# Distagon<sup>®</sup> T\* f/4 - 18 mm



This  $\textbf{Distagon}^{^{\!\! \ensuremath{\circ}}}$  lens with an angular field of 100° has a time-honoured design.

Its special features are excellent image quality, a good distortion correction unexpected in this type of lens and an exceptionally compact design.

The new version of this lens provides the same image quality as the well-known and time-tried

| design when photographing subjects at a              |
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| long-distance. New, however, is the design of the    |
| focusing system. When the lens is focused to short   |
| distances, the positions of the lens groups change   |
| in relation to each other. This counteracts the loss |
| in image quality in the outer zones of the image     |
| and extends the useful range of the lens to 0.3 m.   |
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| Cat. No. of lens:<br>Number of elements:<br>Number of groups:<br>Max. aperture:<br>Focal length:<br>Negative size:<br>Angular field 2w:<br>Mount:<br>Aperture scale:<br>Filter connection: | <b>10 48 42</b><br>10<br>9<br>f/4<br>18.6 mm<br>24 x 36 mm<br>diagonal 100°<br>focusing mount with bayonet;<br>TTL metering either at full aperture<br>or in stopped-down position.<br>Aperture priority/Shutter priority/<br>Automatic programs<br>(Multi-Mode Operation)<br>4 - 5.6 - 8 - 11 - 16 - 22<br>clip-on filter, diameter 70 mm | Focusing range:<br>Aberration correction for cl<br>range by floating element<br>Entrance pupil:<br>Position:<br>Diameter:<br>Exit pupil:<br>Position:<br>Diameter:<br>Position of principal planes:<br>H:<br>H':<br>Back focal distance:<br>Distance between first and<br>last lens vertex: | <ul><li>23.3 mm behind the first lens vertex</li><li>4.5 mm</li><li>11.9 mm in front of the last lens vertex</li><li>11.7 mm</li></ul> |
|--|--|---|--|
| Weight:  | approx. 350 g  |   |  |



## Performance data: **Distagon**<sup>®</sup> T\* f/4 - 18 mm Cat. No. 10 48 42

#### 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.

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Subject to change.

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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