

3 Mega-Pixel Lens

Cinegon 1.8/4.8-0902

In accordance with the sensitivity of modern 2 / 3" CCD and CMOS sensors, the 3 megapixel lenses are corrected and broadband-coated for the spectral range of 400 – 1000 nm (VIS + NIR). Even under production and / or extreme conditions, the robust mechanical design with lockable focus and iris setting mechanism guarantees reliable continuous use in which the set optical parameters remain in place.



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Key Features

- High-resolution optics
- Highest optical imaging performance even with smallest pixel sizes
- Broadband coating (400 - 1000 nm)
- Compact and low weight
- Vibration insensitivity for stable imaging performance
- Focus and iris setting lockable

Applications

- Machine Vision and other imaging applications
- 3D measurement
- Traffic
- Medical
- Robot vision
- Food processing

Technical Specifications

F-number	1.8
Focal length	5.0 mm
Image circle	11 mm
Transmission	400 - 1000 nm
Interface	C-Mount
Weight	90 gr.
Option	Filter holder with M62 x 0.75
Code no.	1001955

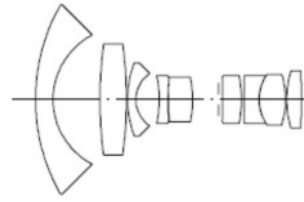
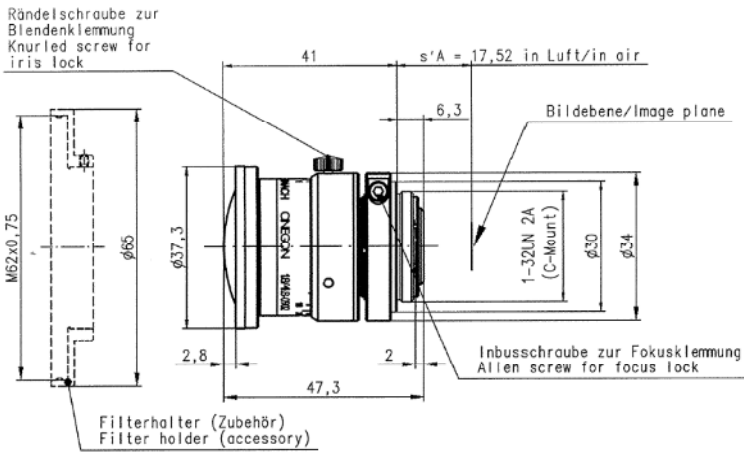
Contact

Jos. Schneider Optische Werke GmbH
 Ringstraße 132
 55543 Bad Kreuznach
 Germany
 Phone +49 671 601-205
 Fax +49 671 601-286
<http://www.schneiderkreuznach.com/en/industrial-solutions/>
industrie@schneiderkreuznach.com

Schneider Asia Pacific Ltd.
 20/F Central Tower, 28 Queen's Road
 Central, Hong Kong
 China
 Phone +852 8302 0301
 Fax +852 8302 4722
www.schneider-asiapacific.com
info@schneider-asiapacific.com

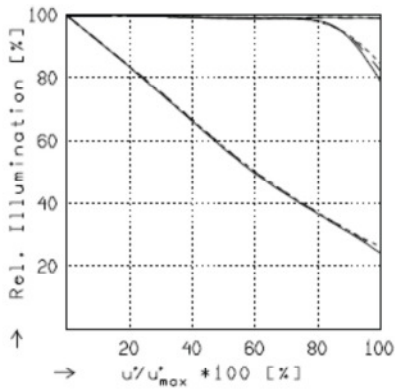
Schneider Optics Inc.
 285 Oser Ave.
 Hauppauge, NY 11788
 USA
 Phone +1 631 761-5000
 Fax +1 631 761-5090
www.schneideroptics.com/industrial
industrial@schneideroptics.com

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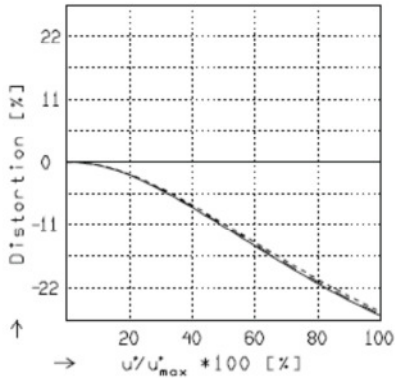
f'	=	5,0 mm	β'_p	=	6,632
s_F	=	13,2 mm	s_{EP}	=	13,9 mm
$s_{F'}$	=	13,2 mm	s_{AP}	=	-19,8 mm
HH'	=	35,4 mm	Σd	=	45,3 mm



