THE IMAGINGSOURCE

TECHNOLOGY BASED ON STANDARDS

GigE Cameras | USB Cameras | FireWire Cameras | Converters | Software

www.theimagingsource.com

Table of Contents

The Imaging Source 003

“23” Series GigE Cameras 005
- DMK 23G618 / DFK 23G618 006
- DMK 23GV024 / DFK 23GV024 012
- DMK 23GM021 / DFK 23GM021 018
- DMK 23G445 / DFK 23G445 024
- DMK 23G274 / DFK 23G274 030
- DMK 23GP031 / DFK 23GP031 036

“USB 3.0“ Series Cameras 042
- DMK 23U618 / DFK 23U618 043
- DMK 23UV024 / DFK 23UV024 049
- DMK 23UM021 / DFK 23UM021 055
- DMK 23U445 / DFK 23U445 061
- DMK 23U274 / DFK 23U274 067
- DMK 23UP031 / DFK 23UP031 073

“IEEE 1394b“ Series Cameras 079
- DMK 23F618 / DFK 23F618 080
- DMK 23FV024 / DFK 23FV024 086
- DMK 23FM021 / DFK 23FM021 092
- DMK 23F445 / DFK 23F445 098
- DMK 23F274 / DFK 23F274 104
- DMK 23FP031 / DFK 23FP031 110

“One4all“ Series USB CMOS Cameras 116
- DMK 22A(B)UC03 / DFK 22A(B)UC03 117
- DMK 42A(B)UC03 / DFK 42A(B)UC03 123
- DMK 72A(B)UC02 / DFK 72A(B)UC02 129

“One4all” Series USB CMOS Board Cameras 135
- DMK 22BUC03 / DFK 22BUC03 136
- DMK 42BUC03 / DFK 42BUC03 141
- DMK 72BUC02 / DFK 72BUC02 146

“AutoFocus“ Series USB CMOS Cameras 151
- DMK 22AUC03-F / DFK 22AUC03-F 152
- DMK 42AUC03-F / DFK 42AUC03-F 158
- DMK 72AUC02-F / DFK 72AUC02-F 164

USB Converter 170

Machine Vision – Designed in Germany

Established in 1990, The Imaging Source is one of the leading manufacturers of industrial cameras, frame grabbers and video converters for production automation, quality assurance, logistics, medicine, science, security and traffic surveillance.

The Imaging Source manufactures a comprehensive range of cameras with USB 3.0, USB 2.0, GigE, 1394b and 1394a interfaces. Their products are renowned for being innovative, high quality and constantly meeting the performance requirements of demanding industrial applications.

Decreasing Integration Costs and Attractive Pricing

The development of our hardware components is driven by more than 20 years of developing modern software components. This intimate interplay guarantees that our products work in perfect harmony with one another. We are driven by manufacturing products that have attractive pricing, low integration costs and longevity.

High-Quality and Ease of Use

All cameras, frame grabbers and video converters, manufactured by The Imaging Source, are the result of decades of experience, uncompromisingly high quality standards, and constant development by global teams consisting of experts and end-users.

Developers and system engineers prefer The Imaging Source cameras due to their ease of system integration. With branches and a strong network of distributors in Europe, USA and Asia, we are available for our customers across all time zones.

The Imaging Source Support

What really separates The Imaging Source from its competitors is the unsurpassed customer service and technical support we provide for our products.

Industrial cameras consist of two basic components: Hardware and software. We guarantee fast and efficient support for both components through our highly skilled support representatives and expert product developers. Not only will we provide support regarding technical issues, but we will also work to provide assistance with software implementation questions.

EASY SOFTWARE INTEGRATION

All The Imaging Source cameras, frame grabbers and video converters are shipped with the SDK IC Imaging Control.

Using this SDK, it is easy for programmers to integrate these devices into their own applications.

The included source code of numerous programming examples helps programmers to get started quickly.

www.imagingcontrol.com

THE IMAGINGSOURCE
TECHNOLOGY BASED ON STANDARDS

The Imaging Source “23” Series GigE Cameras

- Dimensions 29 x 29 x 57 mm
- Wide range of CCD and CMOS sensors
- Power over Ethernet
- Very attractive pricing

Model	Resolution	Megapixel	Pixel Size	Frame Rate	Sensor	Sensor Size	A/D
DMK 23G618	640 x 480	0.3	5.6 µm	120 fps	Sony ICX618ALA	1/4" CCD	8/12 bit
DFK 23G618	640 x 480	0.3	5.6 µm	120 fps	Sony ICX618AQA	1/4" CCD	8/12 bit
DMK 23GV024	752 x 480	0.3	6 µm	100 fps	Aptina MT9V024	1/3" CMOS	8/12 bit
DFK 23GV024	752 x 480	0.3	6 µm	100 fps	Aptina MT9V024	1/3" CMOS	8/12 bit
DMK 23GM021	1280 x 960	1.2	3.75 µm	60 fps	Aptina MT9M021	1/3" CMOS	8/12 bit
DFK 23GM021	1280 x 960	1.2	3.75 µm	60 fps	Aptina MT9M021	1/3" CMOS	8/12 bit
DMK 23G445	1280 x 960	1.2	3.75 µm	30 fps	Sony ICX445ALA	1/3" CCD	8/12 bit
DFK 23G445	1280 x 960	1.2	3.75 µm	30 fps	Sony ICX445AQA	1/3" CCD	8/12 bit
DMK 23G274	1600 x 1200	2	4.4 µm	20 fps	Sony ICX274AL	1/1.8" CCD	8/12 bit
DFK 23G274	1600 x 1200	2	4.4 µm	20 fps	Sony ICX274AQ	1/1.8" CCD	8/12 bit
DMK 23GP031	2592 x 1944	5	2.2 µm	15 fps	Aptina MT9P031	1/2.5" CMOS	8/12 bit
DFK 23GP031	2592 x 1944	5	2.2 µm	15 fps	Aptina MT9P031	1/2.5" CMOS	8/12 bit

The Imaging Source “23” series Gigabit Ethernet cameras are the perfect solution for many industrial automation, quality assurance, security, surveillance, and medical applications. Utilizing monochrome and color CCD and CMOS sensors up to 5 Megapixel, these cameras feature a variety of input, output, strobe, and trigger options via an external Hirose port. With up to 120 fps and a trigger delay of less than 5 micro seconds, the “23” camera series from The Imaging Source is a low cost, yet highly versatile imaging solution.

Included :

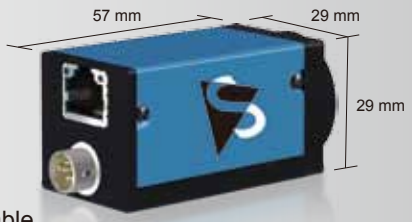
- Camera, CS to C mount adapter and tripod mount
- Drivers compatible to WDM, DirectShow, DirectX®, TWAIN, ActivVisionTools, HALCON, VfW and LabVIEW® for Windows 7/8, Windows Vista, and Windows XP
- IC Capture camera control and aquisition software for Windows 7/8, Windows Vista, and Windows XP (32 and 64 bit versions)
- IC Imaging Control Software Development Kit (SDK) including a .NET component, an ActiveX component, and a C++ class library for Windows

Features :

- Variable trigger (4µs to 1 s)
- Digital I/O strobe
- CS with C mount adapter
- Binning and ROI (CMOS only)
- Power over Ethernet
- Direct power option
- Optional external DC driven auto iris controller

Accessories :

- CS to M12 adapters
- C, CS, and M12 lenses
- 12VDC power supply
- 6-pin Hirose break-out cable
- External power and trigger cable



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THE IMAGINGSOURCE
TECHNOLOGY BASED ON STANDARDS

The Imaging Source "23" Series GigE Camera

DMK 23G618 / DFK 23G618

The Imaging Source DMK 23G618 (monochrome) and DFK 23G618 (color) Gigabit Ethernet cameras are the perfect solution for many industrial automation, quality assurance, security, surveillance, and medical applications. Utilizing the very sensitive SONY Ex View HAD ICX 618ALA/AQA monochrome and color CCD sensors, these cameras feature a variety of input, output, strobe, and trigger options via an external 6-pin Hirose port. With up to 120 fps and a trigger delay of less than 5 micro seconds, the DMK 23G618 and DFK 23G618 Gigabit Ethernet cameras from The Imaging Source are a low cost, yet highly versatile imaging solution.

