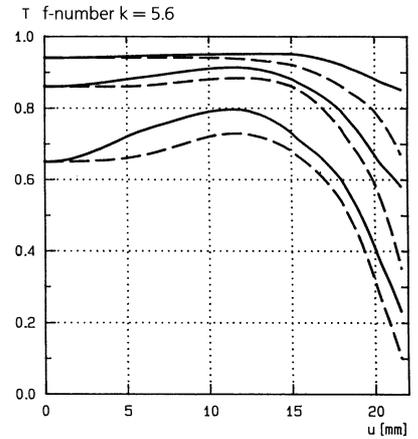
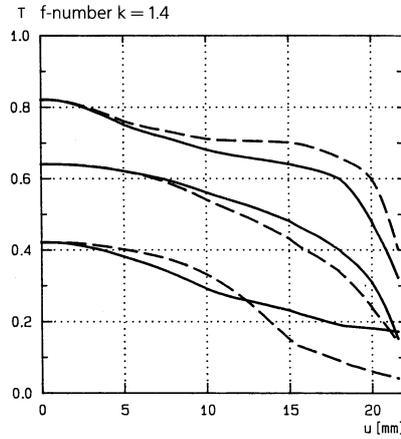
Performance data:

Planar[®] T* f/1.4 - 50 mm
 Cat. No. 10 21 44

1. MTF Diagrams

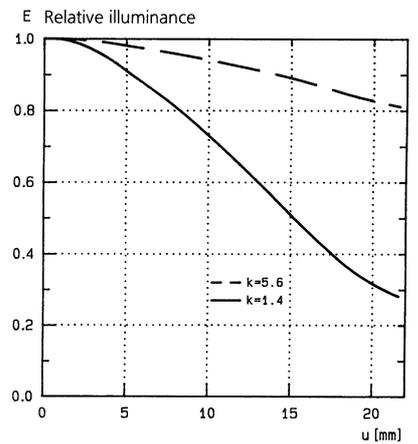
The image height u - calculated from the image center - is entered in mm on the horizontal axis of the graph. The modulation transfer T (MTF = Modulation Transfer Factor) is entered on the vertical axis. Parameters of the graph are the spatial frequencies R in cycles (line pairs) per mm given at the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

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



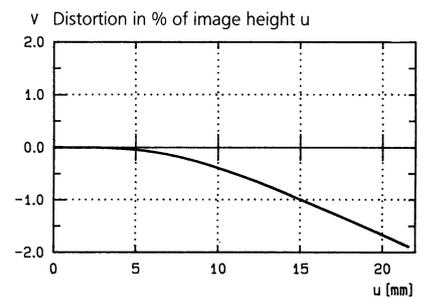
2. Relative illuminance

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.



Performance data:

Planar[®] T* f/1.4 - 50 mm
with converter **Mutar[®] I, 2x, T***

Cat. No. of lens

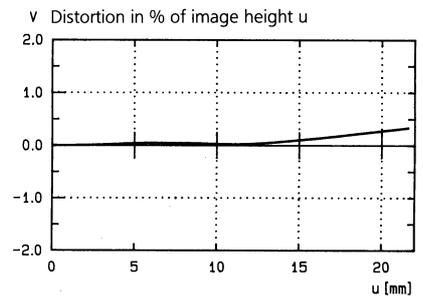
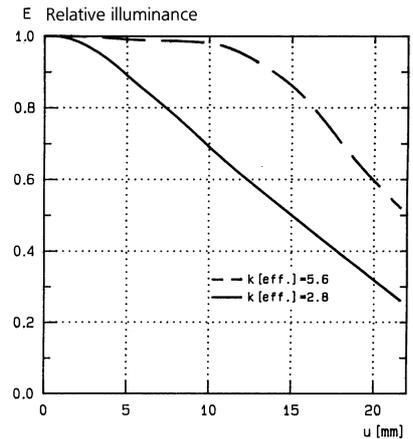
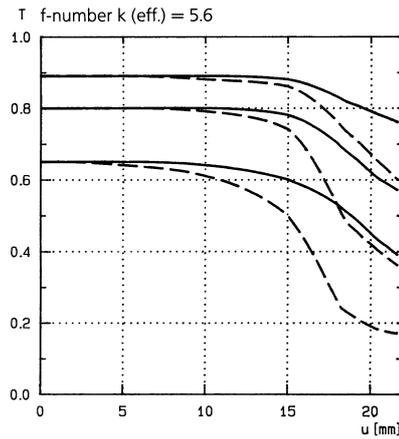
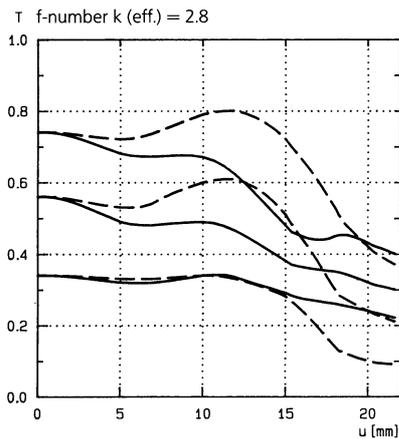
+ converter: 10 21 44 + 10 43 31

Number of elements: 7 + 6
 Number of groups: 6 + 5
 Max. aperture*: f/2.8
 Focal length*: 103.6 mm
 Negative format: 24 x 36 mm
 Angular field 2w*: 24° diagonal
 Spectral region: visible spectrum
 Lens mount: focusing helicoid with bayonet.
 TTL metering either at full aperture or in stopped-down position.
 Filter: thread M 55 x 0.75 mm, screw-in type clip-on, dia. 59 mm
 Weight: lens: approx. 290 g
 converter: approx. 250 g

Focusing range: ∞ to 3.5 m
 Entrance pupil: Position*: 268 mm behind first lens vertex
 Diameter*: 36.2 mm
 Exit pupil: Position*: 42.3 mm in front of last lens vertex
 Diameter*: 28.7 mm
 Position of principal planes:
 H: 1.8 mm in front of first lens vertex
 H': 64.6 mm in front of first lens vertex
 Back focal distance*: 39.2 mm
 Distance between first and last lens vertex: 79.8 mm

* at ∞

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



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