RELATIVE ILLUMINATION

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

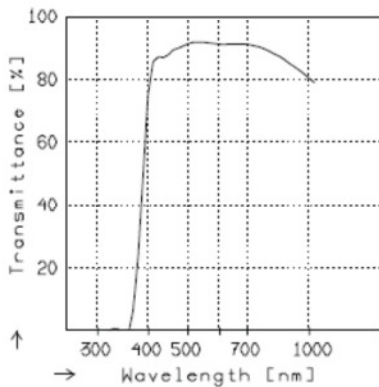
f	/ 1.9	/ 4.0	/ 8.0
—	$\beta' = -0.0200$	$u'_{max} = 5.5$	$00' = 294.$
- - -	$\beta' = -0.0333$	$u'_{max} = 5.5$	$00' = 195.$
--- - -	$\beta' = -0.0500$	$u'_{max} = 5.5$	$00' = 145.$



DISTORTION

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

—	$\beta' = -0.0200$	$u'_{max} = 5.5$	$00' = 294.$
- - -	$\beta' = -0.0333$	$u'_{max} = 5.5$	$00' = 195.$
--- - -	$\beta' = -0.0500$	$u'_{max} = 5.5$	$00' = 145.$



TRANSMITTANCE

Relative spectral transmittance is shown with reference to wavelength.

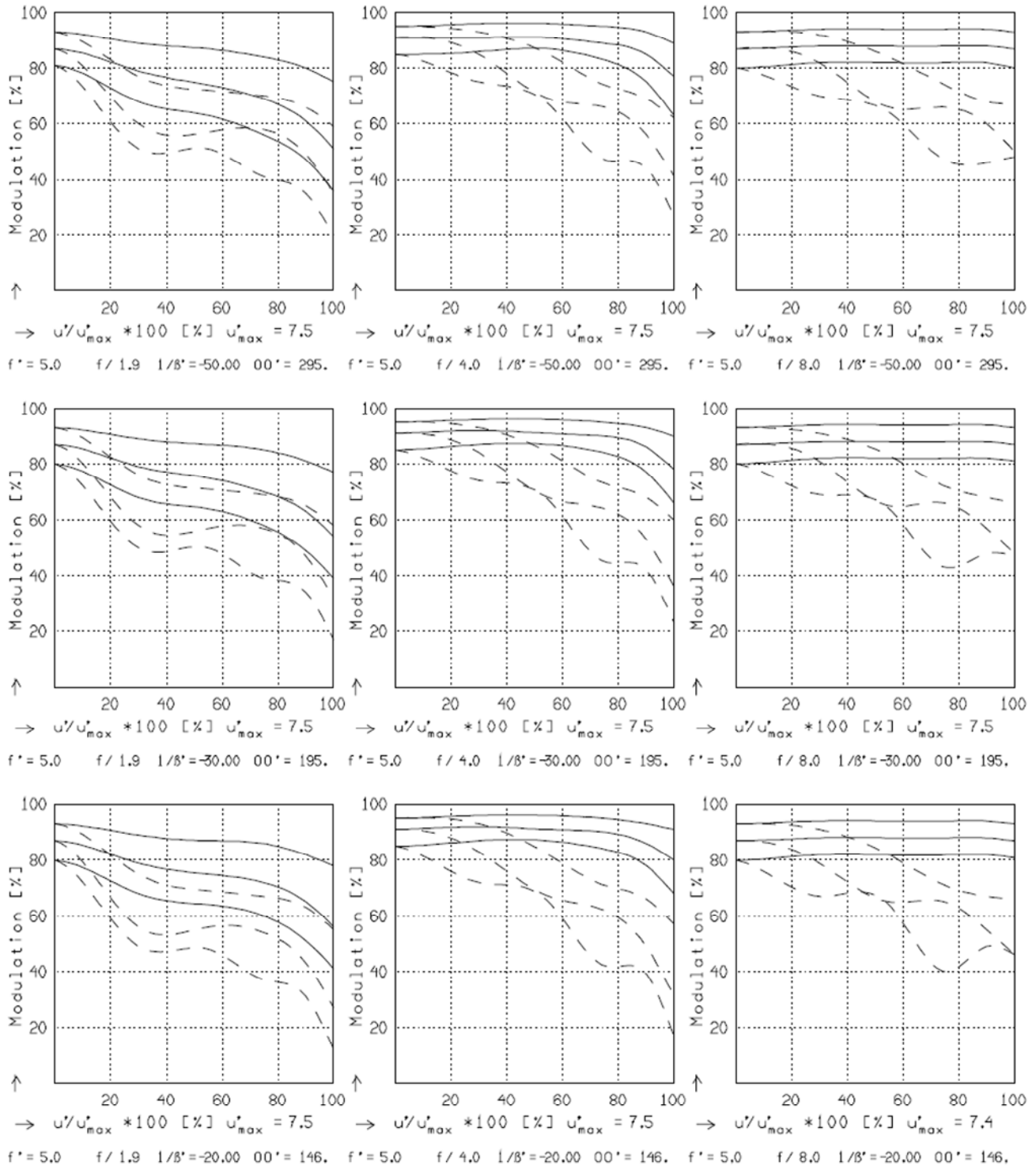
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CINEGON 1.8/4.8

