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# Rodagon 80mm FL - Video Lens

Lens + Modular Focus Tube + Machine Vision Camera

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**A$908**.00

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**Note:** This item requires accessories for use | Learn More

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## General

**Product Family:**
Rodagon Large Format Lenses

**Note:**
Requires Leica Lens Adapter M39 x 1/26" #14-705, Modular Focus Tube #14-707, and a lens mount adapter (C-Mount, F-Mount, T-Mount, SLR, or M72)

**Type:**
Fixed Focal Length Lens

## Physical & Mechanical Properties

**Iris Option:**
Variable

**Length (mm):**
44.50

**Maximum Diameter (mm):**
50.0

**Outer Diameter (mm):**
50

## Optical Properties

**Field of View @ Min Working Distance (mm):**
41.9

**Horizontal Field of View, 1/2" Sensor:**
4.4°

**Maximum Image Circle (mm):**
65.00

**Focal Length FL (mm):**
80.00

**Primary Magnification PMAG:**
0.15X

**Working Distance (mm):**
580 - ∞

**Aperture (f/#):**
f/4 - f/22

**Lens Wavelength Range:**
VIS

## Sensor

**Maximum Sensor Format:**
65mm (Image Circle)

**Pixel Size (µm):**
7.00

## Threading & Mounting

**Filter Thread:**
M40.5 x 0.50

**Mount:**
Adapter Required

## Regulatory Compliance

**RoHS 2015:**
Compliant

**Certificate of Conformance:**
View

**Reach 235:**
Compliant

# Product Details

- Up to 174mm Image Circle for Line Scan or Area Scan
- C-Mount, F-Mount, T-Mount Lens
- Up to 1.3 MegaPixels or 8k Line Scan, 7µm Pixel Size Sensors
- 35mm to 135mm Focal Length

Originally designed as enlarging lenses, these high-resolution lenses can accommodate 1" format sensors and larger, which makes them a great choice for line scan cameras. This unmatched adaptability, combined with low distortion and constant resolution over the entire viewable field, makes Rodagon lenses optimal for close focus applications for which they consistently yield higher magnifications and better resolution than standard fixed focal length lenses. This makes them ideal for use with high-resolution cameras.

Lenses have M39 x 1/26" base threading. A Leica Lens Adapter (**#14-705** for the 35, 50, 60, 80, and 105mm lenses or **#54-126** for the 135mm lens) is required and sold separately to allow attachment to the Modular Focus Tube (MFT). The MFT is required for focusing the lens and for connection to standard camera mounts. The MFT does not ship with a camera adapter; camera adapters for **C-Mount**, **F-Mount**, **T-Mount (M42 x 0.75)**, **SLR-mount (M42 x1.0)**, and **M72 x 0.75** are available and sold separately. For closer working distances, additional extension tubes can be added (see "Working With Spacers" specification table); values should be used for reference only; choose **#57-791** for M72 cameras and **#56-965** for all others.

**Note:** See Technical Image section for spacer length.

## Rodagon Modular Focus Tube (#14-707) and Camera Adapters

To use with a camera, attach a **C-Mount**, **F-Mount**, **T-Mount**, **SLR**, or **M72** adapter (each sold separately) to the **Rodagon Modular Focus Tube**. Extended range (25mm full stroke) accommodates a range of working distances without requiring spacers. Precision design allows lens to remain centered and unrotatable during focusing. Locking screw included.

Please contact **Applications Engineering** for assistance in properly configuring this lens for your application.

# Technical Information

| | | | |
|---|---|---|---|
| **Focal Length** | **25mm of Spacers** | **50mm of Spacers** | **75mm of Spacers** |

| | | WD | FOV* | System Mag** | WD | FOV* | System Mag** | WD | FOV* | System Mag** |
|---|---|---|---|---|---|---|---|---|---|---|
| 28mm | min | † | | | † | | | † | | |
| | max | † | | | † | | | † | | |
| 35mm | min | 26mm | 4mm | 66.0X | † | | | † | | |
| | max | 44mm | 7.3mm | 36.2X | † | | | † | | |
| 50mm | min | 78mm | 7.4mm | 35.7X | 56mm | 4.7mm | 56.2X | † | | |
| | max | 155mm | 17.3mm | 15.3X | 77mm | 7.4mm | 35.7X | † | | |
| 60mm | min | 153mm | 12.7mm | 20.8X | 99mm | 7.0mm | 37.7X | 78mm | 4.9mm | 53.9X |
| | max | 655mm | 64.7mm | 4.1X | 153mm | 12.7mm | 20.8X | 99mm | 7.0mm | 37.7X |
| 80mm | min | 580mm | 41.9mm | 6.3X | 226mm | 13.9mm | 19.0X | 156mm | 8.3mm | 31.8X |
| | max | ∞ | 4.4° | N/A | 580.5mm | 41.9mm | 6.3X | 226mm | 13.9mm | 19.0X |
| 105mm | min | † | | | 974mm | 54.0mm | 4.9X | 377mm | 18.1mm | 14.6X |
| | max | † | | | ∞ | 3.4° | N/A | 974mm | 54.0mm | 4.9X |
| 135mm | min | † | | | † | | | 2128mm | 95.4mm | 2.8X |
| | max | † | | | † | | | ∞ | 2.6° | N/A |

*FOV (Field of View) calculated horizontally for ½" sensor format
**System Magnification specified for ½" sensor format and 13" monitor
† No Image Possible with This Length of Spacers

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