# Mega Pixel lens for image circle 16 mm

**Cinegon 1.8/16 -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.


Cinegon 1.8/16

**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 | 1.8 |
| Focal length | 16.4 mm |
| Image circle | 16 mm |
| Transmission | 400 - 1000 nm |
| Interface | C-Mount |
| Weight | 102 gr. |
| Filter Thread | M30.5 x 0.5 |
| Order No. | 1001482 |

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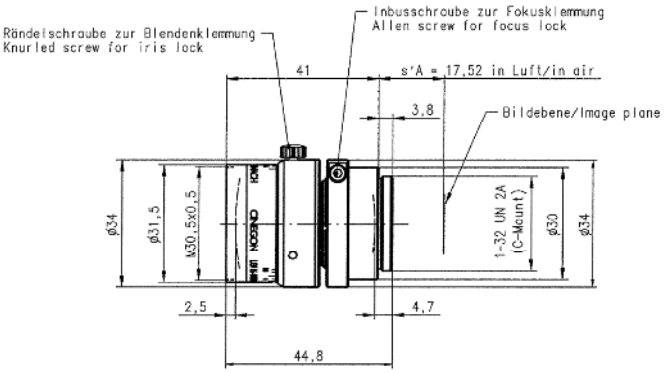
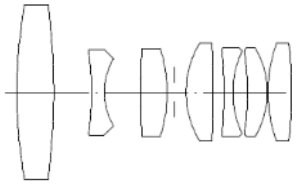
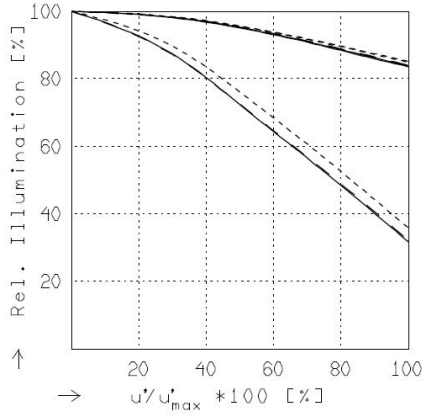
# Cinegon 1.8/16



CINEGON 1.8/16

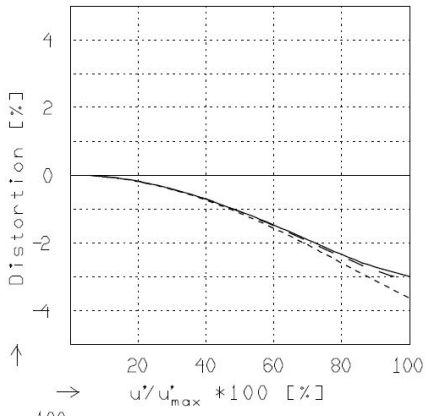
| | | | | | |
|---|---|---|---|---|---|
| $f'$ | = | 16.4 mm | $\beta'_P$ | = | 2.591 |
| $s_F$ | = | 11.1 mm | $s_{EP}$ | = | 17.4 mm |
| $s'_F$ | = | 18.4 mm | $s'_{AP}$ | = | -24.1 mm |
| $HH'$ | = | 12.0 mm | $\Sigma$ d | = | 37.5 mm |




## RELATIVE ILLUMINATION

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

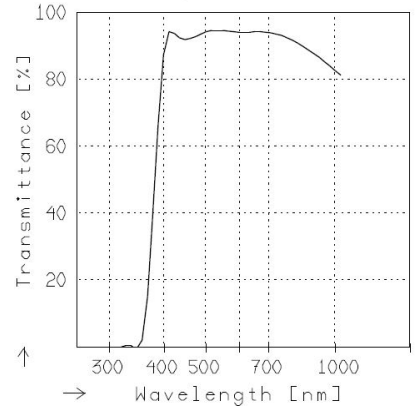
| | f / 1.8 | f / 4.0 | f / 8.0 |
|---|---|---|---|
| —— | $\beta'$ = 0.0000 | $u'_{max}$ = 8.0 | $00'$ = ∞ |
| — — | $\beta'$ = -0.0200 | $u'_{max}$ = 8.0 | $00'$ = 867. |
| ----- | $\beta'$ = -0.1000 | $u'_{max}$ = 8.0 | $00'$ = 211. |