MODULATION with reference to the relative image height

Wavelength λ	[nm]	555	655	605	505	455	405
Spectral weighting	[%]	19.4	23.2	21.7	15.4	11.8	8.5
Spatial frequency R	[1/mm]	10	20	30			
Format	[mm X mm]	6.6	X	8.8			
Diagonal $2u'$	[mm]	11.0					

radial —
tangential - -



Focusing : MTF_{max} at $f / 1.8$, $R = 30$ 1/mm, $u'/u'_{max} = 0$

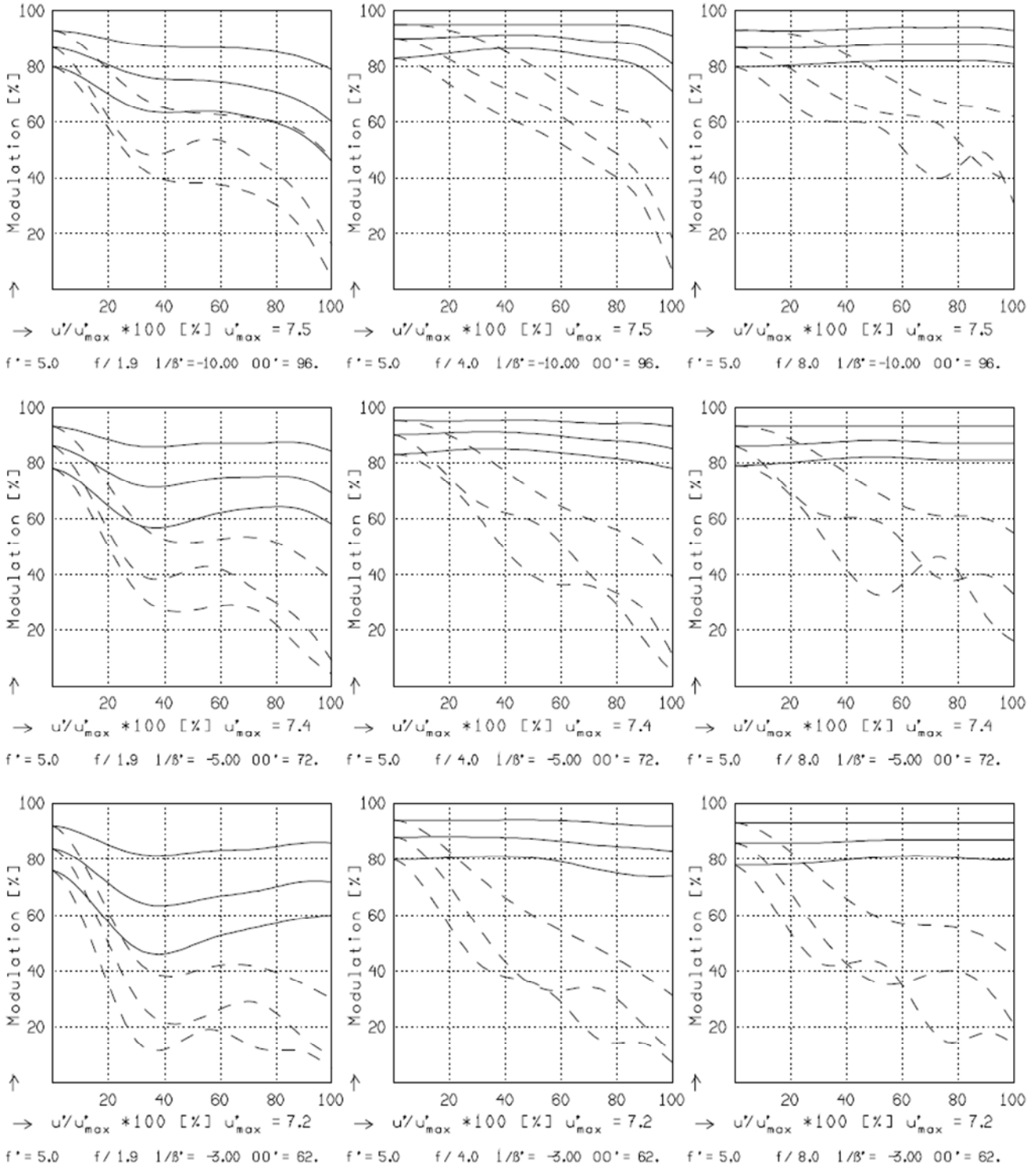
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tangential - -



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