

MeVis-C, MeVis-Cm and MeVis-CF

High-Resolution Inspection Lenses



MeVis-C

High-Resolution Lenses for Megapixel Cameras

The LINOS MeVis-C lenses are specifically developed to be used with the highest resolution sensors available on the market. Exceptionally high resolution across the entire sensor ensures optimal performance for the most demanding applications.

High resolution is paired with low distortion, minimal light fall off and excellent chromatic correction across the entire spectral range of 450 - 900 nm. Premium glass and specialized coatings further combine to deliver very good color rendition. These lenses can resolve up to 200 lp/mm, even to the extreme corners of a 1" sensor. Only MeVis-C lenses combine all these positive optical characteristics and represent the perfect match for modern high-resolution sensors with up to 1" diameter.

The housing features locking screws for focus and aperture that prevent changes due to accidental contact or vibration and shock in harsh environments. Focus and aperture ring operate as smoothly as you would expect from a high-end lens and enable exact focusing and iris adjustment.



- Highest optical performance
- Large image circle up to 1 inch
- For pixel size even below 2 μm
- High numerical aperture

- Focal length: 12 ... 50 mm
- Magnification range: 0 ... -0.1
- Spectral range: 450-900 nm
- Focusing: manual, lockable
- Iris diaphragm: manual, lockable
- Filter thread: M35.5x0.5
- Lens diameter: 42 mm

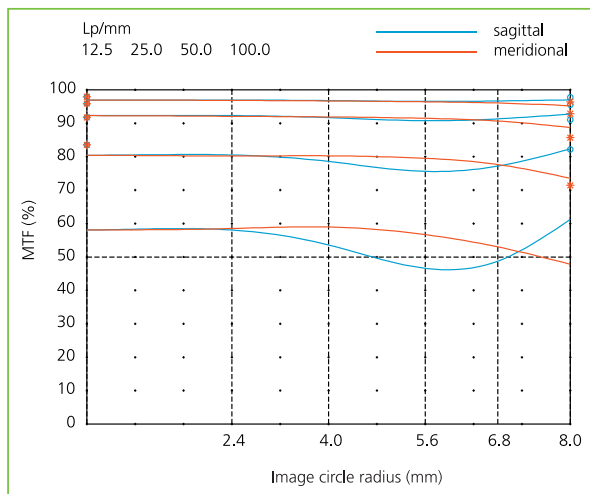
All MeVis-C Lenses are also available with custom coatings. An NIR version with a transmission range from 900 – 1400 nm is also available. Ask your sales manager!

MeVis-C

Product	Focal length (mm)	F-number	Magnification range	Image circle (mm)	Interface	Part No.
MeVis-C 1.8/12	12	1.8	-0.25 ... 0	11	C-Mount	0020-005-000-40
MeVis-C 1.6/16	16	1.6	-0.1 ... 0	11	C-Mount	0020-004-000-40
MeVis-C 1.6/25	25	1.6	-0.1 ... 0	16	C-Mount	0020-002-000-40
MeVis-C 1.6/35	35	1.6	-0.1 ... 0	16	C-Mount	0020-001-000-40
MeVis-C 1.8/50	50	1.8	-0.075 ... 0	16	C-Mount	0020-003-000-40

Performance

The following graph displays the optical performance of the MeVis-C 35mm. High resolution is maintained over the whole magnification range. This is a result of the floating element design with internal focusing. The graph shows up 100lp/mm over the whole image circle.



