

Ruggedized Lens

Cinegon 1.4/12 – Ruggedized

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.



Cinegon 1.4/12

Key Features

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

Applications

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

Technical Specifications

| | |
|--------------|----------------|
| F-number | 1.4 |
| Focal length | 12.7 mm |
| Image circle | 11 mm |
| Transmission | 400 - 1000 nm |
| Interface | C-Mount |
| Weight | 99 gr. |
| Option | Optical filter |

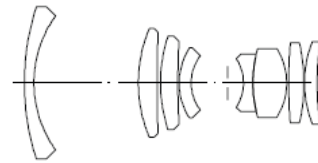
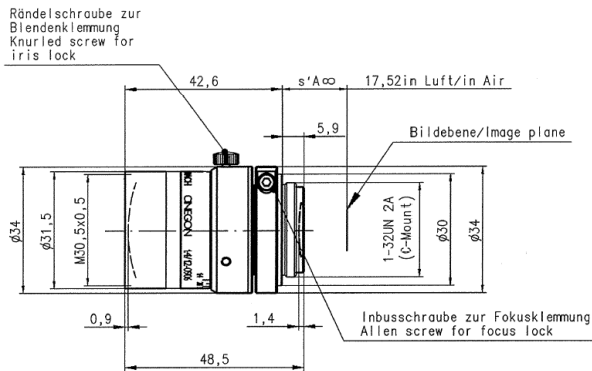
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Cinegon 1.4/12 Ruggedized Lens



CINEGON 1.4/12MM

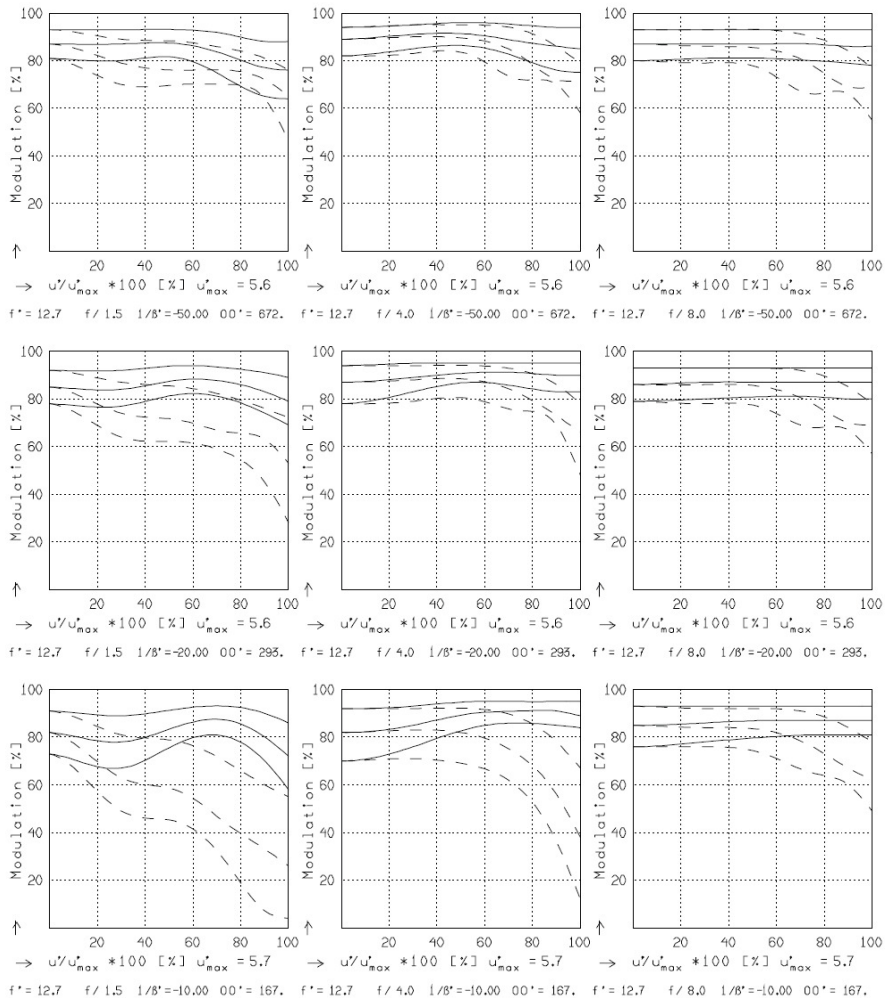
| | | | |
|----------|-----------|------------|------------|
| f' | = 12.7 mm | β_p' | = 4.217 |
| s_F | = 20.1 mm | s_{EP} | = 23.1 mm |
| $s_{F'}$ | = 12.7 mm | s_{AP} | = -40.7 mm |
| HH' | = 13.5 mm | Σd | = 46.3 mm |

