





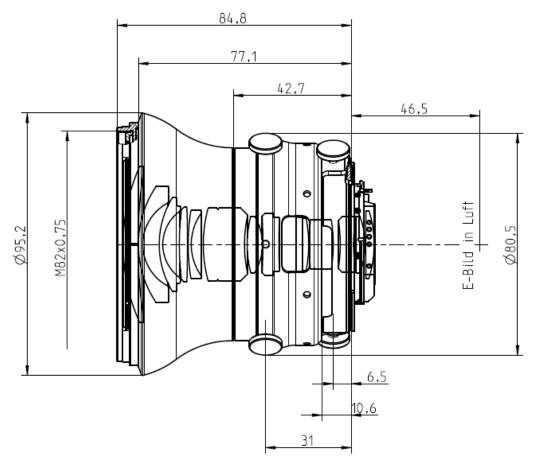
#### Features

- f/2.8 aperture
- Precise manual focusing
- Robust full-metal construction
- Continuous aperture setting or click stop
- For industrial cameras up to sensor sizes of 24x36 mm or 41mm line sensors
- Wide angle lens with highest optical performance
- Features special screws to fix focus and aperture settings even in rough situations
- High contrast over the entire image field

**Camera Mounts** Available with F mount or M42 screw mount



### **Technical Specifications**

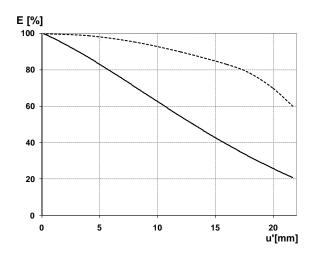


Focal length	21 mm
Aperture range	f/2.8 – f/22 (1/ 2 stop intervals or continuous)
Number of elements / groups	16/13
Min. working distance (object to sensor)	220 mm (0.72 ft.) - ∞
Min. free working distance	90 mm (0.29 ft.) - ∞
Angular field* (diag. / horiz. / vert.)	90 / 81 / 59°
Max. diameter of image field	43 mm (1.7")
Flange focal length	F-Mount: 46.5 mm (1.8"); M42-Mount: 45,5 mm
Coverage at close range	120 x 180 mm (4.7 x 7.1"), line 215 mm (8.4")
Image ratio at close range	1:5
Filter-thread	M 82 x 0.75
Weight	785 g (1.7 lbs.)
Camera mount	F bayonet, M42

\* referring to 35 mm format



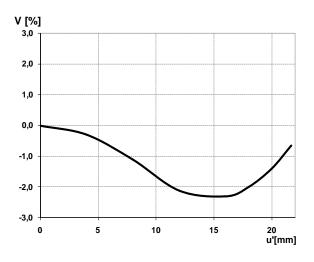
#### **Relative Illuminance\***



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

\_\_\_\_ f-number 2.8 .... f-number 5.6

### **Relative Distortion\***

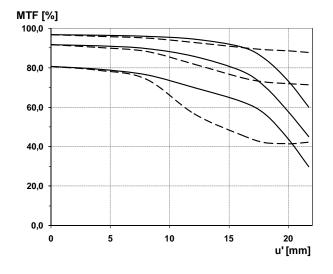


The relative distortion shows the deviation of the actual image height from the ideal one in percent.

\*Data for infinite focus setting

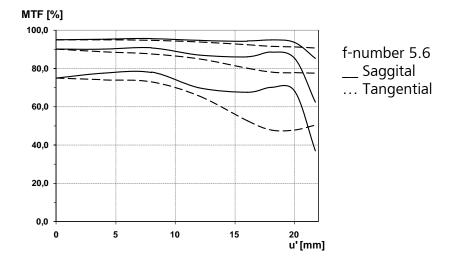


#### **MTF Charts\***



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.

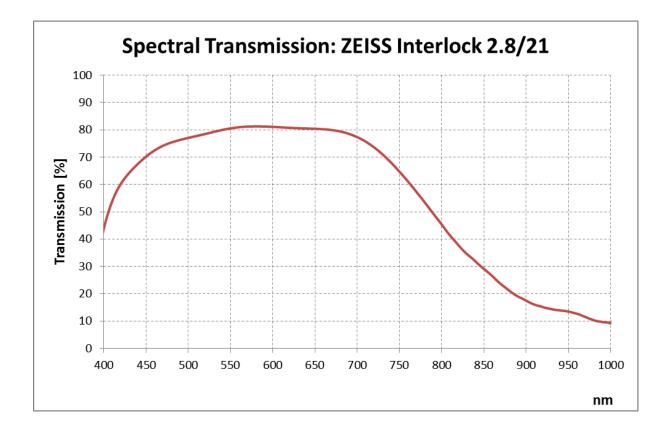
f-number 2.8 \_\_\_\_Saggital ....Tangential



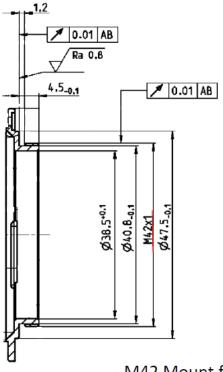
<sup>\*</sup>Data for infinite focus setting



### **Spectral Transmission**







M42 Mount for 45,5 mm Flange Focal Distance

The diameter of the camera/lens adapter must not exceed 55 mm at the lens side!