

Mega Pixel lens for image circle 16 mm

Cinegon 1.9/10 --0901

In accordance with the sensitivity of modern 1" CCD and CMOS sensors the megapixel lenses are broadband coated and can be used in the visible range 400 – 700 nm or the near infrared range 700 – 1000 nm. 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 coated (400 - 1000 nm)
- Compact and low weight
- Vibration insensitivity for stable imaging performance
- Focus and iris setting lockable

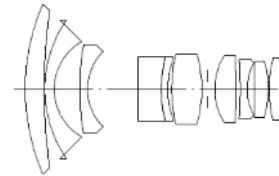
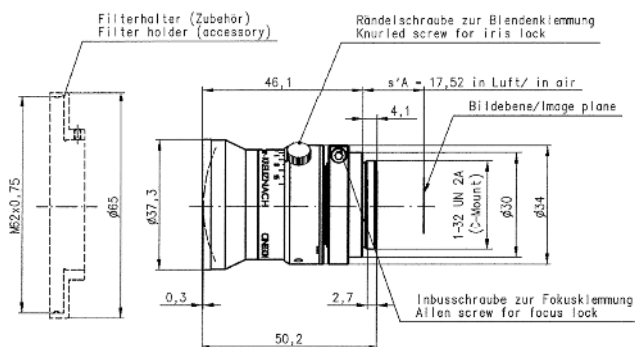
Applications

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

Technical Specifications

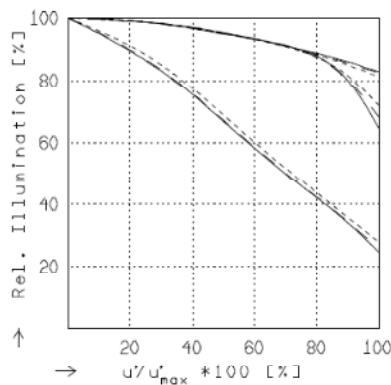
F-number	1.9
Focal length	10.4 mm
Image circle	16 mm
Transmission	400 - 1000 nm
Interface	C-Mount
Weight	136 gr.
Option	Adapter for optical filter
Order No.	1001978

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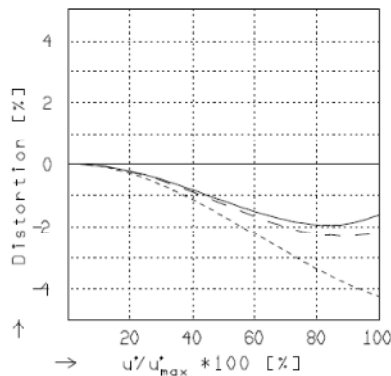
$f' = 10.4 \text{ mm}$	$\beta_p = 2.823$
$s_F = 13.9 \text{ mm}$	$s_{EP} = 17.5 \text{ mm}$
$s_F' = 16.1 \text{ mm}$	$s_{AP}' = -13.1 \text{ mm}$
$HH' = 28.7 \text{ mm}$	$\Sigma d = 47.2 \text{ mm}$



RELATIVE ILLUMINATION

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

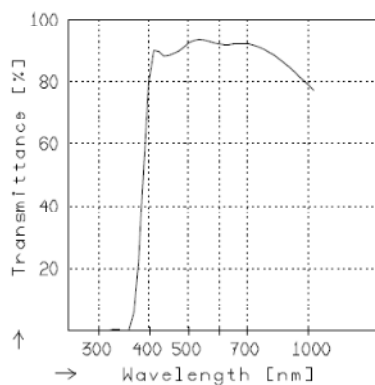
$f / 1.9$	$f / 4.0$	$f / 8.0$
— $\beta' = 0.0000$	$u'_{max} = 8.0$	$00' = \infty$
- - $\beta' = -0.0200$	$u'_{max} = 8.0$	$00' = 567.$
---- $\beta' = -0.1000$	$u'_{max} = 8.0$	$00' = 154.$



DISTORTION

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

— $\beta' = 0.0000$	$u'_{max} = 7.8$	$00' = \infty$
- - $\beta' = -0.0200$	$u'_{max} = 7.8$	$00' = 567.$
---- $\beta' = -0.1000$	$u'_{max} = 8.0$	$00' = 154.$



TRANSMITTANCE

Relative spectral transmittance is shown with reference to wavelength.

