

Basler Lens C10-5014-2M-S

Basler Standard **C-mount lens** with a fixed focal length of 50 mm, aperture range from F1.4–F16, and a resolution of 2 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

	C10-5014-2M-S
Order Number	2200000102
Focal Length f'	50 mm \pm 5 %
Aperture Range	F1.4–F16
Image Circle	16 mm (1" format)
Focus Range	0.5 m to infinity
Optimum Working Distance	1.0 m
Relative Illumination at Full Aperture	47 % (see Simulated Relative Illumination versus Image Height)
Resolution (25 % MTF, Full Aperture)	Designed for 64 LP/mm (7.5 μ m pixel size, see Measured Resolution versus Image Height)

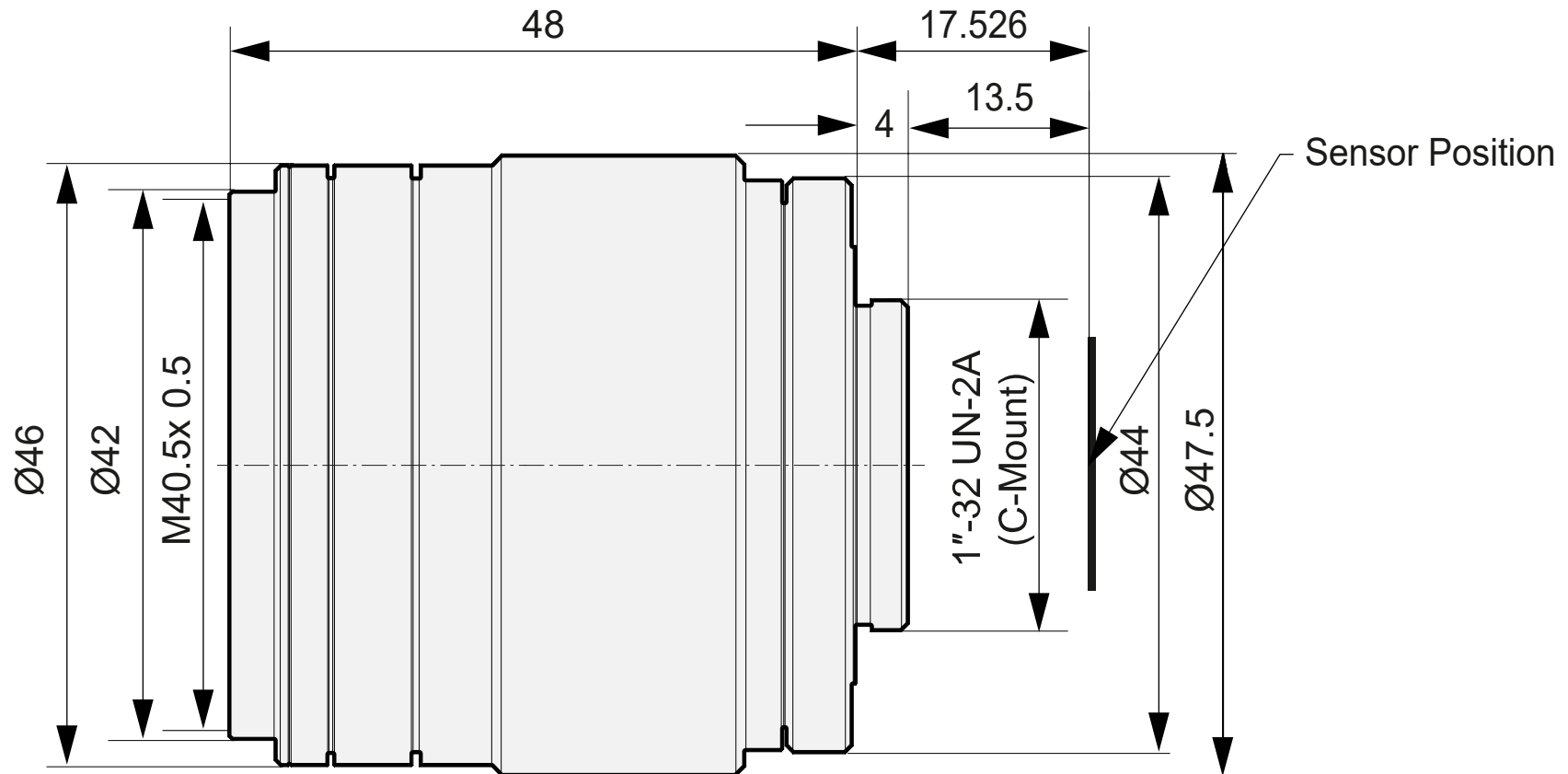
	C10-5014-2M-S
Optical Distortion	Typical 0.82 % (see Simulated Distortion versus Image Height)
Angle of View, 1" Format	Horizontal: 14.5° Vertical: 10.92°
Angle of View, 1/1.2" Format	Horizontal: 12.8° Vertical: 8.1°
Wavelength Range	Visible (400–700 nm)
Pupil Magnification, β'_p	22.2
Chief Ray Angle, CRA	10.25°
Front Focal Length, s_F	-11.61 mm
Back Focal Length, s'_F	14.55 mm
Principal Point Separation, HH'	-26.71 mm
Entrance Pupil Position, s_{EP}	66.47 mm
Overall Optical Length, d	62.13 mm

→ See [Terminology \(Basler Lenses\)](#).

