



# Distagon T\* 2/28 ZF



## Features

- High Speed lens
- Integrated floating elements design ensures consistent performance at any distance
- Optimal control of flare and stray light
- Precise manual focusing
- Robust full-metal construction
- Identical color reproduction of all models assures the quality of products measured by hue difference
- For industrial cameras with F-Mount up to sensor sizes of 24x36 mm.
- Mounts and optical coatings can be modified on request

### **ZF-I: Industrial Edition**

Features special screws to fix focus and aperture settings also in rough situations.

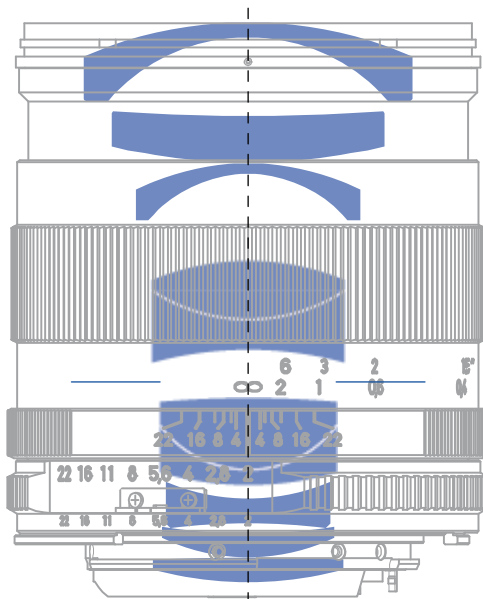
### **Camera Mounts**

Available for other camera mounts such as EF and K bayonet mount.



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## Technical Specifications



<b>Focal length</b>	28 mm
<b>Aperture range</b>	f/2 – f/22 (1/2 stop intervals)
<b>Number of elements / groups</b>	10 / 8
<b>Working distance (object to sensor)</b>	12.1 cm (0.4 ft) – ∞
<b>Angular field* (diag. / horiz. / vert.)</b>	74 / 64 / 45 °
<b>Max. diameter of image field</b>	43 mm (1.7")
<b>Flange focal length</b>	46.5 mm (1.8")
<b>Coverage at close range</b>	11 x 17 cm (4.3 x 6.7")
<b>Image ratio at close range</b>	1: 4.7
<b>Filter-thread</b>	M 58 x 0.75
<b>Length (without caps)**</b>	68.9 mm (2.7")
<b>Diameter</b>	64 mm (2.5")
<b>Weight</b>	520 g (18 oz.)
<b>Camera mount***</b>	ZF (F bayonet)

\* referring to 35 mm format

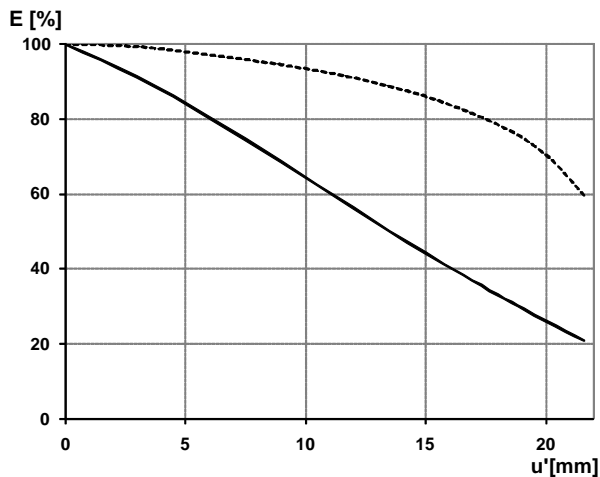
\*\* from bayonet mount to filter thread when lens focused to infinity

\*\*\* other mounts available on request



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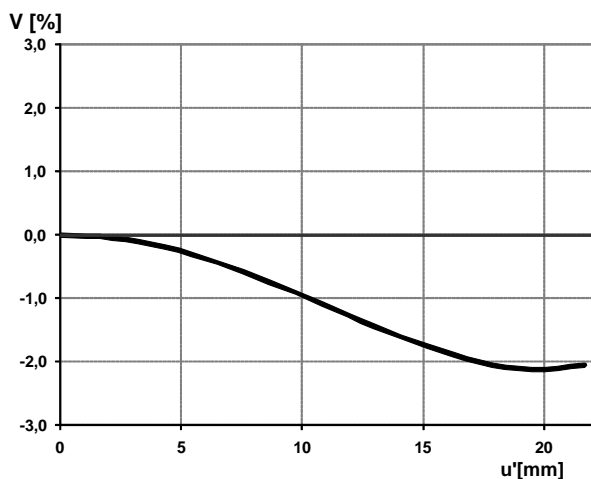
## Relative Illuminance



The relative illumination shows in percent the decrease in image brightness from the image center to edge.