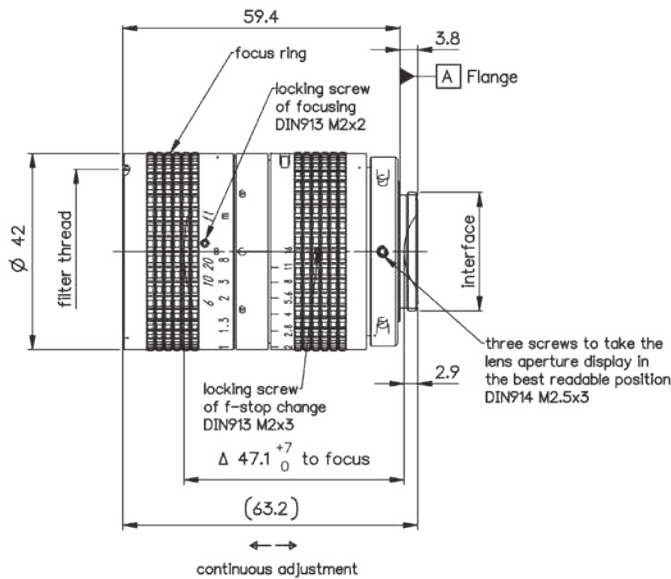
MTF of MeVis-C 1.6/35 @ $\beta' = -0.05$ and f-stop = 2.8

Application

MeVis-C Lenses offer a long standing, field-proven heritage of premium performance across a wide range of industrial, scientific and biomedical imaging applications. MeVis-C lenses are selected when compromises cannot be made and failure is not an option.

Some example applications are:

- Pharmaceutical package control
- Sorting of pharmaceuticals
- Traffic Monitoring
- Rail and wheel inspection
- 3-D measurement
- Eye tracking systems
- Solar cell inspection – visible and NIR
- Glass inspection
- Tire inspection
- Inspection of contact lenses
- Drug sorting
- Wood inspection
- Forensics
- Inspection of composite materials



MeVis-C 1.6/35

MeVis-Cm (motorized)

Motorized High-End Inspection Lenses

The motorized version of the well-known MeVis-C Lenses enables automated adjustment of focus and aperture. This feature is ideal for remote operation in hard-to-access installations, as well as those with variable lighting conditions or object distances. Encoders in the MeVis-Cm ensure precise and reproducible adjustment to realize a fully automated system.



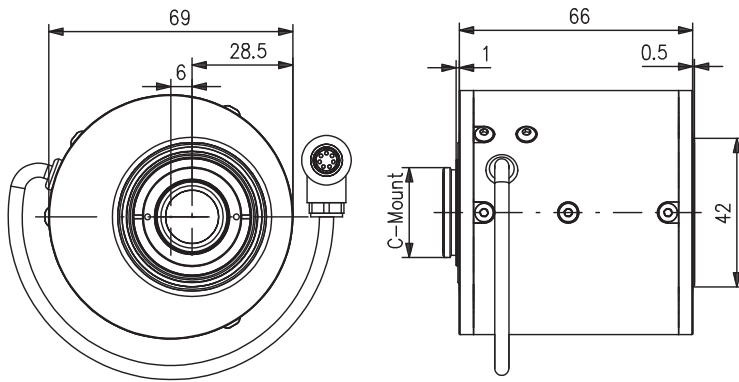
Download Mevis-Cm data sheet with detailed information from www.qioptiq-shop.com

Because of their rugged design and the full metal housing, the motorized lenses are ideal for use under tough industrial conditions. The MeVis-Cm features the same optical design as the standard MeVis-C Series and delivers the same premium performance for high-resolution imaging to mega-pixel cameras. MeVis-Cm brings unparalleled optical performance to fully automated installations.

- Highest optical performance
- Large image circle up to 1 inch
- For pixel size even below 2 μm
- High numerical aperture
- Focal length: 16 ... 50 mm
- Magnification range: 0...-0.1
- Spectral range: 450-900 nm
- Focusing: motorized
- Iris diaphragm: motorized
- Lens diameter: 69 mm