Included :

- Camera, CS to C mount adapter and tripod mount
- Drivers compatible to WDM, DirectShow, DirectX®, TWAIN, ActivVisionTools, HALCON, VfW and LabVIEW® for Windows 7/8, Windows Vista, and Windows XP
- IC Capture camera control and aquisition software for Windows 7/8, Windows Vista, and Windows XP (32 and 64 bit versions)
- IC Imaging Control Software Development Kit (SDK) including a .NET component, an ActiveX component, and a C++ class library for Windows

Features :

- Variable trigger (4µs to 1s)
- Digital I/O strobe
- CS with C mount adapter
- Power over Ethernet
- Direct power optional
- Optional external DC driven auto iris controller

Accessories :

- CS to M12 adapters
- C, CS, and M12 lenses
- 12VDC power supply
- 6-pin Hirose break-out cable
- External power and trigger cable

Specification : DMK 23G618 (Monochrome)

GENERAL BEHAVIOR	
Video formats @ Frame rate	640x480 Y800 @ 120, 90, 60, 30, 15, 7.5, 3.75 fps 640x480 Y16 @ 120, 90, 60, 30, 15, 7.5, 3.75 fps
Sensitivity	0.015 lx
Dynamic range	8 / 12 bit

INTERFACE (OPTICAL)	
IR cut filter	no
Sensor specification	ICX618ALA
Type	progressive scan
Format	1/4 "
Resolution	H: 640, V: 480
Pixel size	H: 5.6 µm, V: 5.6 µm
Lens mount	C/CS

INTERFACE (ELECTRICAL)	
Supply voltage	11 to 13 VDC or 48 to 56 PoE
Current consumption	approx. 400 mA at 12 VDC

INTERFACE (MECHANICAL)	
Dimensions	H: 29 mm, W: 29 mm, L: 57 mm
Mass	65 g

ADJUSTMENTS (MANUAL)	
Shutter	1/100,000 to 30 s
Gain	0 to 36 dB

ADJUSTMENTS (AUTOMATIC)	
Shutter	1/100,000 to 30 s
Gain	0 to 36 dB

ENVIRONMENTAL	
Max. temperature (operation)	-5 °C to 45 °C
Max. temperature (storage)	-20 °C to 60 °C
Max. humidity (operation)	20 % to 80 % non-condensing
Max. humidity (storage)	20 % to 95 % non-condensing

Specification : DFK 23G618 (Color)

GENERAL BEHAVIOR	
Video formats @ Frame rate	640x480 RGB32 @ 120, 90, 60, 30, 15, 7.5, 3.75 fps 640x480 Y800 @ 120, 90, 60, 30, 15, 7.5, 3.75 fps 640x480 Y16 @ 120, 90, 60, 30, 15, 7.5, 3.75 fps
Sensitivity	0.05 lx
Dynamic range	8 / 12 bit

INTERFACE (OPTICAL)	
IR cut filter	yes
Sensor specification	ICX618AQA
Type	progressive scan
Format	1/4 "
Resolution	H: 640, V: 480
Pixel size	H: 5.6 µm, V: 5.6 µm
Lens mount	C/CS

INTERFACE (ELECTRICAL)	
Supply voltage	11 to 13 VDC or 48 to 56 PoE
Current consumption	approx. 400 mA at 12 VDC

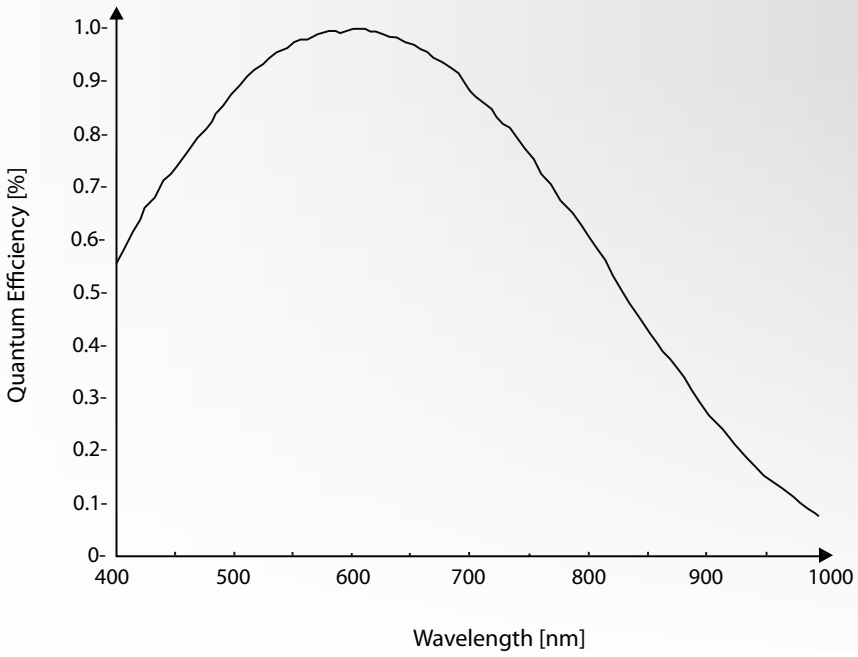
INTERFACE (MECHANICAL)	
Dimensions	H: 29 mm, W: 29 mm, L: 57 mm
Mass	65 g

ADJUSTMENTS (MANUAL)	
Shutter	1/100,000 to 30 s
Gain	0 to 36 dB
White balance	-2 dB to +6 dB

ADJUSTMENTS (AUTOMATIC)	
Shutter	1/100,000 to 30 s
Gain	0 to 36 dB
White balance	-2 dB to +6 dB

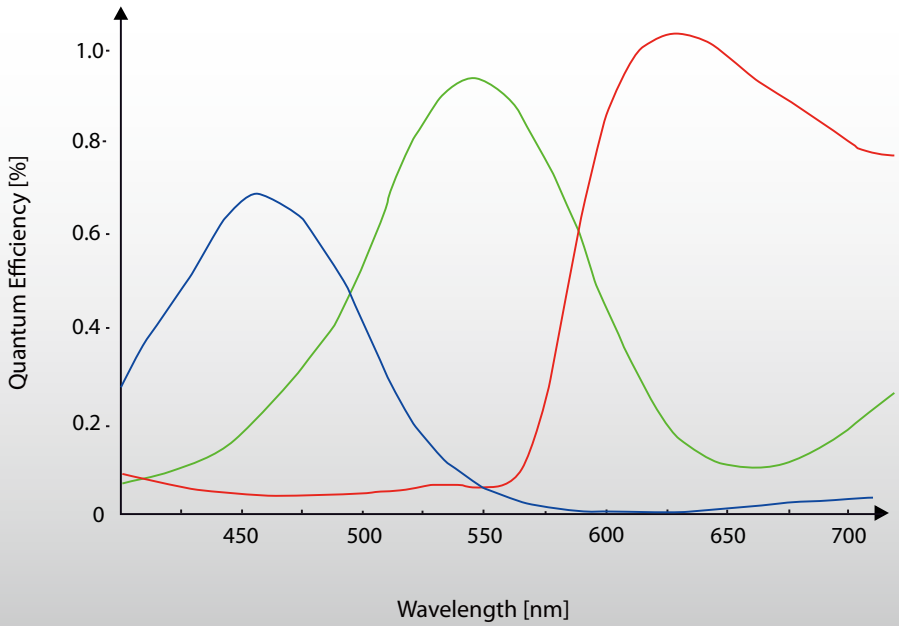
ENVIRONMENTAL	
Max. temperature (operation)	-5 °C to 45 °C
Max. temperature (storage)	-20 °C to 60 °C
Max. humidity (operation)	20 % to 80 % non-condensing
Max. humidity (storage)	20 % to 95 % non-condensing

Monochrome Spectral Response Curve



Sensor: Sony ICX 618 ALA - courtesy of SONY Deutschland GmbH

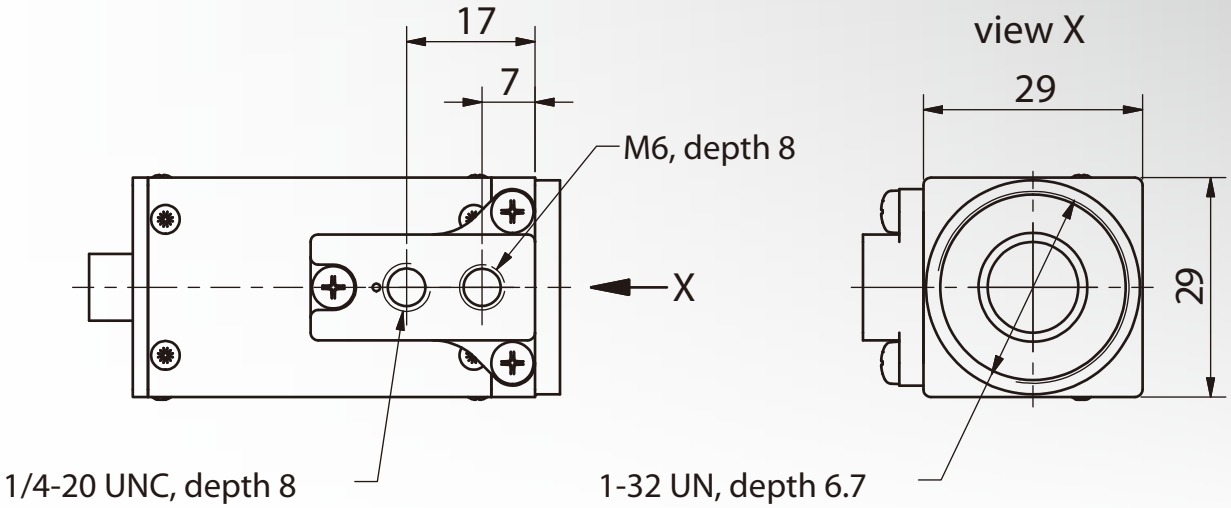
Color Spectral Response Curve

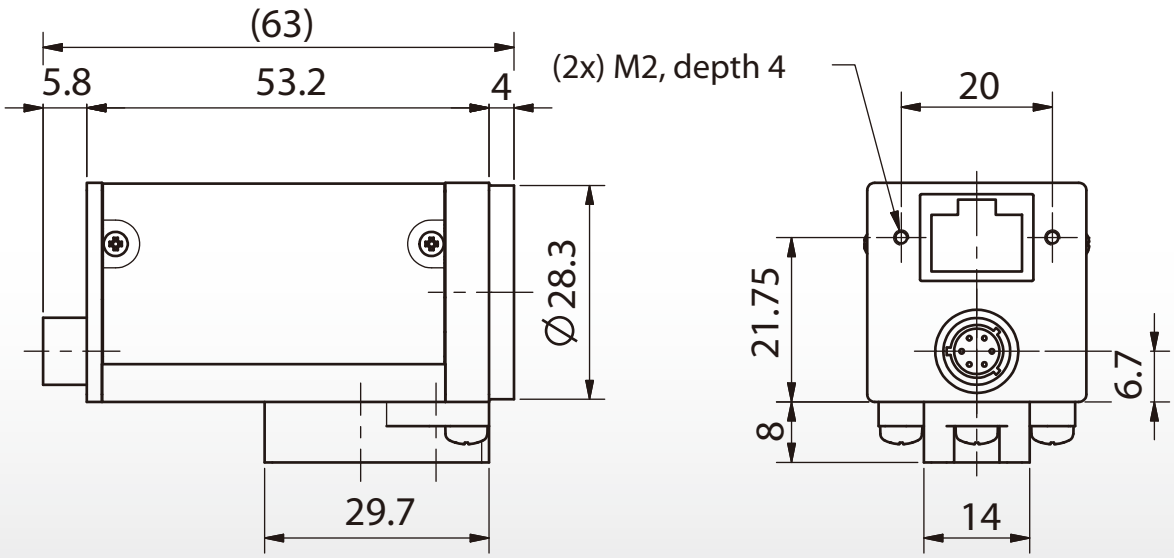


Sensor: Sony ICX 618 AQA - courtesy of SONY Deutschland GmbH

DMK 23G618 / DFK 23G618 Dimensional Diagram

(with tripod adapter)

