Basler Lens C10-1614-3M-S

Basler Standard C-mount lens with a fixed focal length of 16 mm, aperture range from F1.4–F16, and a resolution of 3 MP.

Key Features

- Fits all Basler cameras with a sensor size of up to 1"
- Basler Standard Lens
- Metal housing
- C-mount
- Locking screws for iris and focus

Info

The technical data shown in the following sections are nominal design values. The real values of the delivered products can deviate from the nominal design values.

General Specifications

	C10-1614-3M-S
Order Number	2200000100
Focal Length *f'*	16.2 mm ± 5 %
Aperture Range	F1.4–F16
Image Circle	16 mm (1" format)
Focus Range	0.3 m to infinity
Optimum Working Distance	1.0 m
Relative Illumination at Full Aperture	40.50 % (see Simulated Relative Illumination versus Image Height)
Resolution (25 % MTF, Full Aperture)	Designed for 100 LP/mm (5.0 µm pixel size, see Measured Resolution versus Image Height)

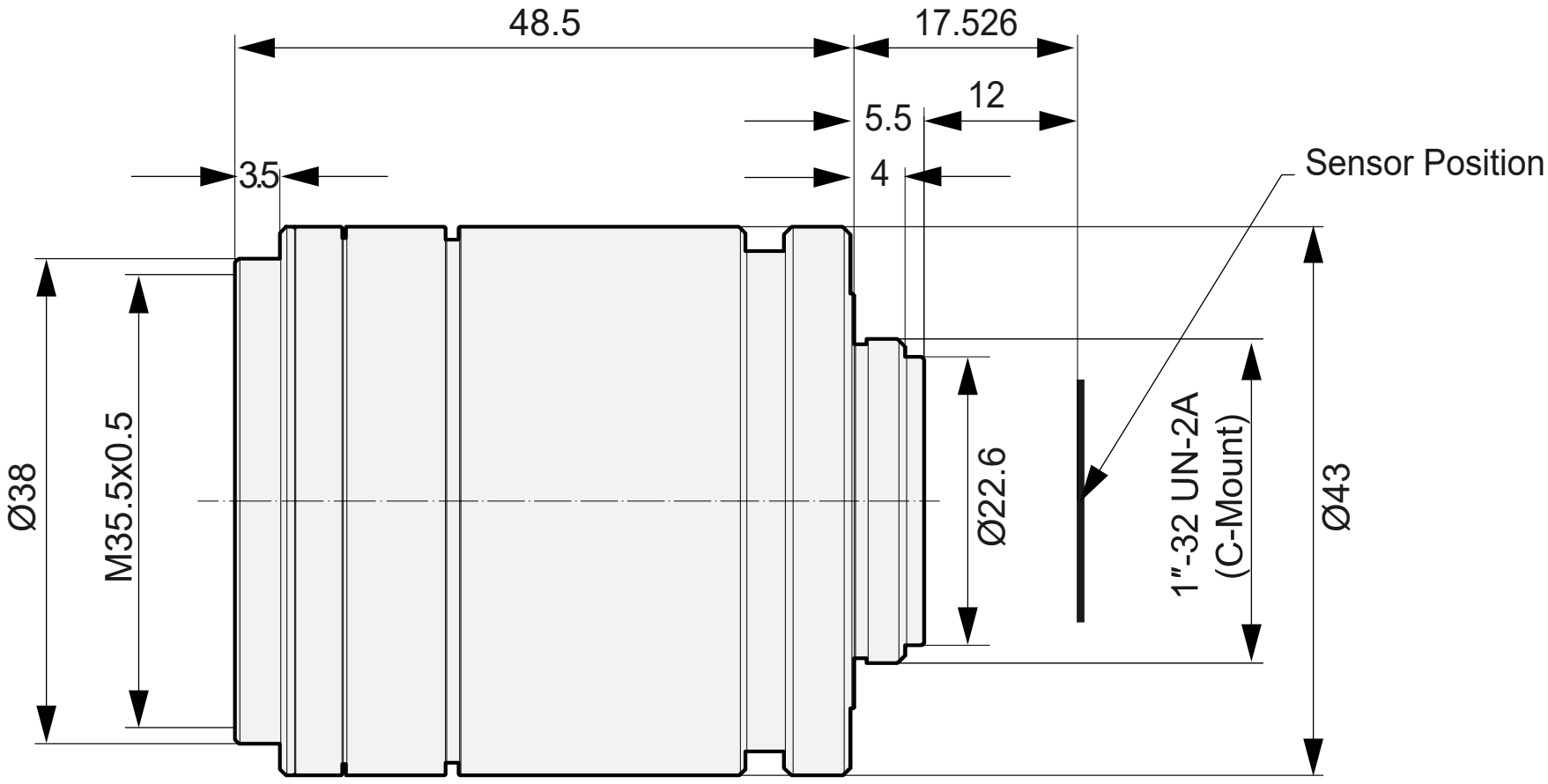
	C10-1614-3M-S
Optical Distortion	Typical -3.84 % (see Simulated Distortion versus Image Height)
Angle of View, 1" Format	Horizontal: 44.25° Vertical: 33.56°
Angle of View, 1/1.2" Format	Horizontal: 39.3° Vertical: 24.97°
Wavelength Range	Visible (400–700 nm)
Pupil Magnification, $ß'_P$	103.2
Chief Ray Angle, CRA	5.8°
Front Focal Length, s_F	9.14 mm
Back Focal Length, s'_F	12.15 mm
Principal Point Separation, HH'	15.77 mm
Entrance Pupil Position, s_{EP}	10.88 mm
Overall Optical Length, d	57.28 mm

→ See Terminology (Basler Lenses).

