Xenon-RUBY Lens

Xenon-RUBY 2.3/16

The Xenon-Ruby lens is optimized in accordance with the sensitivity of modern image sensors up to 1 / 1.8“ (9mm). This lens is the perfect trade-off between price and performance: By having a practice-oriented speed of 2.3, a very high optical performance is achieved.
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.

Xenon-RUBY 2.3/16

Key Features

- Robust mechanics for rough industrial environment
- Compact design and low weight
- Focus and iris setting lockable
- High resolution optics
- Transmission 400 - 1000 nm (VIS - NIR)
- Designed for Sensors up to 1 / 1.8” (9mm)

Applications

- Traffic
- Security/Surveillance
- Machine vision and other imaging applications
- Quality control
- Surface inspection
- 2D / 3D Measurement

Technical Specifications

F-stop range	2.3 - 16
Focal length	15.9 mm
Image circle	9 mm
Transmission	400 - 1000 nm
Interface	C-Mount
Filter Thread	M25.5 x 0.5
Weight	60 gr.
Code No.	1074626

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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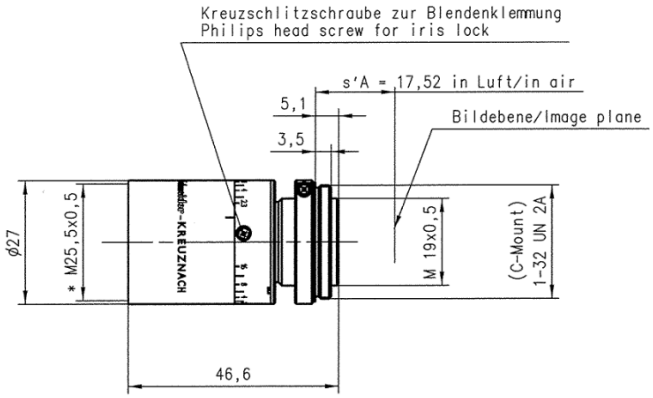

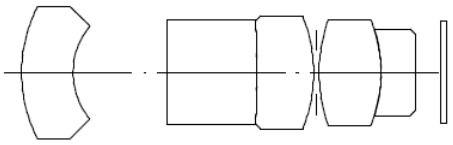

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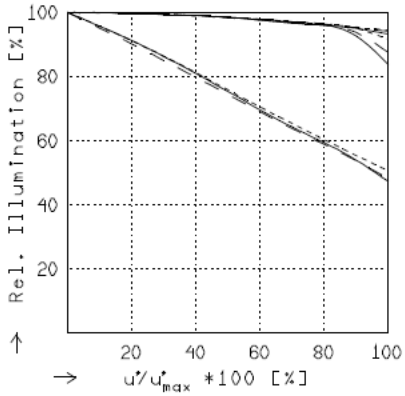
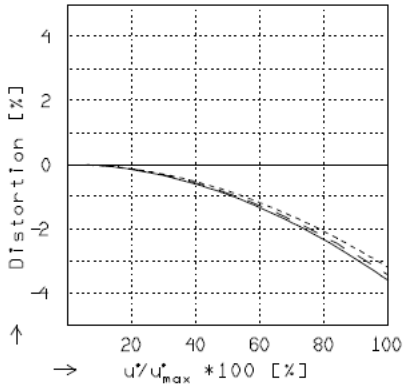
f'	=	15.9 mm	β'_P	=	1.446
s_F	=	9.2 mm	s_{EP}	=	20.2 mm
s'_F	=	14.1 mm	s'_{AP}	=	-8.9 mm
HH'	=	16.1 mm	Σ d	=	42.9 mm