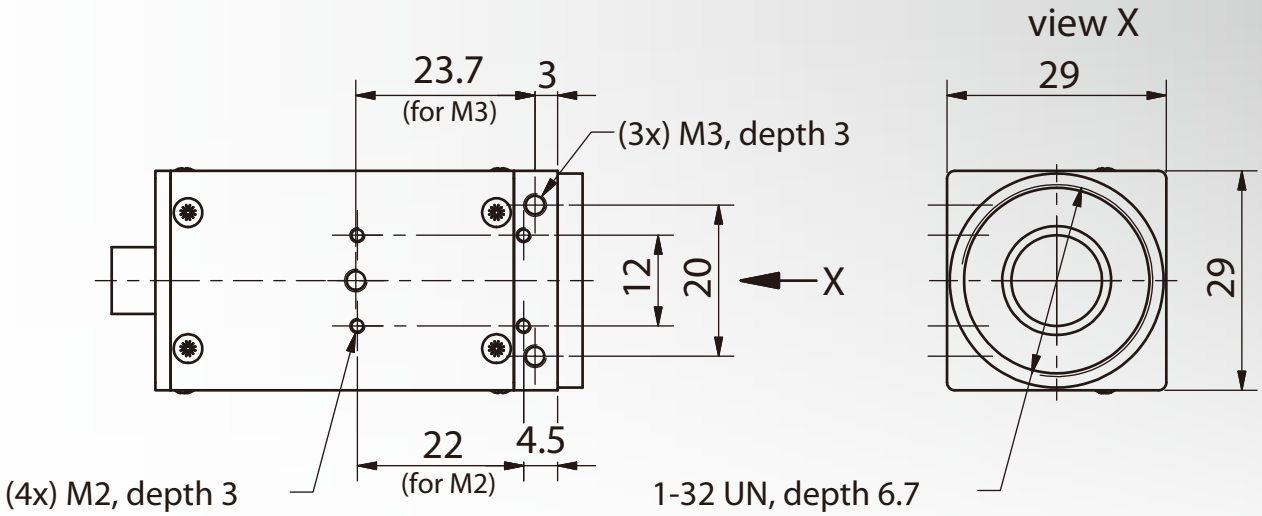


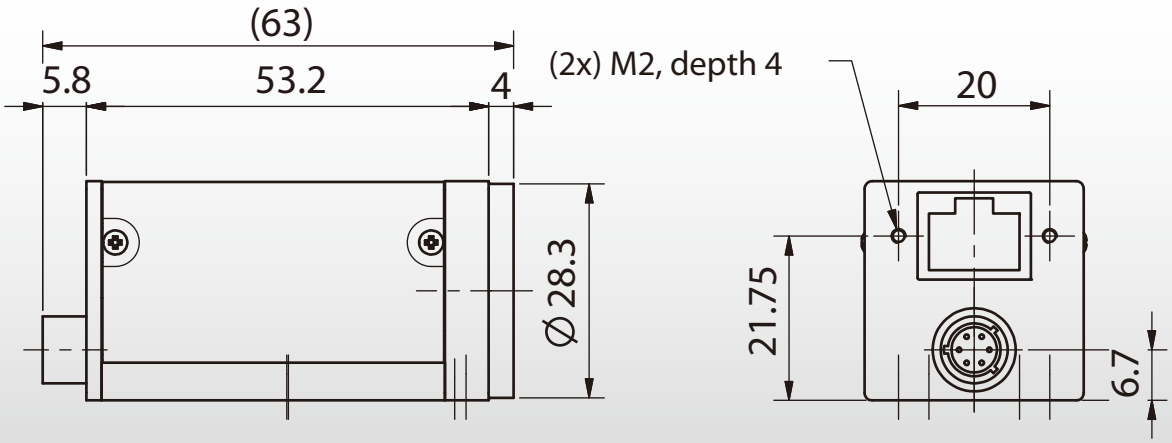


Dimensions: mm
Tolerances: DIN ISO 2768m

DMK 23G618 / DFK 23G618 Dimensional Diagram

(without tripod adapter)





Dimensions: mm
Tolerances: DIN ISO 2768m

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All weights and dimensions are approximate. Unless otherwise specified the lenses shown in the context of cameras are not shipped with these cameras.

The Imaging Source "23" Series GigE Camera

DMK 23GV024 / DFK 23GV024

The Imaging Source DMK 23GV024 (monochrome) and DFK 23GV024 (color) Gigabit Ethernet cameras are the perfect solution for many industrial automation, quality assurance, security, surveillance, and medical applications. Utilizing the very sensitive Aptina WVGA MT9V024 monochrome and color global shutter CMOS sensors, these cameras feature a variety of input, output, strobe, and trigger options via an external 6-pin Hirose port. With up to 100 fps and a trigger delay of less than 5 micro seconds, the DMK 23GV024 and DFK 23GV024 Gigabit Ethernet cameras from The Imaging Source are a very low cost, yet highly versatile imaging solution.

Included :

- Camera, CS to C mount adapter and tripod mount
- Drivers compatible to WDM, DirectShow, DirectX®, TWAIN, ActivVisionTools, HALCON, VfW and LabVIEW® for Windows 7/8, Windows Vista, and Windows XP
- IC Capture camera control and aquisition software for Windows 7/8, Windows Vista, and Windows XP (32 and 64 bit versions)
- IC Imaging Control Software Development Kit (SDK) including a .NET component, an ActiveX component, and a C++ class library for Windows

Features :

- Variable trigger (4µs to 1s)
- Digital I/O strobe
- CS with C mount adapter
- Binning and ROI (CMOS only)
- Power over Ethernet
- Direct power optional
- Optional external DC driven auto iris controller

Accessories :

- CS to M12 adapters
- C, CS, and M12 lenses
- 12VDC power supply
- 6-pin Hirose break-out cable
- External power and trigger cable

Specification : DMK 23GV024 (Monochrome)

GENERAL BEHAVIOR	
Video formats @ Frame rate	752x480 Y800 @ 60, 30, 15, 7.5, 3.75 fps 752x480 Y16 @ 60, 30, 15, 7.5, 3.75 fps
Sensitivity	0.015 lx
Dynamic range	8 / 12 bit

INTERFACE (OPTICAL)	
IR cut filter	no
Sensor specification	MT9V024
Shutter	Global
Format	1/3 "
Resolution	H: 752, V: 480
Pixel size	H: 6.0 µm, V: 6.0 µm
Lens mount	C/CS

INTERFACE (ELECTRICAL)	
Supply voltage	11 to 13 VDC or 48 to 56 PoE
Current consumption	approx. 400 mA at 12 VDC

INTERFACE (MECHANICAL)	
Dimensions	H: 29 mm, W: 29 mm, L: 57 mm
Mass	65 g

ADJUSTMENTS (MANUAL)	
Shutter	1/100,000 to 30 s
Gain	0 to 36 dB

ADJUSTMENTS (AUTOMATIC)	
Shutter	1/100,000 to 30 s
Gain	0 to 36 dB

ENVIRONMENTAL	
Max. temperature (operation)	-5 °C to 45 °C
Max. temperature (storage)	-20 °C to 60 °C
Max. humidity (operation)	20 % to 80 % non-condensing
Max. humidity (storage)	20 % to 95 % non-condensing

Specification : DFK 23GV024 (Color)

GENERAL BEHAVIOR	
Video formats @ Frame rate	752x480 RGB32 @ 60, 30, 15, 7.5, 3.75 fps 752x480 Y800 @ 60, 30, 15, 7.5, 3.75 fps 752x480 Y16 @ 60, 30, 15, 7.5, 3.75 fps
Sensitivity	0.05 lx
Dynamic range	8 / 12 bit

INTERFACE (OPTICAL)	
IR cut filter	yes
Sensor specification	MT9V024
Shutter	Global
Format	1/3 "
Resolution	H: 752, V: 480
Pixel size	H: 6.0 µm, V: 6.0 µm
Lens mount	C/CS

INTERFACE (ELECTRICAL)	
Supply voltage	11 to 13 VDC or 48 to 56 PoE
Current consumption	approx. 400 mA at 12 VDC

