Sonnar® T* 4/210

64 to film

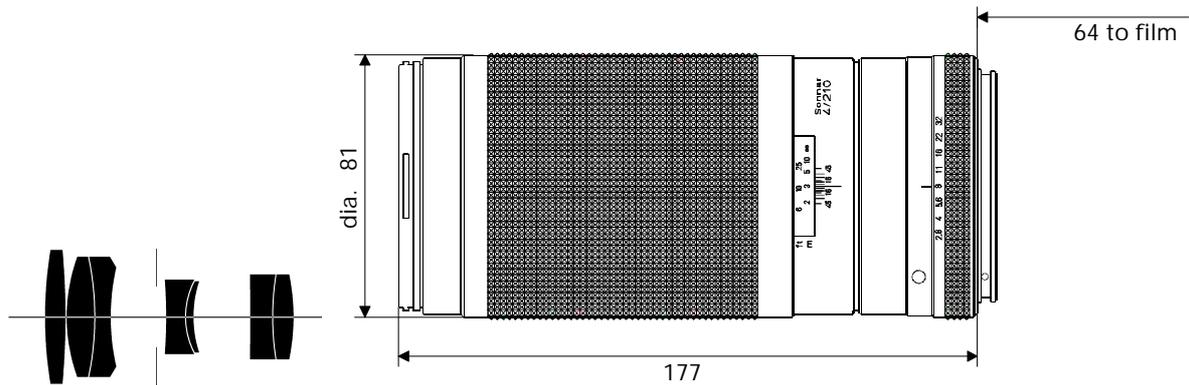dia. 81

177

CONTAX® 645

The **Sonnar**® T* 4/210 lens is an autofocus telephoto lens similar to a 135 mm lens on a 35 mm Contax® SLR. The optical system was designed using the latest technology, incorporating internal focusing (IF) and the most recent optical glass types. It shows outstanding performance.

The **Sonnar**® T* 4/210 lens can deliver telephoto shots of high quality and perfect corner-to-corner uniformity even at wide open aperture.

This is what fashion photographers need to blur out unwanted background with a shallow depth of field, making their subjects stand out impressively.

Combined with the autofocus of the Contax® 645 the **Sonnar**® T* 4/210 lens brings new possibilities to such fields as fashion and beauty photography, sports celebrities in action, performing artists on stage, musicians in concert, playing kids, pets and the like. The resulting images can be blown up to poster size with significantly better results than a 35 mm photo could deliver.

Preferred use: portraits, kids, pets, animals, fashion, beauty, sports and action

Cat. No. of lens:	**10 11 39**	Entrance pupil[*]:	
Number of elements:	7	Position:	61.6mm behind the first lens vertex
Number of groups:	4	Diameter:	51.1mm
Max. aperture:	1:4	Exit pupil[*]:	
Focal length:	209.6mm	Position:	74.2mm in front of the last lens vertex
Negative size:	41.5 x 56mm	Diameter:	47.2mm
Angular field 2w:	19°	Position of principal planes[*]:	
Mount:	Contax 645 Mount	H:	40.5mm behind the first lens vertex
Filter connection:	screw-in type, thread M72x0.75	H':	93.3mm in front of the last lens vertex
Focusing range:	∞ to 1.4m	Back focal distance:	116.3mm
Aperture scale:	4 - 5.6 - 8 - 11 - 16 - 22 - 32 - 45	Distance between first	
Weight:	approx. 1178 g	and last lens vertex:	116.3mm

[*] at ∞

Performance data:
Sonnar® T* 4/210
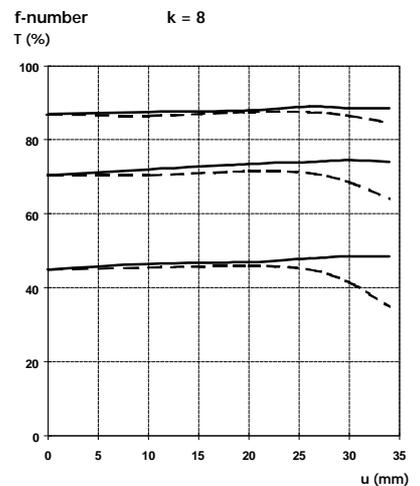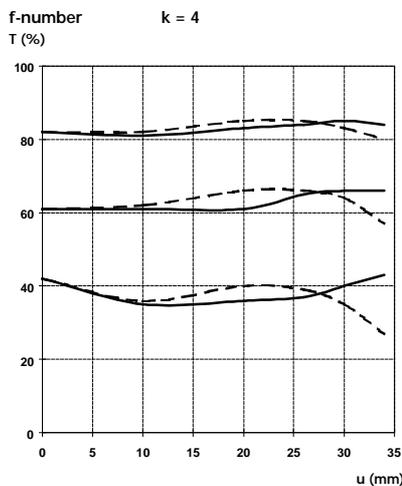# Cat. No. 10 11 39

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.
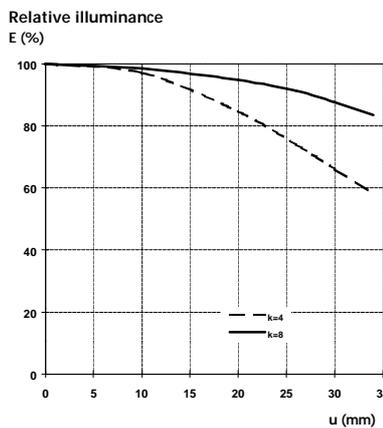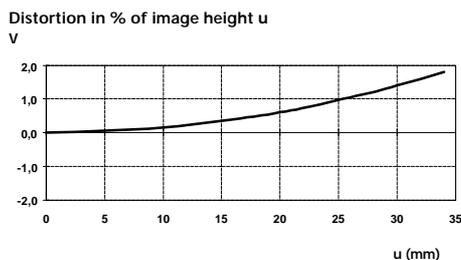
2. Relative illuminance

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.

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.

Modulation transfer T as a function of image height u.
White light. Spatial frequencies R = 10, 20 and 40 cycles/mm

Slit orientation: ⎯⎯ sag ⎯ ⎯ tan

f-number k = 4
T (%)

f-number k = 8
T (%)

Relative illuminance
E (%)

k=4
k=8

Distortion in % of image height u
V