RELATIVE ILLUMINATION

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

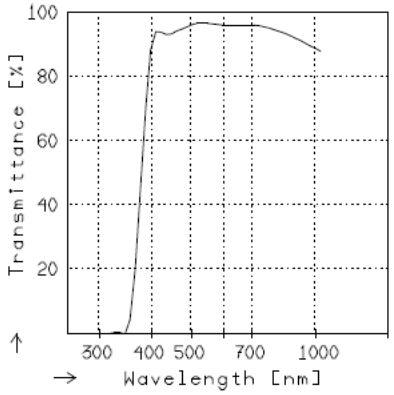
	f / 2.3	f / 4.0	f / 5.6
——	β' = -0.0200	u'_{max} = 4.4	ω' = 843.
— —	β' = -0.0500	u'_{max} = 4.4	ω' = 367.
-----	β' = -0.1000	u'_{max} = 4.5	ω' = 208.



DISTORTION

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

——	β' = -0.0200	u'_{max} = 4.5	ω' = 843.
— —	β' = -0.0500	u'_{max} = 4.5	ω' = 367.
-----	β' = -0.1000	u'_{max} = 4.5	ω' = 208.



TRANSMITTANCE

Relative spectral transmittance is shown with reference to wavelength.

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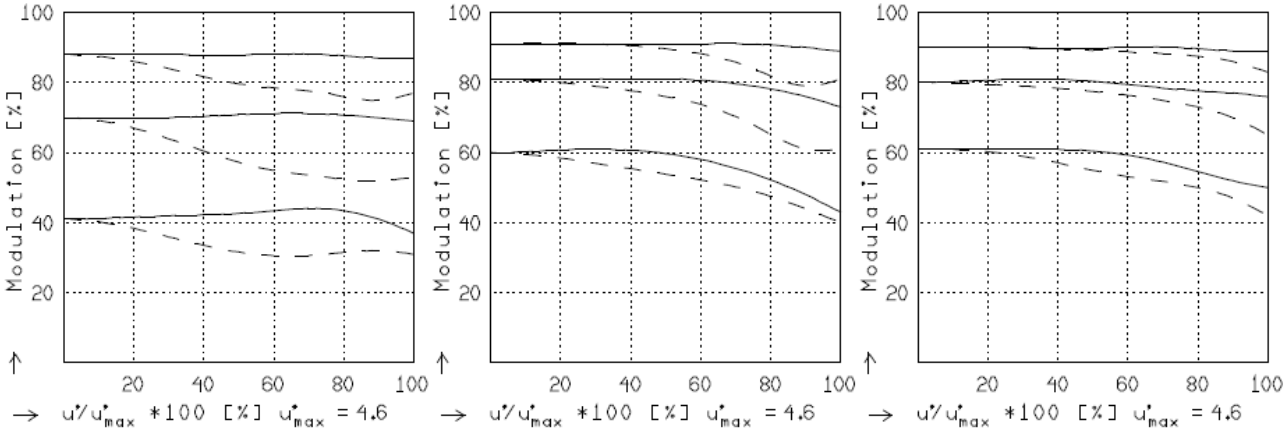
MODULATION with reference to the relative image height

