3 Mega-Pixel Lens

Cinegon 1.4/8-0902

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.

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

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>F-number</td>
<td>1.4</td>
</tr>
<tr>
<td>Focal length</td>
<td>8.2 mm</td>
</tr>
<tr>
<td>Image circle</td>
<td>11 mm</td>
</tr>
<tr>
<td>Transmission</td>
<td>400 - 1000 nm</td>
</tr>
<tr>
<td>Interface</td>
<td>C-Mount</td>
</tr>
<tr>
<td>Weight</td>
<td>90 gr.</td>
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<tr>
<td>Filter thread</td>
<td>M30.5 x 0.5</td>
</tr>
<tr>
<td>Code no.</td>
<td>1001919</td>
</tr>
</tbody>
</table>

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Cinegon 1.4/8.0MM

Modulation with reference to the relative image height

Wavelength $\lambda$ [nm]: 555 555 605 605 405 405
Spectral weighting [%]: 15.5 25.7 25.2 15.7 12.1 6.7
Spatial frequency $R$ [1/mm]: 10 20 50
Format [mm x mm]: 6.6 x 9.6

Radial $\nu'$ $[\%]$ 11.0
Tangential $\nu'$ $[\%]$ 11.0

MTF

Focusing: $\text{MTF}_{\text{max}}$ at $f/1.4$, $R = 50$ 1/mm, $\nu' = 0$
Cinegon 1.4/8

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

\[
f / 1.5 \quad f / 4.0 \quad f / 8.0
\]

- \(8' = 0.0200\) \(\omega_{\text{max}} = 5.5\) 00' = 450.
- \(8' = 0.0500\) \(\omega_{\text{max}} = 5.5\) 00' = 205.
- \(8' = 0.1000\) \(\omega_{\text{max}} = 5.5\) 00' = 121.

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

- \(8' = 0.0200\) \(\omega_{\text{max}} = 5.5\) 00' = 450.
- \(8' = 0.0500\) \(\omega_{\text{max}} = 5.5\) 00' = 205.
- \(8' = 0.1000\) \(\omega_{\text{max}} = 5.5\) 00' = 121.

TRANSMITTANCE
Relative spectral transmittance is shown with reference to wavelength.