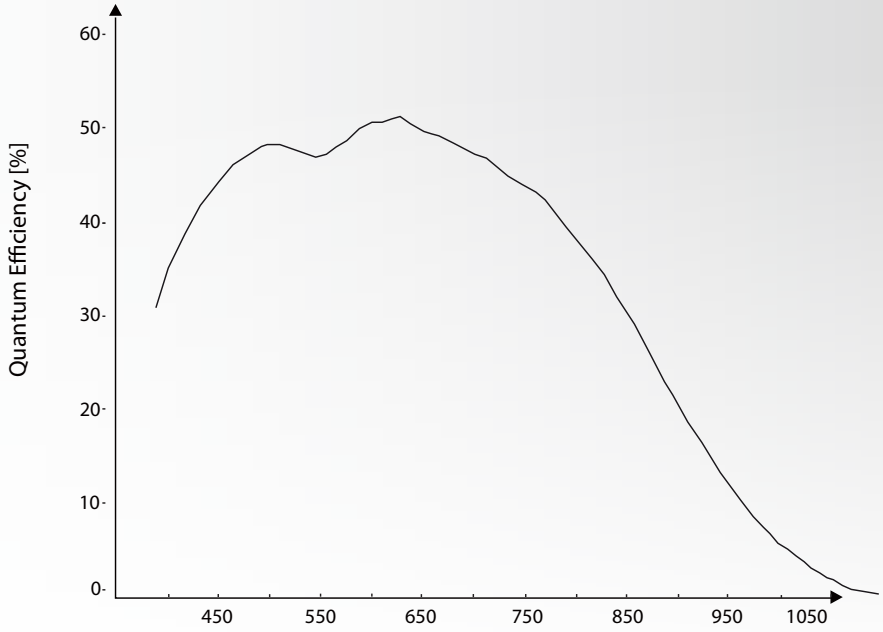
INTERFACE (MECHANICAL)	
Dimensions	H: 29 mm, W: 29 mm, L: 57 mm
Mass	65 g

ADJUSTMENTS (MANUAL)	
Shutter	1/100,000 to 30 s
Gain	0 to 36 dB
White balance	-2 dB to +6 dB

ADJUSTMENTS (AUTOMATIC)	
Shutter	1/100,000 to 30 s
Gain	0 to 36 dB
White balance	-2 dB to +6 dB

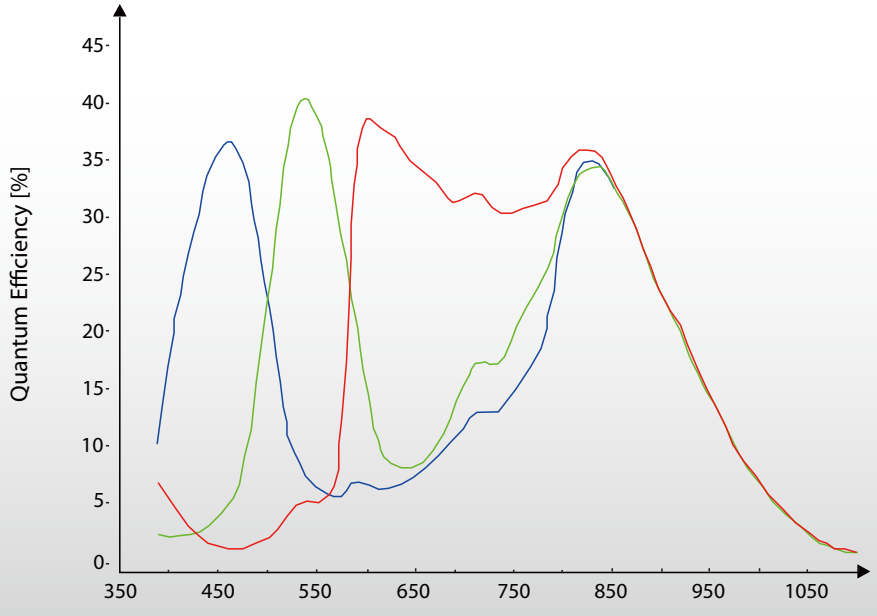
ENVIRONMENTAL	
Max. temperature (operation)	-5 °C to 45 °C
Max. temperature (storage)	-20 °C to 60 °C
Max. humidity (operation)	20 % to 80 % non-condensing
Max. humidity (storage)	20 % to 95 % non-condensing

Monochrome Spectral Response Curve



Sensor: Micron MT9V024 M - courtesy of Aptina Deutschland GmbH

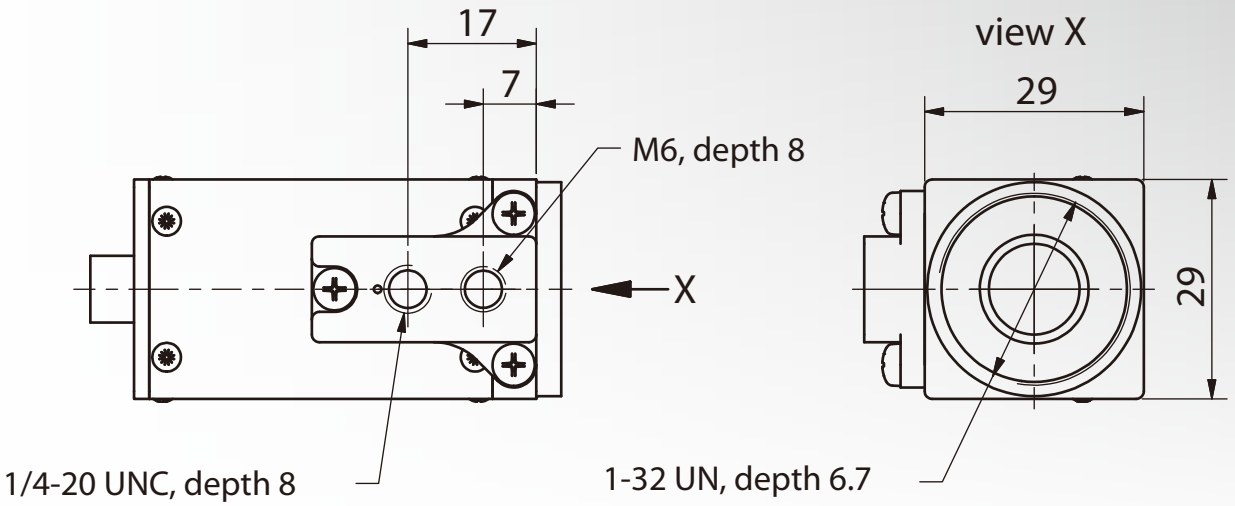
Color Spectral Response Curve

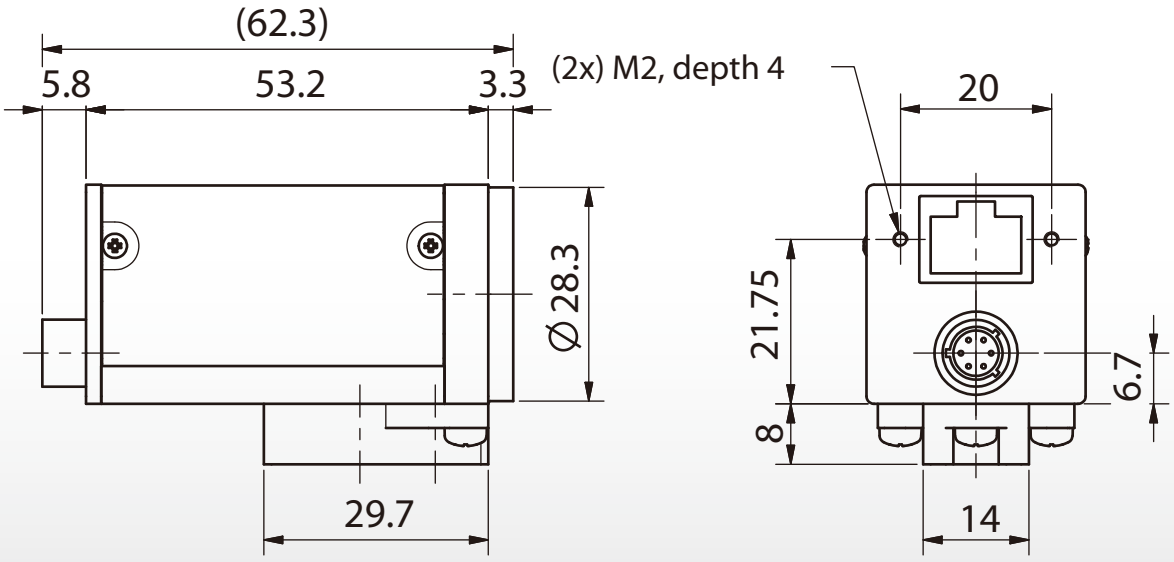


Sensor: Micron MT9V024 C - courtesy of Aptina Deutschland GmbH

DMK 23GV024 / DFK 23GV024 Dimensional Diagram

(with tripod adapter)