## DISTORTION

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

| | | | |
|---|---|---|---|
| —— | $\beta'$ = 0.0000 | $u'_{max}$ = 8.0 | $00'$ = ∞ |
| — — | $\beta'$ = -0.0200 | $u'_{max}$ = 8.0 | $00'$ = 867. |
| ----- | $\beta'$ = -0.1000 | $u'_{max}$ = 8.0 | $00'$ = 211. |




## TRANSMITTANCE

Relative spectral transmittance is shown with reference to wavelength.

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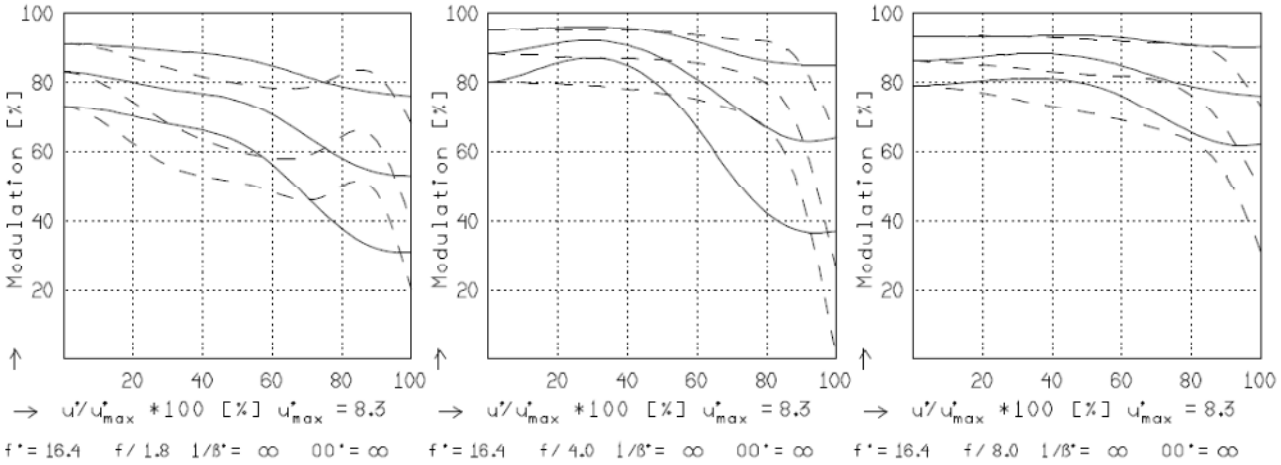
MODULATION with reference to the relative image height

