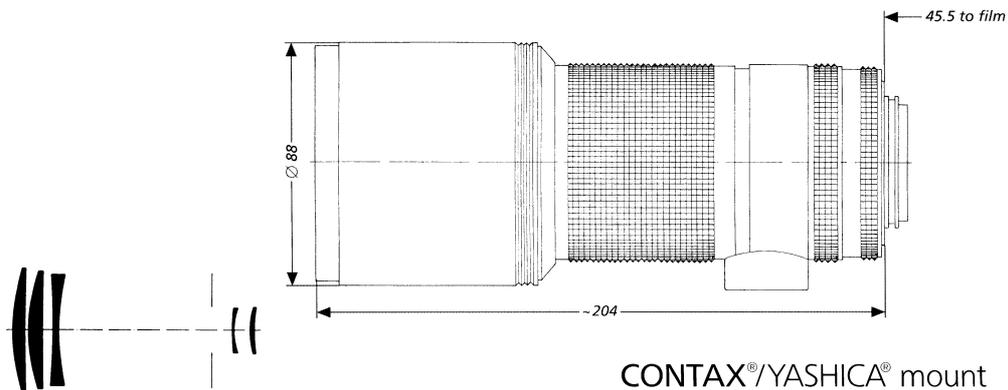


Tele-Tessar® T* f/4 - 300 mm



CONTAX®/YASHICA® mount

The 300 mm **Tele-Tessar®** T* f/4 lens offers a long focal length, remarkably high speed, compact design and easy operation at one and the same time. It is a telephoto design where the distance between the front lens vertex and the rear focus is only about 80% of the focal length. It offers virtually perfect monochromatic correction and excellent image quality even at full aperture - a decisive improvement over earlier telephoto designs.

It is, however, the mechanical construction of the lens that allows full utilization of its superb optical performance. The lens is easy to handle despite its long focal length, and the favourable opto-mechanical transmission ratio of the focusing helicoid offers the

photographer more flexibility. The lens hood which is connected with the outer barrel can be pushed back for transport. For shooting from a tripod, the lens has a tripod socket positioned approximately at the centre of gravity of the lens-camera combination. The camera can be swung through 90° for the transition from horizontal to vertical shots.

This **Tele-Tessar®** lens is ideal for large-size pictures of distant subjects and for photographing at long distances without being observed. The relatively long focal length makes the main subject stand out distinctly against the background, an effect often required by photographers.

Cat. No. of lens:	10 45 31	Filter connection:	clip-on filter, diameter 85 mm
Number of elements:	5		screw-in type, thread M 82 x 0.75
Number of groups:	5	Weight:	approx. 1170 g
Max. aperture:	f/4	Focusing range:	∞ to 3.5 m
Focal length:	300.0 mm	Entrance pupil:	
Negative size:	24 x 36 mm	Position:	238.4 mm behind first lens vertex
Angular field 2w:	8.2° diagonal	Diameter:	75.0 mm
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). Built-in lens hood.	Exit pupil:	
Aperture scale:	4 - 5.6 - 8 - 11 - 16 - 22 - 32	Position:	31.9 mm in front of last lens vertex
		Diameter:	32.8 mm
		Position of principal planes:	
		H:	153.3 mm in front of first lens vertex
		H':	54.6 mm in front of first lens vertex
		Back focal distance:	89.2 mm
		Distance between first and last lens vertex:	89.2 mm

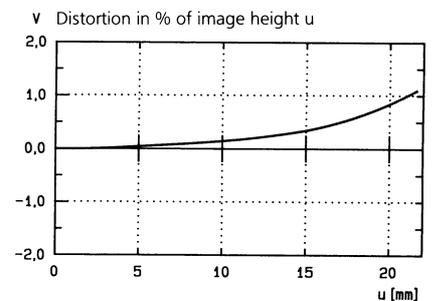
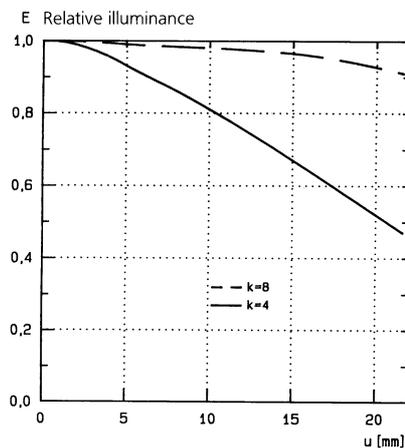
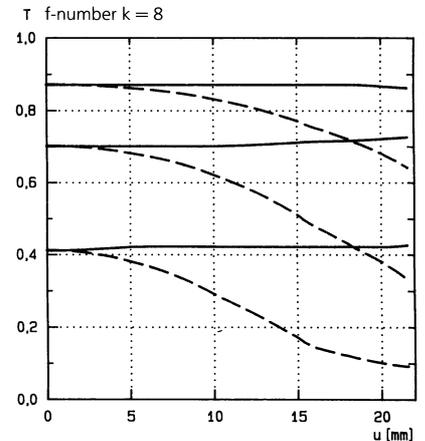
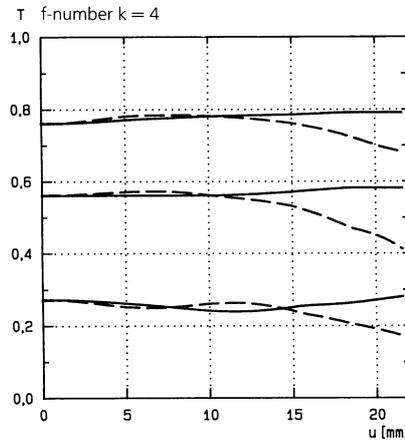


Performance data:
Tele-Tessar® T* f/4 - 300 mm
 Cat. No. 10 45 31

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.



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