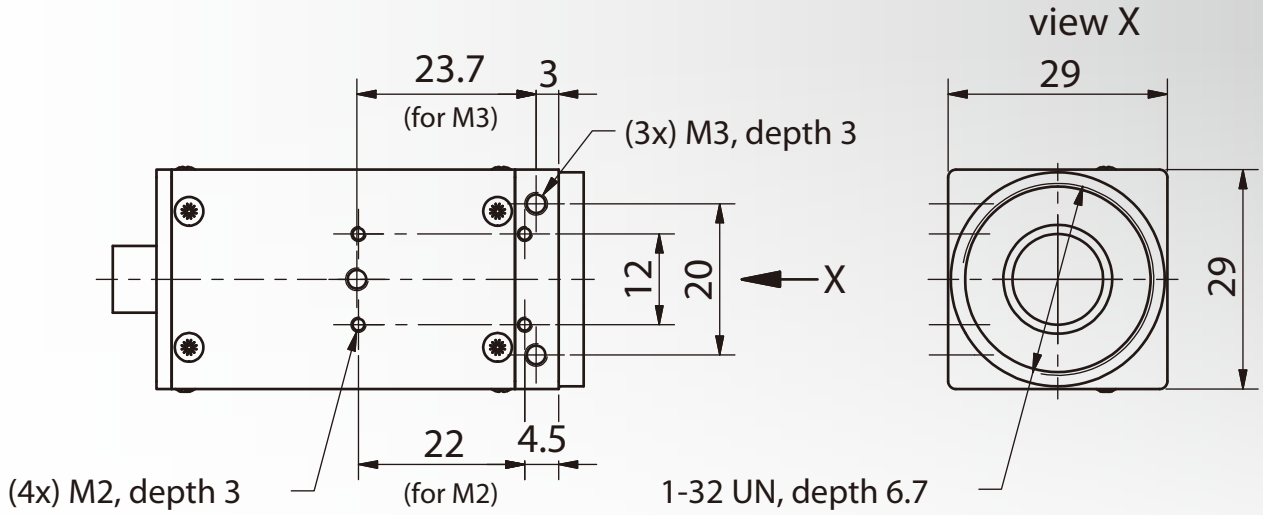


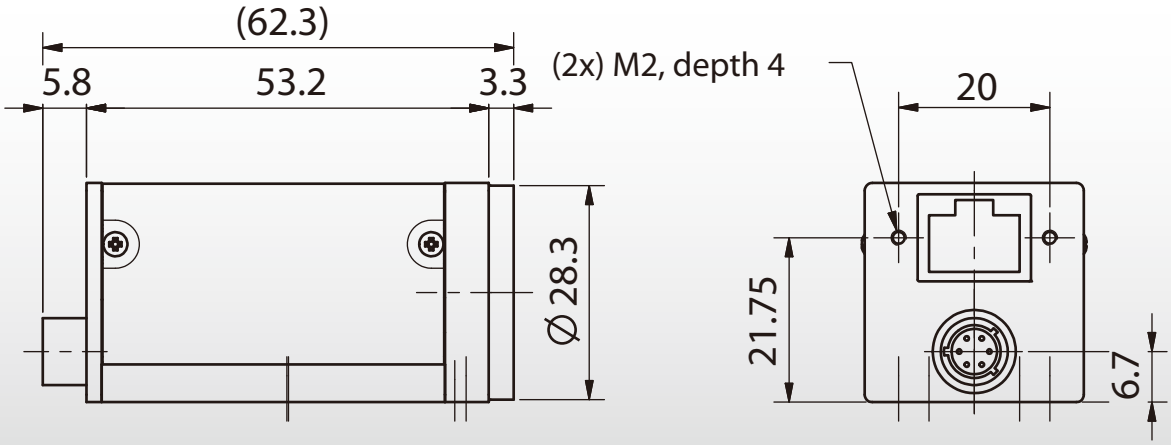


Dimensions: mm
Tolerances: DIN ISO 2768m

DMK 23GV024 / DFK 23GV024 Dimensional Diagram

(without tripod adapter)





Dimensions: mm
Tolerances: DIN ISO 2768m

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All weights and dimensions are approximate. Unless otherwise specified the lenses shown in the context of cameras are not shipped with these cameras.

The Imaging Source "23" Series GigE Camera

DMK 23GM021 / DFK 23GM021

The Imaging Source DMK 23GM021 (monochrome) and DFK 23GM021 (color) Gigabit Ethernet cameras are the perfect solution for many industrial automation, quality assurance, security, surveillance, and medical applications. Utilizing the very sensitive Aptina 1.2 Megapixel MT9M021 monochrome and color global shutter CMOS sensors, these cameras feature a variety of input, output, strobe, and trigger options via an external 6-pin Hirose port. With up to 60 fps and a trigger delay of less than 5 micro seconds, the DMK 23GM021 and DFK 23GM021 Gigabit Ethernet cameras from The Imaging Source are a very low cost, yet highly versatile imaging solution.

Included :

- Camera, CS to C mount adapter and tripod mount
- Drivers compatible to WDM, DirectShow, DirectX®, TWAIN, ActivVisionTools, HALCON, VfW and LabVIEW® for Windows 7/8, Windows Vista, and Windows XP
- IC Capture camera control and aquisition software for Windows 7/8, Windows Vista, and Windows XP (32 and 64 bit versions)
- IC Imaging Control Software Development Kit (SDK) including a .NET component, an ActiveX component, and a C++ class library for Windows

Features :

- Variable trigger (4µs to 1s)
- Digital I/O strobe
- CS with C mount adapter
- Binning and ROI (CMOS only)
- Power over Ethernet
- Direct power optional
- Optional external DC driven auto iris controller

Accessories :

- CS to M12 adapters
- C, CS, and M12 lenses
- 12VDC power supply
- 6-pin Hirose break-out cable
- External power and trigger cable

Specification : DMK 23GM021 (Monochrome)

GENERAL BEHAVIOR	
Video formats @ Frame rate	1280x960 Y800 @ 45, 30, 15, 7.5, 3.75 fps 1280x960 Y16 @ 45, 30, 15, 7.5, 3.75 fps
Sensitivity	0.015 lx
Dynamic range	8 / 12 bit

INTERFACE (OPTICAL)	
IR cut filter	no
Sensor specification	MT9M021
Shutter	Global
Format	1/3 "
Resolution	H: 1280, V: 960
Pixel size	H: 3.75 µm, V: 3.75 µm
Lens mount	C/CS

INTERFACE (ELECTRICAL)	
Supply voltage	11 to 13 VDC or 48 to 56 PoE
Current consumption	approx. 400 mA at 12 VDC

INTERFACE (MECHANICAL)	
Dimensions	H: 29 mm, W: 29 mm, L: 57 mm
Mass	65 g

ADJUSTMENTS (MANUAL)	
Shutter	1/100,000 to 30 s
Gain	0 to 36 dB

ADJUSTMENTS (AUTOMATIC)	
Shutter	1/100,000 to 30 s
Gain	0 to 36 dB

ENVIRONMENTAL	
Max. temperature (operation)	-5 °C to 45 °C
Max. temperature (storage)	-20 °C to 60 °C
Max. humidity (operation)	20 % to 80 % non-condensing
Max. humidity (storage)	20 % to 95 % non-condensing

Specification : DFK 23GM021 (Color)

GENERAL BEHAVIOR	
Video formats @ Frame rate	1280x960 RGB32 @ 45, 30, 15, 7.5, 3.75 fps 1280x960 Y800 @ 45, 30, 15, 7.5, 3.75 fps 1280x960 Y16 @ 45, 30, 15, 7.5, 3.75 fps
Sensitivity	0.05 lx
Dynamic range	8 / 12 bit

INTERFACE (OPTICAL)	
IR cut filter	yes
Sensor specification	MT9M021
Shutter	Global
Format	1/3 "
Resolution	H: 1280, V: 960
Pixel size	H: 3.75 µm, V: 3.75 µm
Lens mount	C/CS

INTERFACE (ELECTRICAL)	
Supply voltage	11 to 13 VDC or 48 to 56 PoE
Current consumption	approx. 400 mA at 12 VDC

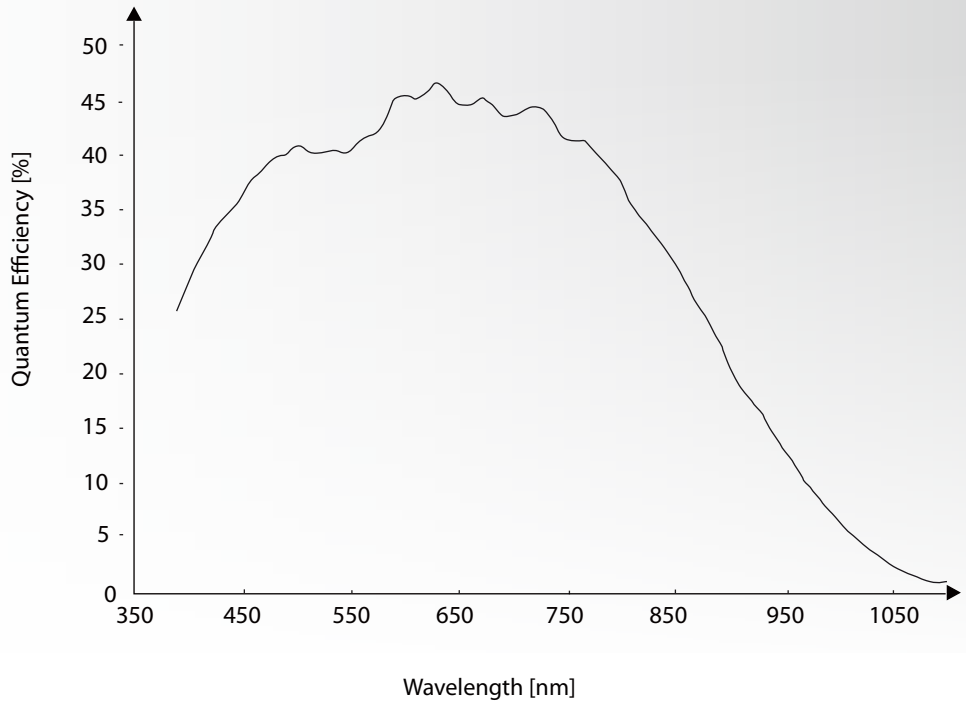
INTERFACE (MECHANICAL)	
Dimensions	H: 29 mm, W: 29 mm, L: 57 mm
Mass	65 g

ADJUSTMENTS (MANUAL)	
Shutter	1/100,000 to 30 s
Gain	0 to 36 dB
White balance	-2 dB to +6 dB

ADJUSTMENTS (AUTOMATIC)	
Shutter	1/100,000 to 30 s
Gain	0 to 36 dB
White balance	-2 dB to +6 dB