CINEGON 1.4/12MM

MODULATION with reference to the relative image height

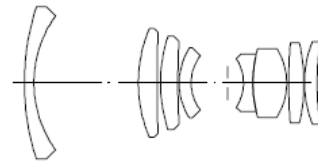
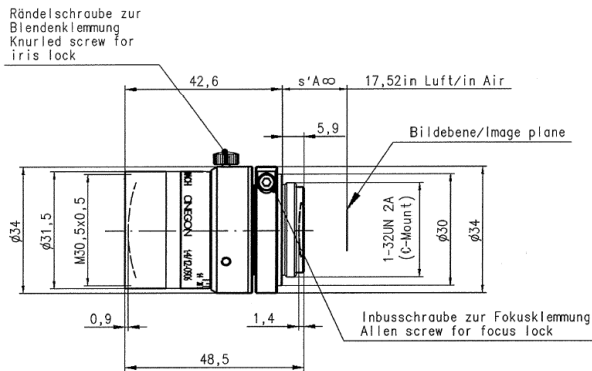
| | | | | | | | |
|----------------------|-----------|------|------|------|------|------|-----|
| Wavelength λ | [nm] | 555 | 655 | 605 | 555 | 455 | 405 |
| Spectral weighting | [%] | 19.6 | 23.7 | 22.2 | 15.7 | 12.1 | 6.7 |
| Spatial frequency R | [1/mm] | 10 | 20 | 30 | | | |
| Format | [mm X mm] | 6.6 | X | 8.8 | | | |
| Diagonal $2u'$ | [mm] | 11.0 | | | | | |

radial —
tangential - -



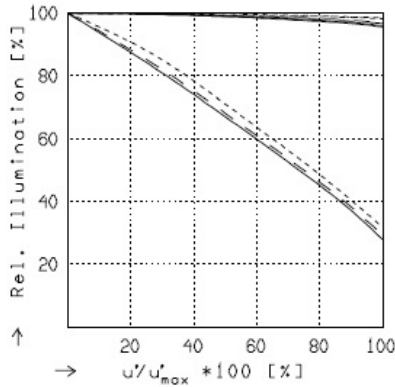
Focusing : MTF_{max} at f / 1.4 . R = 30 1/mm. $u/u'_{max} = 0$

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CINEGON 1.4/12MM

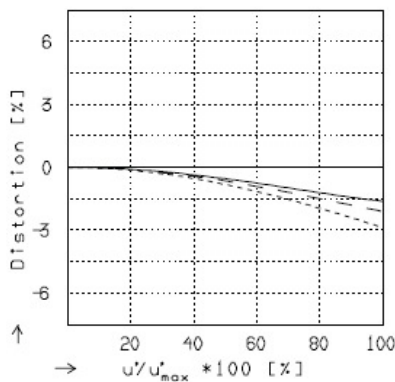
| | |
|--------------------|----------------------|
| f' = 12.7 mm | β'_p = 4.217 |
| s_F = 20.1 mm | s_{EP} = 23.1 mm |
| $s_{F'}$ = 12.7 mm | s_{AP} = -40.7 mm |
| HH' = 13.5 mm | Σd = 46.3 mm |



RELATIVE ILLUMINATION

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

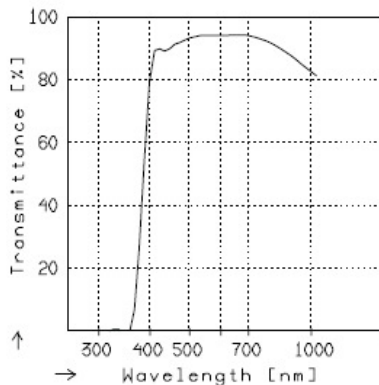
| | $f / 1.5$ | $f / 4.0$ | $f / 8.0$ |
|--------------------------|------------------|--------------|-----------|
| — $\beta' = -0.0200$ | $u'_{max} = 5.5$ | $00' = 672.$ | |
| - - $\beta' = -0.0500$ | $u'_{max} = 5.5$ | $00' = 293.$ | |
| - · - $\beta' = -0.1000$ | $u'_{max} = 5.5$ | $00' = 167.$ | |



DISTORTION

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

| | | |
|--------------------------|------------------|--------------|
| — $\beta' = -0.0200$ | $u'_{max} = 5.4$ | $00' = 672.$ |
| - - $\beta' = -0.0500$ | $u'_{max} = 5.5$ | $00' = 293.$ |
| - · - $\beta' = -0.1000$ | $u'_{max} = 5.5$ | $00' = 167.$ |



TRANSMITTANCE

Relative spectral transmittance is shown with reference to wavelength.