— f-number 2  
... f-number 4

## Relative Distortion

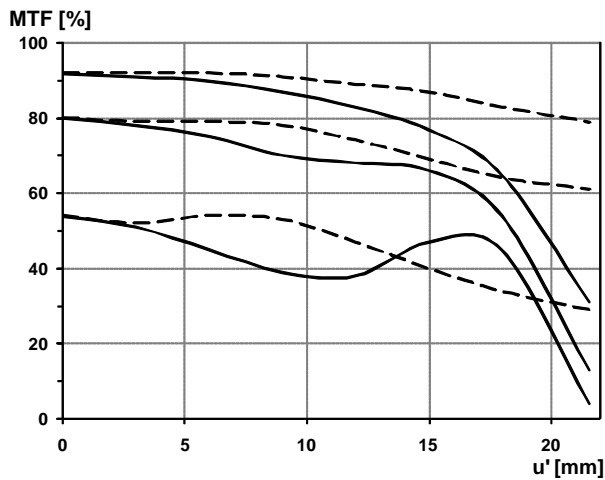


The relative distortion shows in percent the deviation of the actual from the ideal image height.



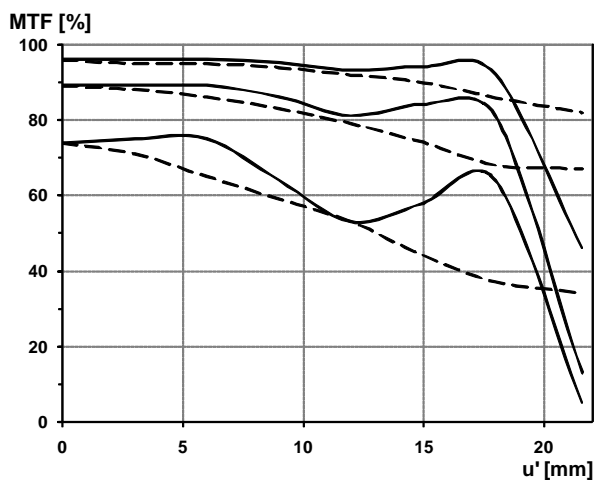
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## MTF Charts



The Modulation Transfer (MTF) as a function of image height ( $u$ ) and slit orientation (sagittal, tangential) has been measured with white light at spatial frequencies of  $R = 10, 20$  and  $40$  cycles/mm.

f-number 2  
— Saggital  
... Tangential



f-number 4  
— Saggital  
... Tangential



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## Depth of Field

Aperture	Field range			
	Object distance 1.50 m (4.92 ft)		Object distance 0.80 m (2.62 ft)	
f / 2	1.37 – 1.66 m	(4.49 – 5.45 ft)	0.77 – 0.84 m	(2.53 – 2.75 ft)
f / 2.8	1.32 – 1.73 m	(4.33 – 5.67 ft)	0.75 – 0.85 m	(2.46 – 2.79 ft)
f / 4	1.26 – 1.86 m	(4.13 – 6.10 ft)	0.73 – 0.88 m	(2.39 – 2.89 ft)
f / 5.6	1.19 – 2.06 m	(3.90 – 6.76 ft)	0.71 – 0.92 m	(2.33 – 3.02 ft)
f / 8	1.09 – 2.47 m	(3.58 – 8.10 ft)	0.68 – 0.98 m	(2.23 – 3.21 ft)
f / 11	1.00 – 3.00 m	(3.28 – 9.84 ft)	0.65 – 1.08 m	(2.13 – 3.54 ft)
f / 16	0.87 – 7.80 m	(2.85 – 25.59 ft)	0.60 – 1.29 m	(1.97 – 4.23 ft)
f / 22	0.76 m – ∞	(2.49 ft – ∞)	0.55 – 1.71 m	(1.80 – 5.61 ft)