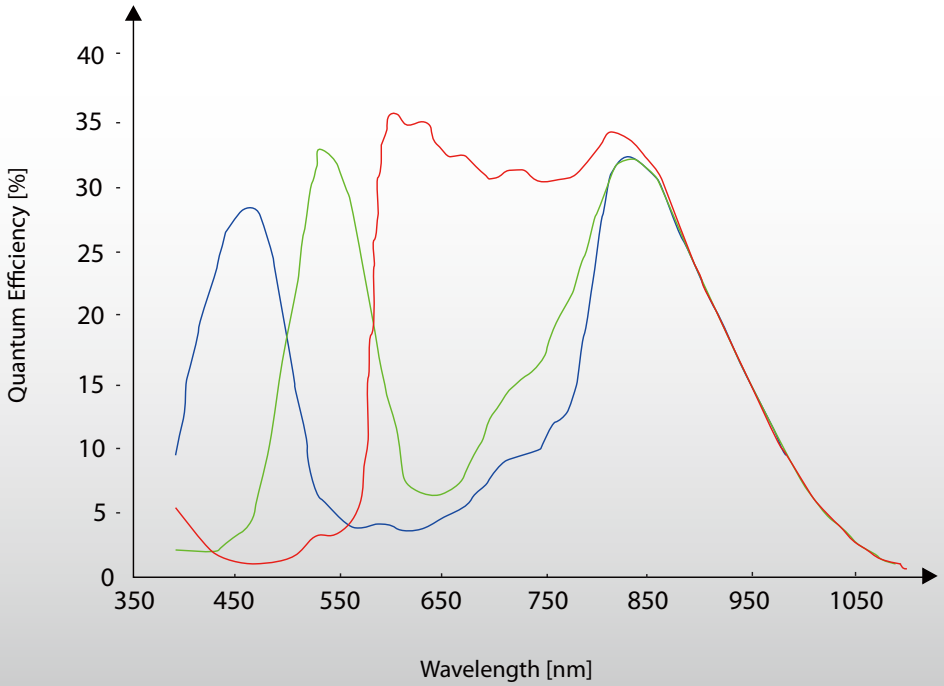
ENVIRONMENTAL	
Max. temperature (operation)	-5 °C to 45 °C
Max. temperature (storage)	-20 °C to 60 °C
Max. humidity (operation)	20 % to 80 % non-condensing
Max. humidity (storage)	20 % to 95 % non-condensing

Monochrome Spectral Response Curve



Sensor: Micron MT9M021M - courtesy of Aptina Deutschland GmbH

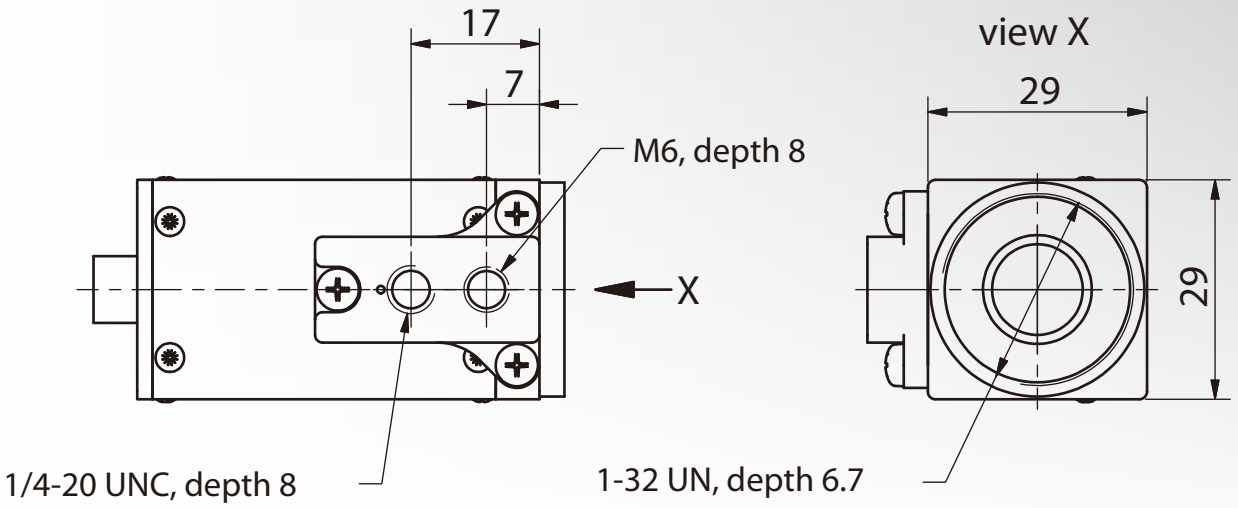
Color Spectral Response Curve

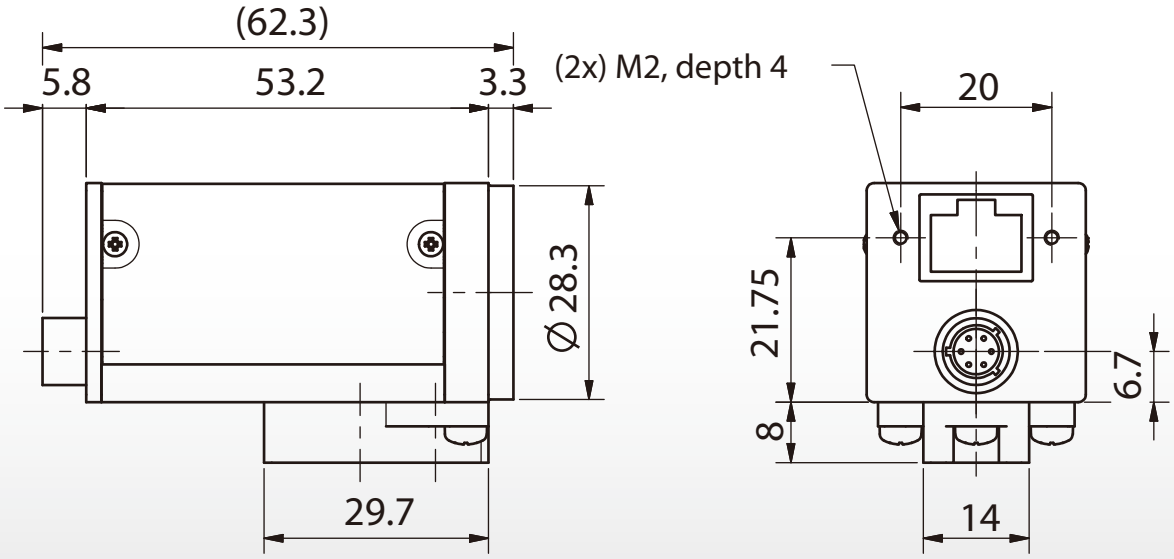


Sensor: Micron MT9M021C - courtesy of Aptina Deutschland GmbH

DMK 23GM021 / DFK 23GM021 Dimensional Diagram

(with tripod adapter)

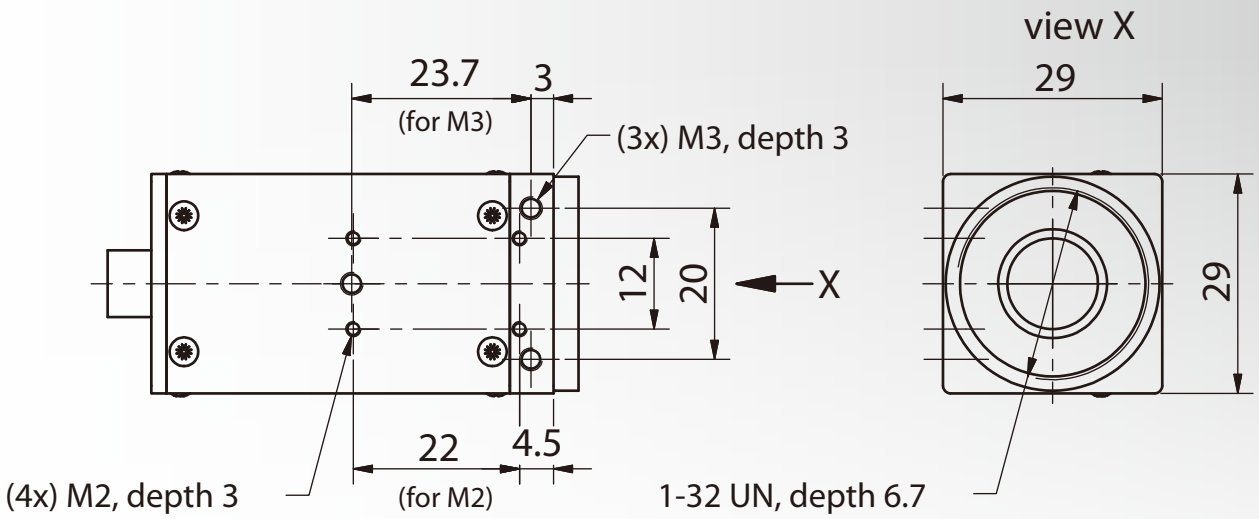


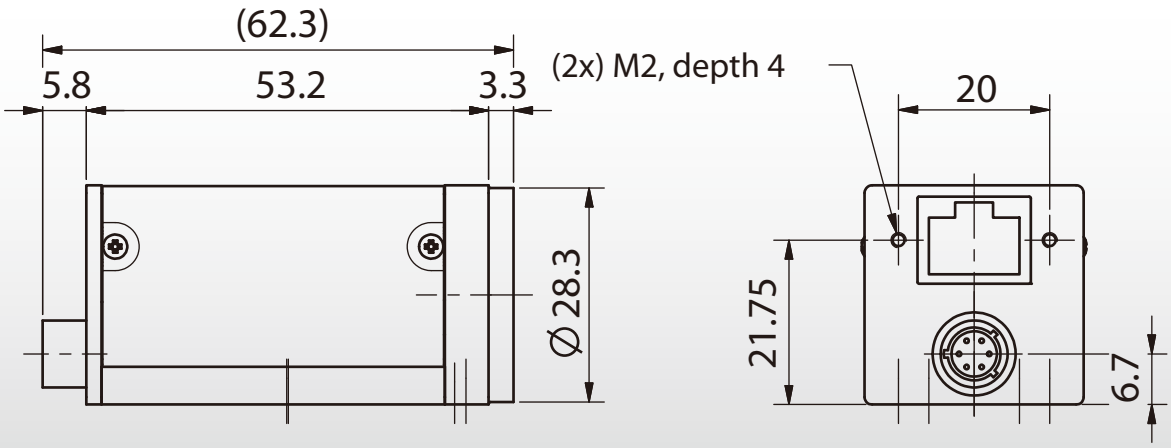


Dimensions: mm
Tolerances: DIN ISO 2768m

DMK 23GM021 / DFK 23GM021 Dimensional Diagram

(without tripod adapter)





Dimensions: mm
Tolerances: DIN ISO 2768m

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All weights and dimensions are approximate. Unless otherwise specified the lenses shown in the context of cameras are not shipped with these cameras.