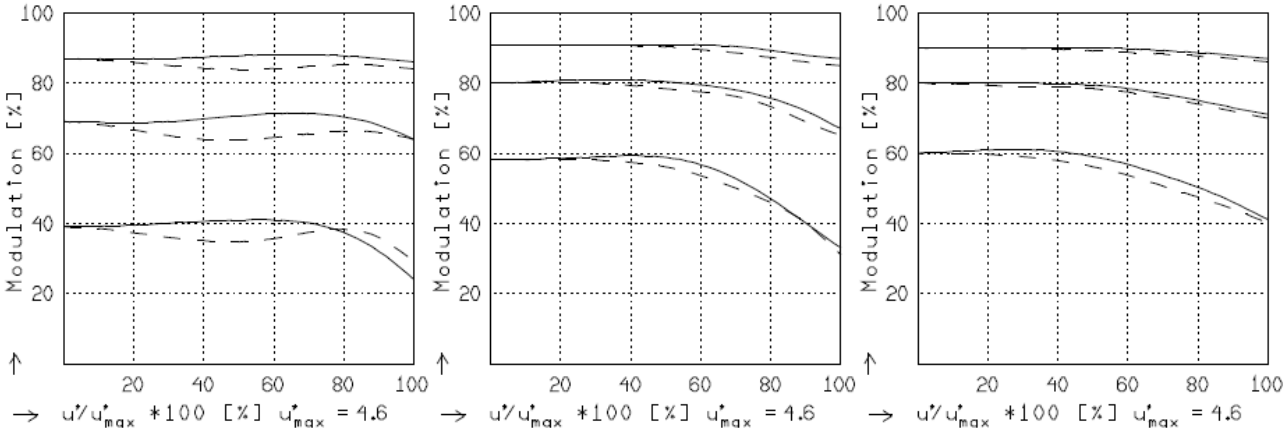
Wavelength	λ	[nm] :	555	655	605	505	455	405
Spectral weighting		[%] :	19.8	23.7	22.2	15.7	12.1	6.7
Spatial frequency R		[1/mm] :	20	40	80			
Format		[mm X mm] :	0.0		9.0			
Diagonal 2u'		[mm] :	9.0					

radial ——

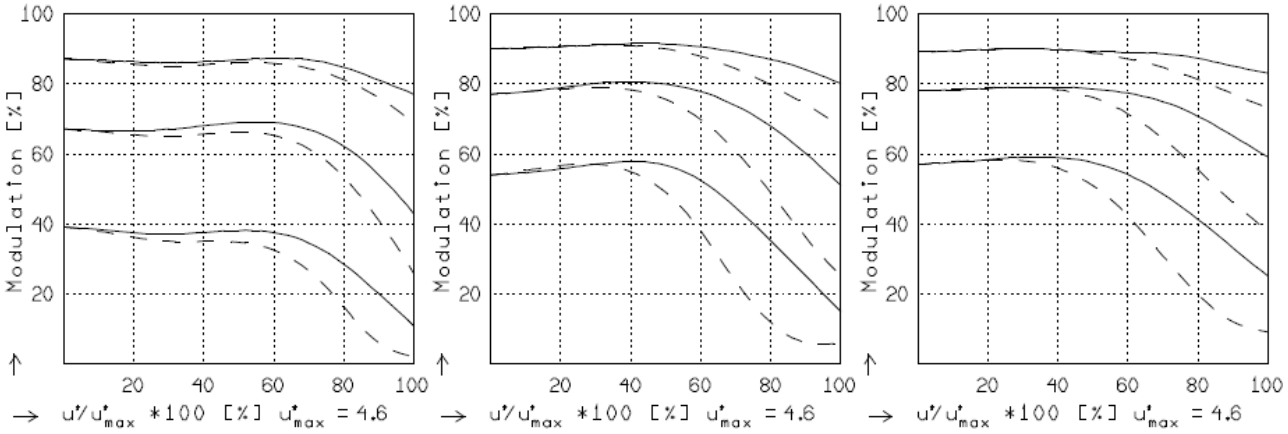
tangential — —



f' = 15.9 f/ 2.3 l/β' =-50.00 OO' = 843. | f' = 15.9 f/ 4.0 l/β' =-50.00 OO' = 843. | f' = 15.9 f/ 5.6 l/β' =-50.00 OO' = 843.



f' = 15.9 f/ 2.3 l/β' =-20.00 OO' = 367. | f' = 15.9 f/ 4.0 l/β' =-20.00 OO' = 367. | f' = 15.9 f/ 5.6 l/β' =-20.00 OO' = 367.



f' = 15.9 f/ 2.3 l/β' =-10.00 OO' = 208. | f' = 15.9 f/ 4.0 l/β' =-10.00 OO' = 208. | f' = 15.9 f/ 5.6 l/β' =-10.00 OO' = 208.

Focusing : MTF_{max} at f / 2.3 , R = 80 l/mm, u'/u'_{max} = 0

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