V-Mount Macro Lens

Apo-Componon 4.0/45-0007

Unlike conventional camera lenses where the optical performance decreases as the magnification increases, Schneider-Kreuznach macro lenses have been developed and corrected exclusively for the close-up range of 1:20 to 1:1. Due to its mechanical stability and the robust V-mount interface enabling simpler adjustment of the best azimuth position, the system is exceptionally well suited to demanding, continuous industrial use.

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Key Features

- Excellent optical imaging performance when using large sensors
- Vibration-insensitive for stable optical performance
- Industry-compatible V-mount interface
- Lockable distance and aperture settings
- Continuous aperture adjustment, guaranteed long-term stability
- 100% quality control guarantees reliability and constant quality
- Low maintenance requirements, therefore high system reliability

Applications

- Machine Vision and other imaging applications
- PCB inspection
- LCD inspection
- OLED inspection
- Solar inspection

Technical Specifications

F-number	4.0
Focal length	46.5 mm
Image circle	43.2 mm
Magnification	1:20 to 1:1, optimized for -0.17
Transmission	400 - 700 nm
Interface	V38-Mount
Weight	100 gr.
Filter tread	M37 x 0.75
Code no.	14783

Contact

Jos. Schneider Optische Werke GmbH
Ringstraße 132
55543 Bad Kreuznach
Germany
Phone +49 671 601-205
Fax +49 671 601-286
www.schneiderkreuznach.com
industrie@schneiderkreuznach.com

Schneider Optical Technologies Co., Ltd.
Rm. A505 Yingdali Science Park, Hongmian Rd.,
Futian Free Trade Zone, Shenzhen 518038,
P.R. China
Phone: +86 755 88 32 11 70
Fax: +86 755 88 32 11 75
www.schneiderkreuznach.com
info@schneider-asiapacific.com

Schneider Optics Inc.
285 Oser Ave.
Hauppauge, NY 11788
USA
Phone +1 631 761-5000
Fax +1 631 761-5090
www.schneideroptics.com/industrial
industrial@schneideroptics.com

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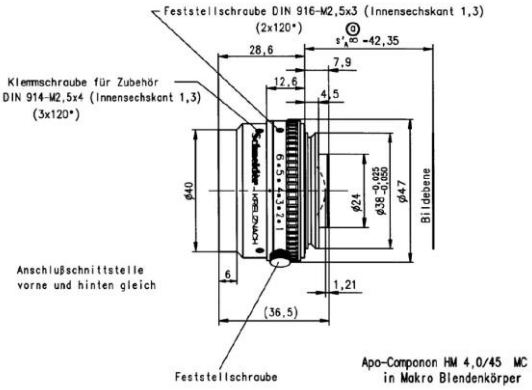

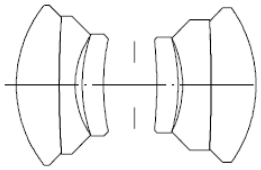

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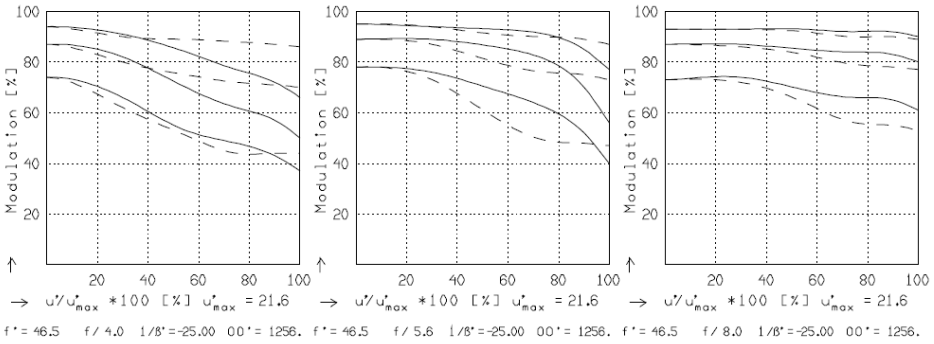
f' =	46.5 mm	β'_P =	1.026
s_F =	-33.1 mm	s_{EP} =	12.3 mm
s'_F =	35.7 mm	s'_{AP} =	-12.1 mm
HH' =	-1.8 mm	Σ d =	22.5 mm