The Imaging Source "23" Series GigE Camera

DMK 23G445 / DFK 23G445

The Imaging Source DMK 23G445 (monochrome) and DFK 23G445 (color) Gigabit Ethernet cameras are the perfect solution for many industrial automation, quality assurance, security, surveillance, and medical applications. Utilizing the very sensitive SONY Ex View HAD ICX 445ALA/AQA monochrome and color CCD sensors, these cameras feature a variety of input, output, strobe, and trigger options via an external 6-pin Hirose port. With up to 30 fps and a trigger delay of less than 5 micro seconds, the DMK 23G445 and DFK 23G445 Gigabit Ethernet cameras from The Imaging Source are a low cost, yet highly versatile imaging solution.

Included :

- Camera, CS to C mount adapter and tripod mount
- Drivers compatible to WDM, DirectShow, DirectX®, TWAIN, ActivVisionTools, HALCON, VfW and LabVIEW® for Windows 7/8, Windows Vista, and Windows XP
- IC Capture camera control and aquisition software for Windows 7/8, Windows Vista, and Windows XP (32 and 64 bit versions)
- IC Imaging Control Software Development Kit (SDK) including a .NET component, an ActiveX component, and a C++ class library for Windows

Features :

- Variable trigger (4µs to 1s)
- Digital I/O strobe
- CS with C mount adapter
- Power over Ethernet
- Direct power optional
- Optional external DC driven auto iris controller

Accessories :

- CS to M12 adapters
- C, CS and M12 lenses
- 12VDC power supply
- 6-pin Hirose break-out cable
- External power and trigger cable

Specification : DMK 23G445 (Monochrome)

GENERAL BEHAVIOR	
Video formats @ Frame rate	1280x960 Y800 @ 30, 20, 15, 7.5, 3.75 fps 1280x960 Y16 @ 30, 20, 15, 7.5, 3.75 fps
Sensitivity	0.015 lx
Dynamic range	8 / 12 bit

INTERFACE (OPTICAL)	
IR cut filter	no
Sensor specification	ICX445ALA
Type	progressive scan
Format	1/3 "
Resolution	H: 1280, V: 960
Pixel size	H: 3.75 µm, V: 3.75 µm
Lens mount	C/CS

INTERFACE (ELECTRICAL)	
Supply voltage	11 to 13 VDC or 48 to 56 PoE
Current consumption	approx. 400 mA at 12 VDC

INTERFACE (MECHANICAL)	
Dimensions	H: 29 mm, W: 29 mm, L: 57 mm
Mass	65 g

ADJUSTMENTS (MANUAL)	
Shutter	1/100,000 to 30 s
Gain	0 to 36 dB

ADJUSTMENTS (AUTOMATIC)	
Shutter	1/100,000 to 30 s
Gain	0 to 36 dB

ENVIRONMENTAL	
Max. temperature (operation)	-5 °C to 45 °C
Max. temperature (storage)	-20 °C to 60 °C
Max. humidity (operation)	20 % to 80 % non-condensing
Max. humidity (storage)	20 % to 95 % non-condensing

Specification : DFK 23G445 (Color)

GENERAL BEHAVIOR	
Video formats @ Frame rate	1280x960 RGB32 @ 30, 20, 15, 7.5, 3.75 fps 1280x960 Y800 @ 30, 20, 15, 7.5, 3.75 fps 1280x960 Y16 @ 30, 20, 15, 7.5, 3.75 fps
Sensitivity	0.05 lx
Dynamic range	8 bit

INTERFACE (OPTICAL)	
IR cut filter	yes
Sensor specification	ICX445AQA
Type	progressive scan
Format	1/3 "
Resolution	H: 1280, V: 960
Pixel size	H: 3.75 µm, V: 3.75 µm
Lens mount	C/CS

INTERFACE (ELECTRICAL)	
Supply voltage	11 to 13 VDC or 48 to 56 PoE
Current consumption	approx. 400 mA at 12 VDC

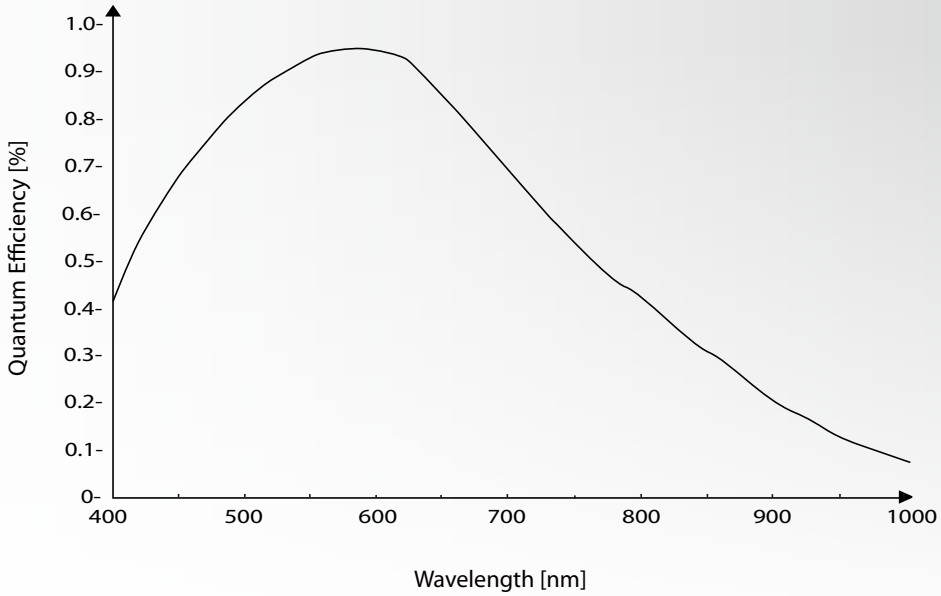
INTERFACE (MECHANICAL)	
Dimensions	H: 29 mm, W: 29 mm, L: 57 mm
Mass	65 g

ADJUSTMENTS (MANUAL)	
Shutter	1/100,000 to 30 s
Gain	0 to 36 dB
White balance	-2 dB to +6 dB

ADJUSTMENTS (AUTOMATIC)	
Shutter	1/100,000 to 30 s
Gain	0 to 36 dB
White balance	-2 dB to +6 dB

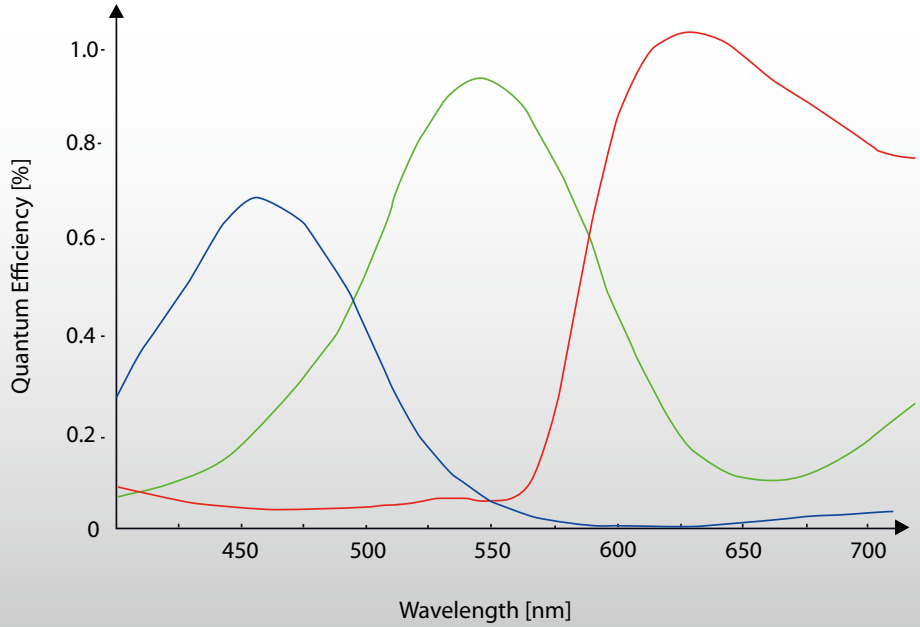
ENVIRONMENTAL	
Max. temperature (operation)	-5 °C to 45 °C
Max. temperature (storage)	-20 °C to 60 °C
Max. humidity (operation)	20 % to 80 % non-condensing
Max. humidity (storage)	20 % to 95 % non-condensing