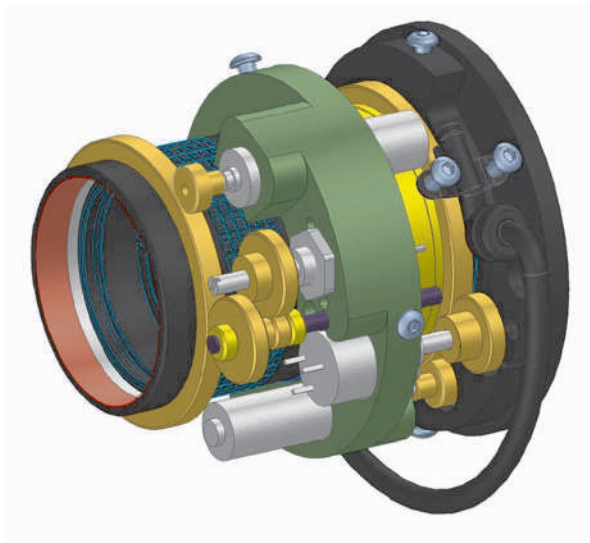
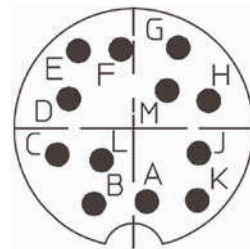
MeVis-Cm

Product	Focal length (mm)	F-number	Magnification range	Image circle (mm)	Interface	Part No.
MeVis-Cm 1.6/16	16	1.6	-0.1 ... 0	11	C-Mount	G038414000
MeVis-Cm 1.6/25	25	1.6	-0.1 ... 0	16	C-Mount	G038415000
MeVis-Cm 1.6/35	35	1.6	-0.1 ... 0	16	C-Mount	G038416000
MeVis-Cm 1.8/50	50	1.8	-0.075 ... 0	16	C-Mount	G038417000



Pin configuration

Plug/Pin	Function	Lead color
D	1 potentiometer aperture	brown
E	3 potentiometer aperture	white
A	2 potentiometer aperture	green
B	2 potentiometer focus	yellow
D	1 potentiometer focus	grey
E	3 potentiometer focus	pink
L	- motor focus	blue
K	+ motor focus	red
F	- motor aperture	black
G	+ motor aperture	violette



Not exactly what you need? Qioptiq is your partner for custom developments: from alterations of standard products to complete custom modules.

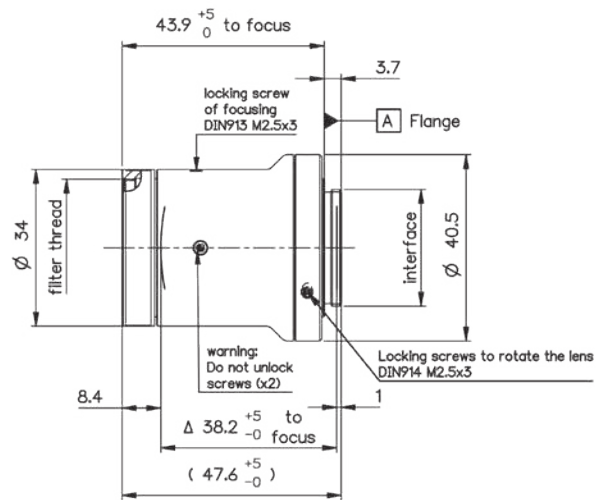
MeVis-CF

Superior Optical Performance Packaged in a Compact and Robust Housing

With the new MeVis-CF series, Qioptiq introduces a new line of lenses to serve applications requiring the best possible imaging quality from a compact, robust lens package. The optical performance is equal to the renowned MeVis-C series, but the mechanics are designed to be as simple as possible.

The major difference to the standard MeVis-C Series is the fixed aperture. This enhances durability, reduces size for compact installation and offers a more cost-effective design. The lenses are available in several versions offering a variety of apertures.

