

Basler Lens C11-5020-12M-P

Basler Premium **C-mount lens** with a fixed focal length of 50 mm, aperture range from F2.0–F16, and a resolution of 12 MP.



Key Features

- Fits all Basler cameras with a sensor size of up to 1.1"
- Basler Premium Lens
- Metal housing
- C-mount
- Locking screws for iris and focus
- High contrast

 **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

	C11-5020-12M-P
Order Number	2200000579
Focal Length f'	49.7 mm \pm 5 %
Aperture Range	F2.0–F16
Aperture with Highest Resolution	F2.5
Image Circle	17.6 mm (1.1" format)
Focus Range	0.2 m to infinity
Optimum Working Distance	0.5 m
Relative Illumination at Full Aperture	78 %

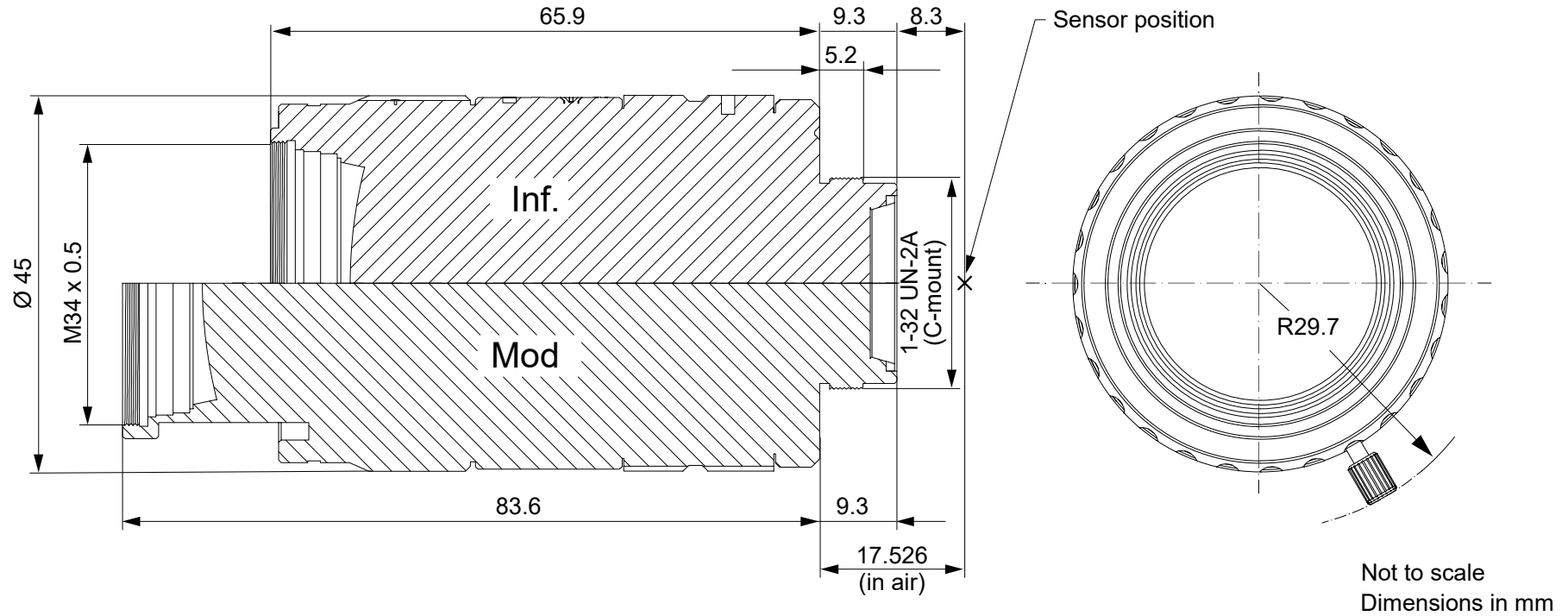
	C11-5020-12M-P
Resolution	Designed for 140 LP/mm (3.57 μ m pixel size, see Resolution versus Image Height)
MTF Measured in the Center at 90 LP/mm / 140 LP/mm (conditions: F2.0, polychromatic, 0.45 m working distance)	0.66 / 0.52
MTF Measured in the Corner at 90 LP/mm / 140 LP/mm (conditions: F2.0, polychromatic, 0.45 m working distance)	0.58 / 0.37
Optical Distortion	Typical 0.06 %
Angle of View, 1" Format	Horizontal: 14.6° Vertical: 11.0°
Angle of View, 1.1" Format	Horizontal: 16.2° Vertical: 11.9°
Wavelength Range	Visible (400–700 nm)
Back Focal Length, s'_F	11.56 mm

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

Mechanical Specifications

	C11-5020-12M-P
Flange Back	17.526 mm
Mount	C-mount
Weight	Approx. 277.5 g
Focus/Iris Operation	Manual

Lens Dimensions



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

Environmental Requirements

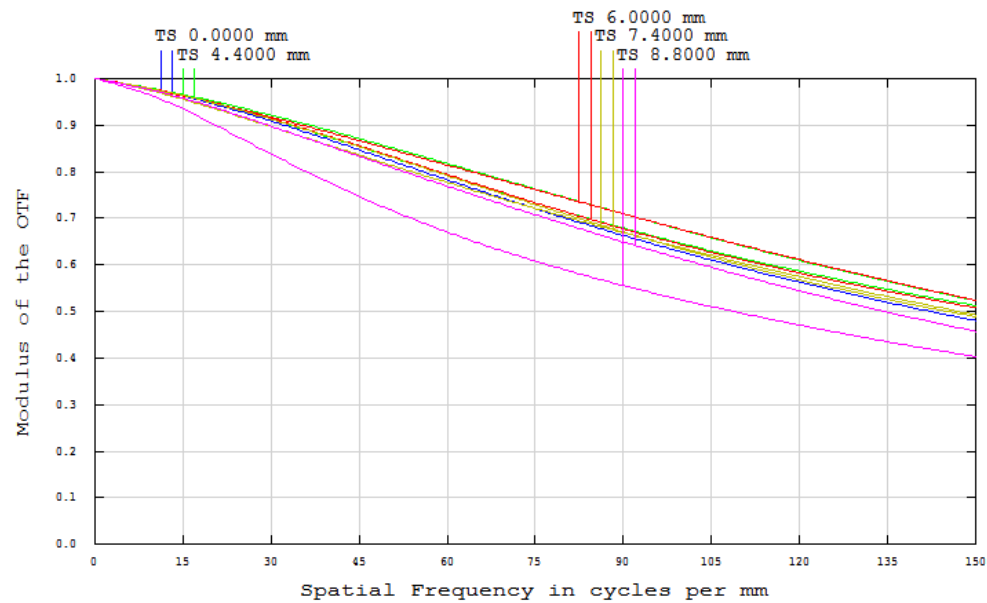
Temperature During Operation	-20–60 °C (-4–140 °F) (For best results, adjust the focus when a steady operating temperature has been reached.)
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Humidity During Operation	10–90 % relative humidity, non-condensing
Temperature During Storage	-20–60 °C (-4–140 °F)

Performance Chart

Resolution versus Image Height

Conditions: $f/2.0$, polychromatic, 0.45 m working distance



Precautions, Mounting, and Cleaning (Basler Lenses)

→ See [Precautions, Mounting, and Cleaning \(Basler Lenses\)](#).