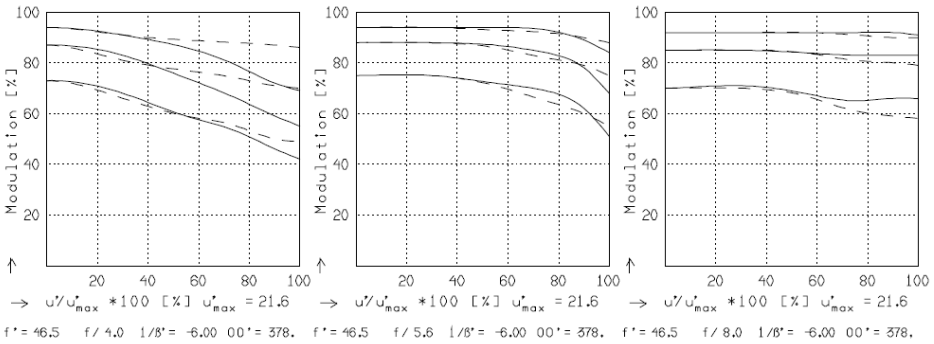
APO-COMPONON 4/45

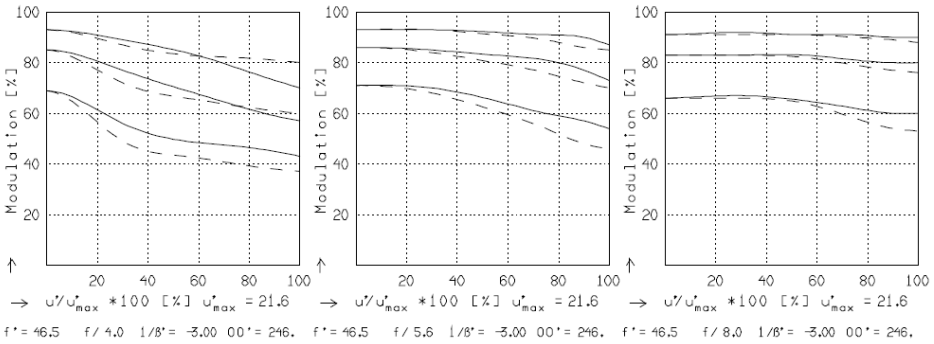
MODULATION with reference to the relative image height

Wavelength	λ	[nm] :	546	706	644	480	436	405
Spectral weighting		[%] :	27.4	12.4	24.1	18.3	12.6	5.2
Spatial frequency R		[1/mm] :	10	20	40			
Format		[mm X mm] :	24.0 X 36.0					
Diagonal 2u'		[mm] :	43.2					

radial ——
tangential — —

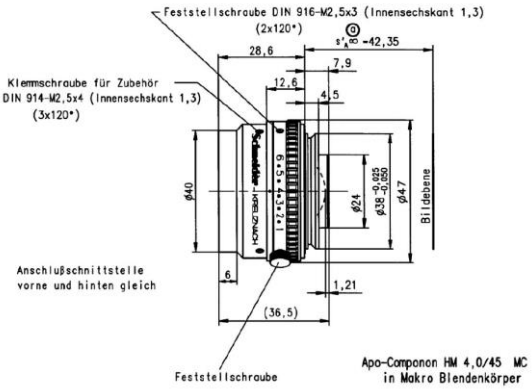


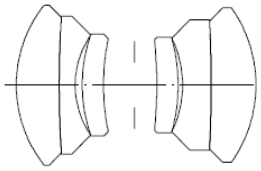




Focusing : MTF_{max} at f / 4.0 , R = 20 1/mm, u'/u'_{max} = 0

Apo-Componon 4.0/45





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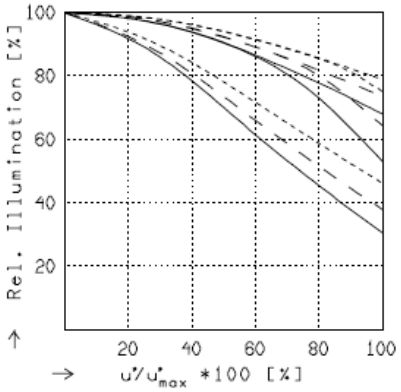
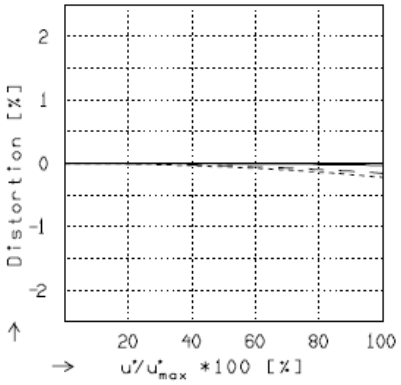


RELATIVE ILLUMINATION

The relativ illumination is shown for the given focal distances or magnifications.

f / 4.0 f / 5.6 f / 8.0

—— β' = -0.0400	u'_{max} = 21.6	OO' = 1256.	
— — β' = -0.1667	u'_{max} = 21.6	OO' = 378.	
----- β' = -0.3333	u'_{max} = 21.6	OO' = 246.	



DISTORTION

Distortion is shown for the given focal distances or magnifications. Positive values indicate pincushion distortion and negative values barrel distortion.

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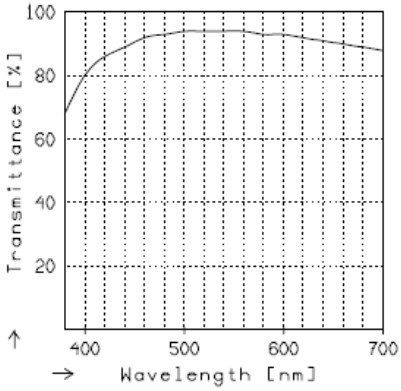
— — β' = -0.1667	u'_{max} = 21.6	OO' = 378.	
----- β' = -0.3333	u'_{max} = 21.6	OO' = 246.	



TRANSMITTANCE

Relative spectral transmittance is shown with reference to wavelength.