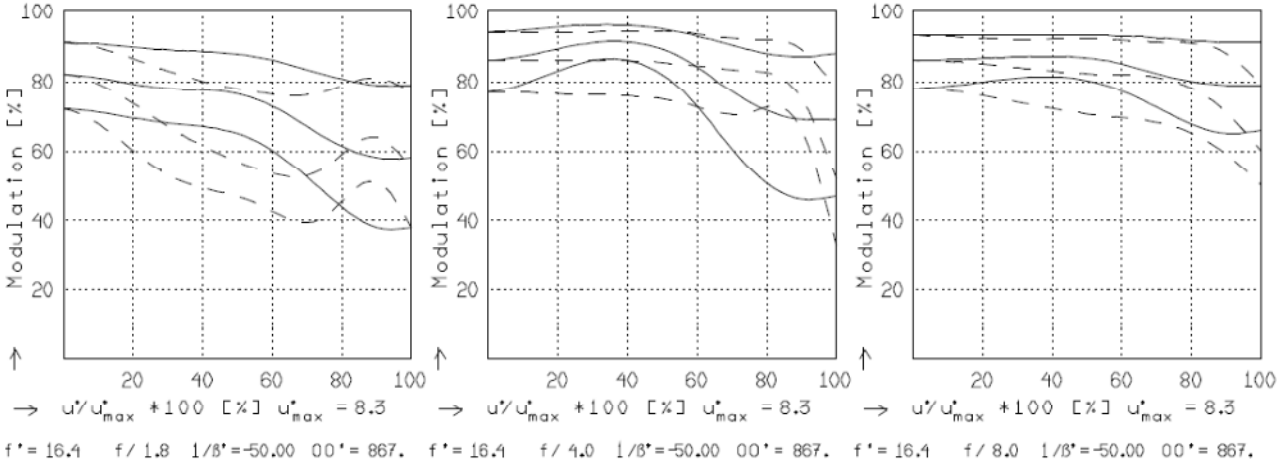
| | | | | | | |
|---|---|---|---|---|---|---|
| Wavelength λ [nm] : | 555 | 655 | 605 | 505 | 455 | 405 |
| Spectral weighting [%] : | 19.6 | 23.7 | 22.2 | 15.7 | 12.1 | 6.7 |
| Spatial frequency R [1/mm] : | 10 | 20 | 30 | | | |
| Format [mm X mm] : | 9.6 X 12.8 | | | | | |
| Diagonal 2u' [mm] : | 16.0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

radial ——

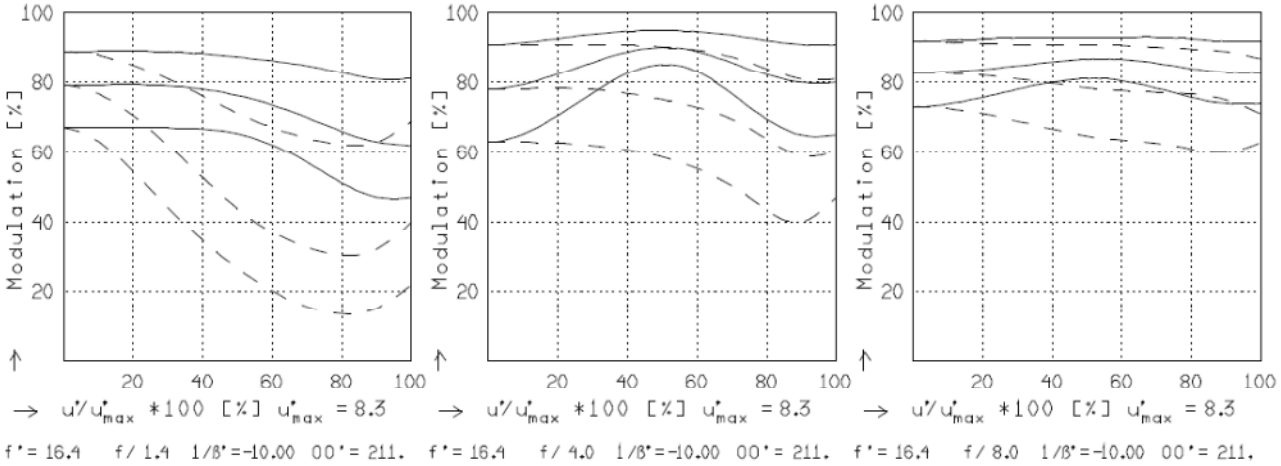
tangential — —




f' = 16.4 f/ 1.8 1/β' = ∞ OO' = ∞ | f' = 16.4 f/ 4.0 1/β' = ∞ OO' = ∞ | f' = 16.4 f/ 8.0 1/β' = ∞ OO' = ∞




f' = 16.4 f/ 1.8 1/β' = -50.00 OO' = 867. | f' = 16.4 f/ 4.0 1/β' = -50.00 OO' = 867. | f' = 16.4 f/ 8.0 1/β' = -50.00 OO' = 867.




f' = 16.4 f/ 1.4 1/β' = -10.00 OO' = 211. | f' = 16.4 f/ 4.0 1/β' = -10.00 OO' = 211. | f' = 16.4 f/ 8.0 1/β' = -10.00 OO' = 211.

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