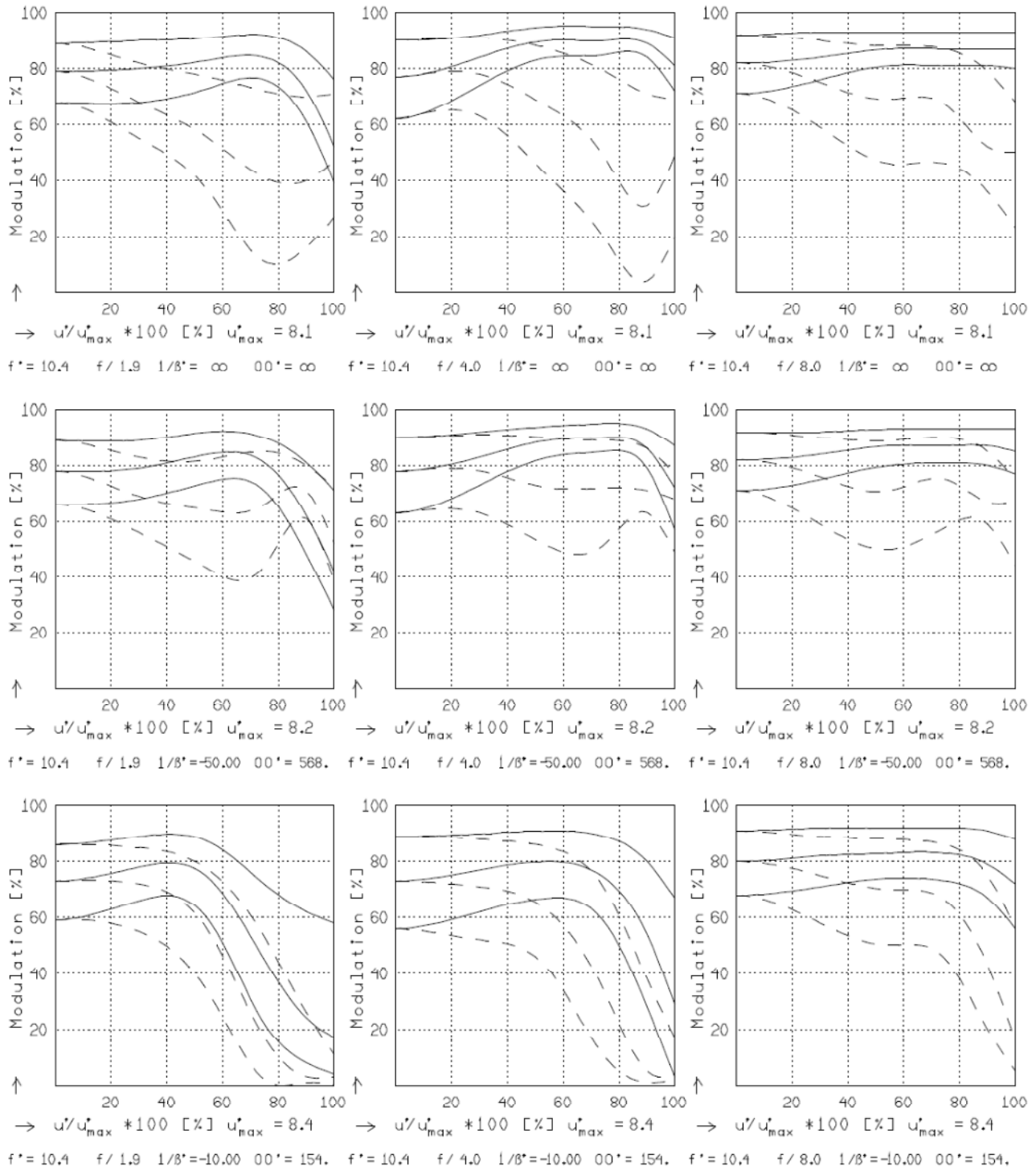
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MODULATION with reference to the relative image height

Wavelength λ	[nm]	555	655	605	505	455	405
Spectral weighting	[%]	19.6	23.7	22.2	15.7	12.1	6.7
Spatial frequency R	[1/mm]	10	20	30			
Format	[mm X mm]	9.6	X 12.8				
Diagonal $2u'$	[mm]	16.0					

radial —
tangential - -



Focusing : $MTF_{\max}$ at $f / 1.4$, $R = 30$ 1/mm, $u'/u'_{\max} = 0$