Mechanical Specifications

	C10-1614-3M-S
Flange Back	17.526 mm
Mount	C-mount
Weight	Approx. 170 g
Focus/Iris Operation	Manual Operating angle: 152.82°

Lens Dimensions



Not to scale
Dimensions in mm

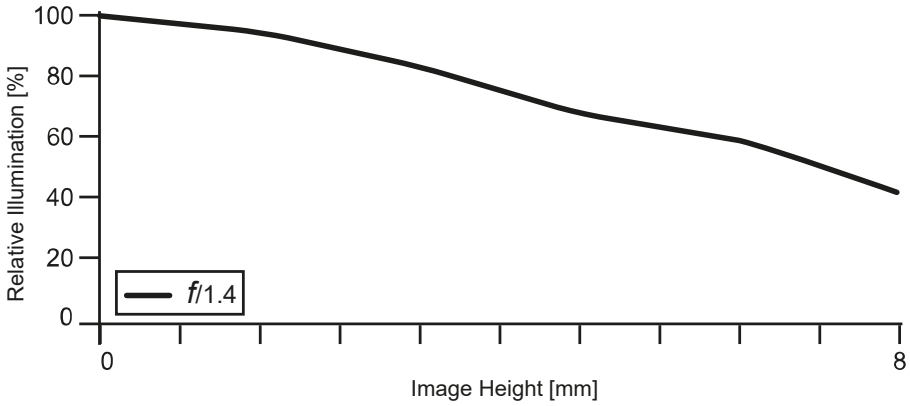
→ Download the CAD/technical drawing for your Basler Lens.

Environmental Requirements

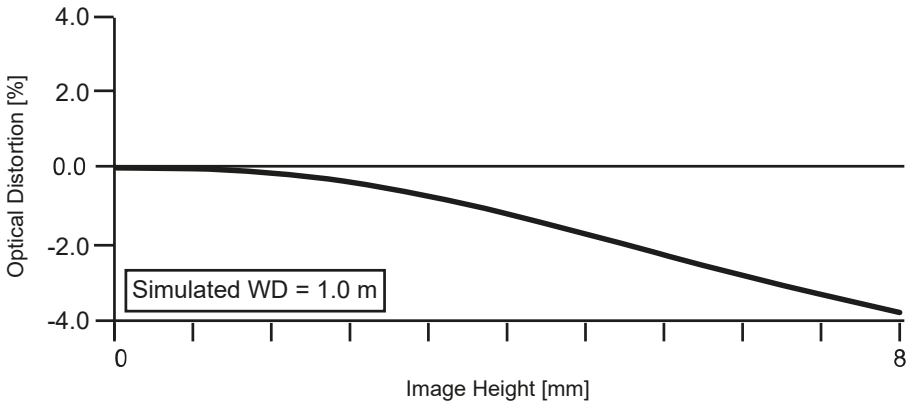
Temperature During Operation	-10–50 °C (14–122 °F) (For best results, adjust the focus when a steady operating temperature has been reached.)
Humidity During Operation	20–80 % relative humidity, non-condensing
Temperature During Storage	-20–60 °C (-4–140 °F)
Humidity During Storage	20–70 % relative humidity, non-condensing

Performance Charts

Simulated Relative Illumination versus Image Height

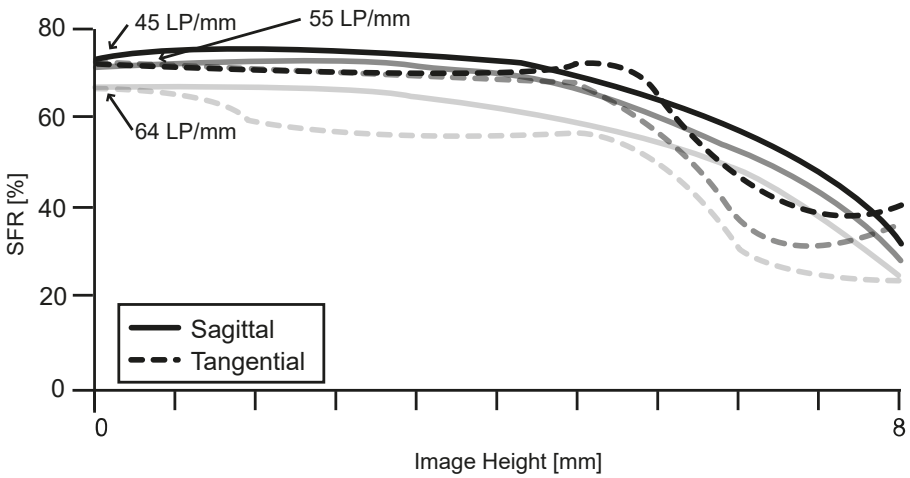


Simulated Distortion versus Image Height



Measured Resolution versus Image Height

Conditions: *f*/1.4, polychromatic, 1.0 m working distance, average result based on 10 samples



Precautions, Mounting, and Cleaning (Basler Lenses)

→ See Precautions, Mounting, and Cleaning (Basler Lenses).