Mechanical Specifications

	C10-5014-2M-S
Flange Back	17.526 mm
Mount	C-mount
Weight	Approx. 200 g
Focus/Iris Operation	Manual Operating angle: 230°

Lens Dimensions



Not to scale
Dimensions in mm

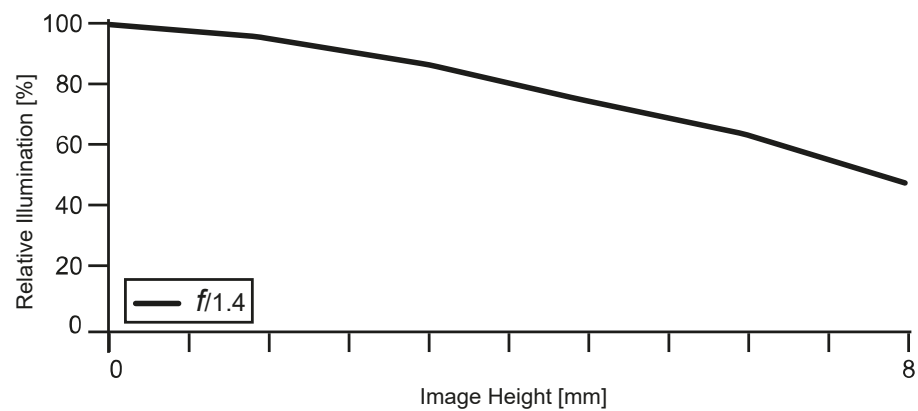
→ Download the [CAD/technical drawing for your Basler Lens.](#)

Environmental Requirements

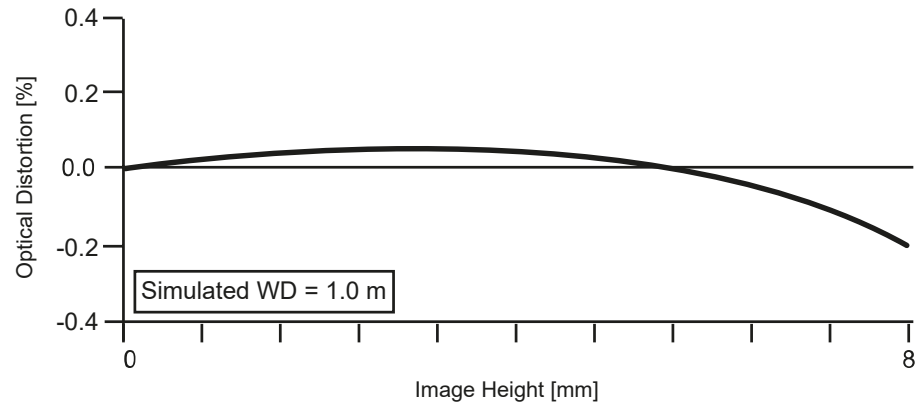
Temperature During Operation	-10–50 °C (14–122 °F) (For best results, adjust the focus when a steady operating temperature has been reached.)
Humidity During Operation	20–80 % relative humidity, non-condensing
Temperature During Storage	-20–60 °C (-4–140 °F)
Humidity During Storage	20–70 % relative humidity,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

Performance Charts

Simulated Relative Illumination versus Image Height

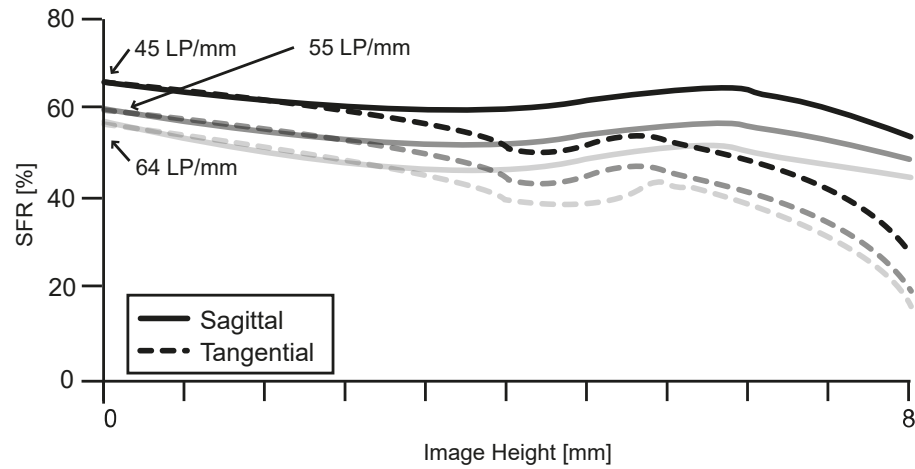


Simulated Distortion versus Image Height



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 \(Basler Lenses\)](#).