- Highest optical performance
 - Fixed aperture
 - Large image circle up to 1 inch
 - For pixel size even below 2 μm
 - High numerical aperture
 - Compact and robust mechanics
-
- Focal length: 16 ... 50 mm
 - Magnification range: 0...-0.1
 - Spectral range: 450-900 nm
 - Focusing: manual, lockable
 - Iris diaphragm: fix



MeVis-CF 1.6/25

MeVis-CF

Product	Focal length (mm)	F-number	Magnification range	Image circle (mm)	Interface	Part No.
MeVis-CF 1.6/16	16	1.6	-0.1 ... 0	11	C-Mount	0020-009-000-20
MeVis-CF 2.8/16	16	2.8	-0.1 ... 0	11	C-Mount	0020-009-000-21
MeVis-CF 4.0/16	16	4.0	-0.1 ... 0	11	C-Mount	0020-009-000-22
MeVis-CF 1.6/25	25	1.6	-0.1 ... 0	16	C-Mount	0020-007-000-20
MeVis-CF 4.0/25	25	4.0	-0.1 ... 0	16	C-Mount	0020-007-000-21
MeVis-CF 2.8/25	25	2.8	-0.1 ... 0	16	C-Mount	0020-007-000-22
MeVis-CF 1.6/35	35	1.6	-0.1 ... 0	16	C-Mount	0020-008-000-20
MeVis-CF 2.8/35	35	2.8	-0.1 ... 0	16	C-Mount	0020-008-000-21
MeVis-CF 4.0/35	35	4.0	-0.1 ... 0	16	C-Mount	0020-008-000-22
MeVis-CF 1.8/50	50	1.8	-0.075 ... 0	16	C-Mount	0020-010-000-20
MeVis-CF 2.8/50	50	2.8	-0.075 ... 0	16	C-Mount	0020-010-000-21
MeVis-CF 4.0/50	50	4.0	-0.075 ... 0	16	C-Mount	0020-010-000-22

MachVis Software

Lens Selection Software

MachVis software is designed to help you find the right lens for your machine vision application. Starting with four simple parameters:

- Object size
- Working distance
- Sensor size
- Camera mount

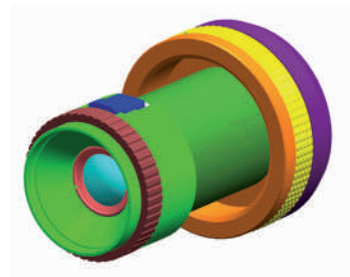
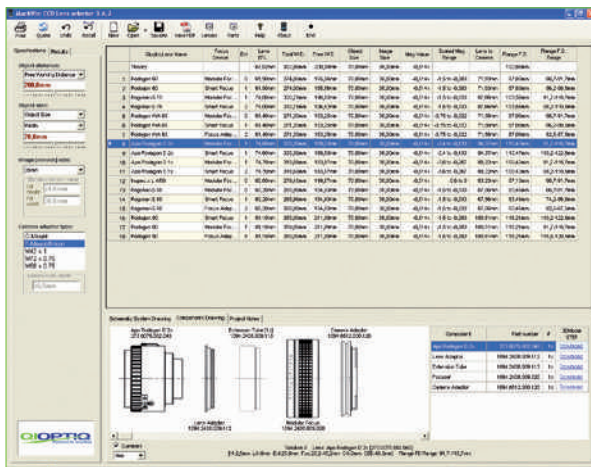
MachVis calculates the necessary optical parameters and then, from the extensive LINOS Lens catalogue, selects all suitable lenses that meet your specifications.

If mechanical accessories (e.g. focussing units, extension tubes etc.) are needed, MachVis will create a printable, itemized list of the required parts. MachVis also generates a schematic drawing of the lens and accessories in the order of assembly.

Specifications, along with your own project notes, may be saved to disk for later recall. Data-sheets (PDF) for each lens may be viewed for a more detailed analysis.

For download and further information, please go to www.qioptiq.com/machvis.

Workflow: From the choice of lens...



... to the three-dimensional model



... to the final system



Discover the Q!

Discover the capabilities, knowledge, equipment and technology of Qioptiq

The Vision Technology product area covers the whole range of industrial magnification tasks from Macro to Micro and Line-Scan to Area-Scan.

Photonics for Innovation

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