Monochrome Spectral Response Curve



Sensor: Sony ICX 445ALA - courtesy of SONY Deutschland GmbH

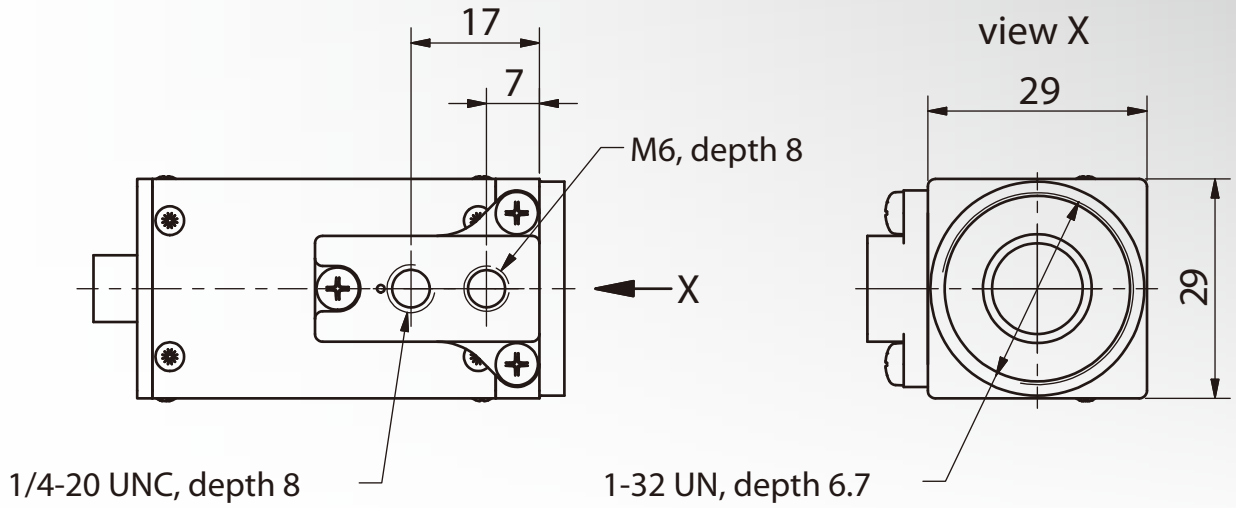
Color Spectral Response Curve

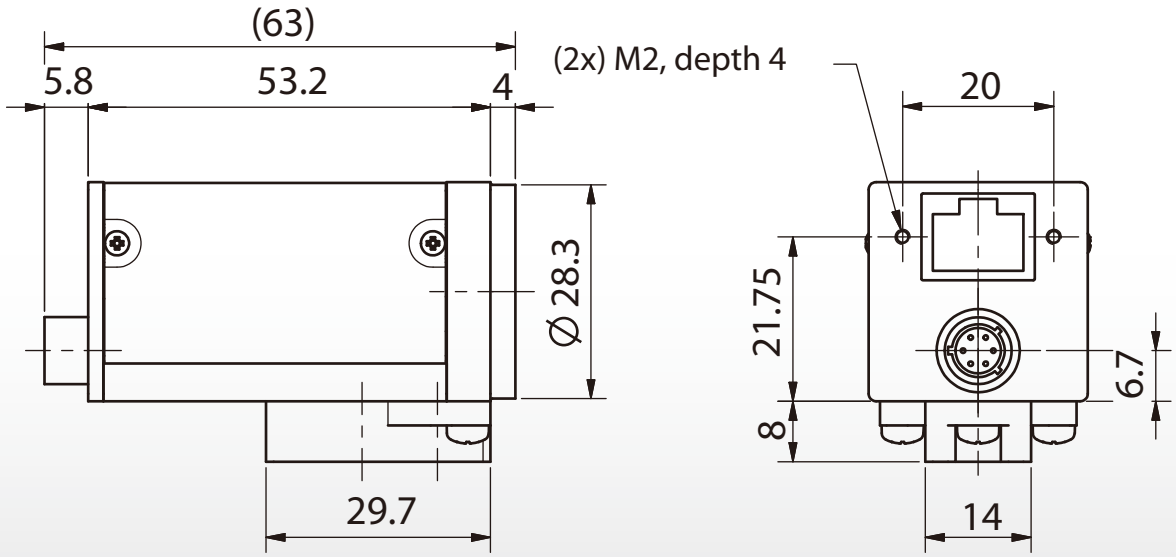


Sensor: Sony ICX 445AQA - courtesy of SONY Deutschland GmbH

DMK 23G445 / DFK 23G445 Dimensional Diagram

(with tripod adapter)

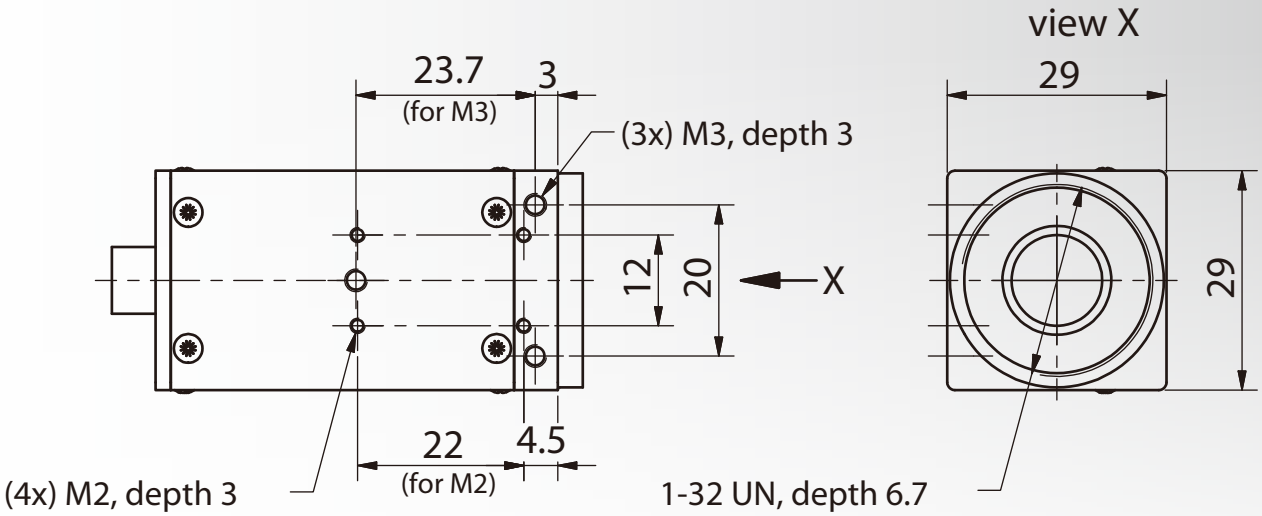


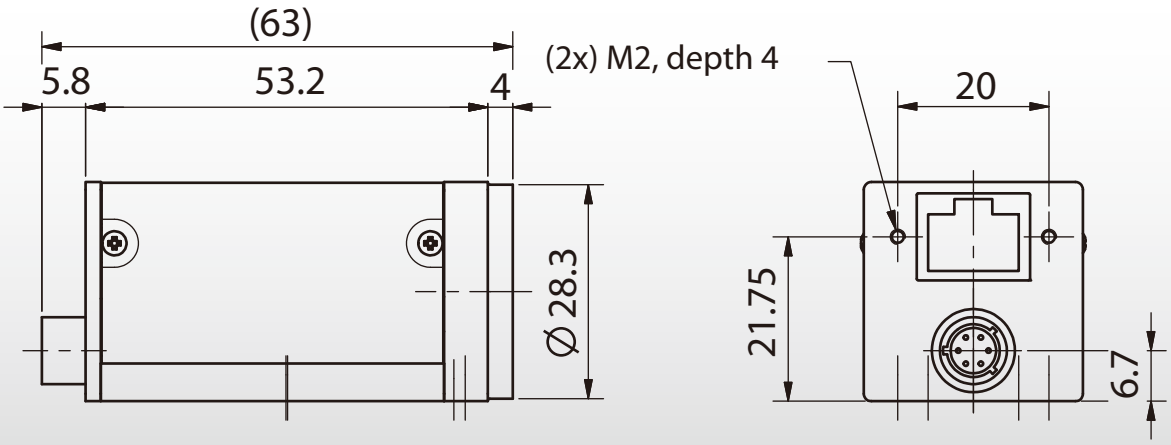


Dimensions: mm
Tolerances: DIN ISO 2768m

DMK 23G445 / DFK 23G445 Dimensional Diagram

(without tripod adapter)





Dimensions: mm
Tolerances: DIN ISO 2768m

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All weights and dimensions are approximate. Unless otherwise specified the lenses shown in the context of cameras are not shipped with these cameras.

The Imaging Source "23" Series GigE Camera

DMK 23G274 / DFK 23G274

The Imaging Source DMK 23G274 (monochrome) and DFK 23G274 (color) Gigabit Ethernet cameras are the perfect solution for many industrial automation, quality assurance, security, surveillance, and medical applications. Utilizing the very sensitive SONY Ex View HAD ICX 274ALA/AQA monochrome and color CCD sensors, these cameras feature a variety of input, output, strobe, and trigger options via a 6-pin external Hirose port. With up to 20 fps and a trigger delay of less than 5 micro seconds, the DMK 23G274 and DFK 23G274 Gigabit Ethernet cameras from The Imaging Source are a low cost, yet highly versatile imaging solution.

Included :

- Camera, CS to C mount adapter and tripod mount
- Drivers compatible to WDM, DirectShow, DirectX®, TWAIN, ActivVisionTools, HALCON, VfW and LabVIEW® for Windows 7/8, Windows Vista, and Windows XP
- IC Capture camera control and aquisition software for Windows 7/8, Windows Vista, and Windows XP (32 and 64 bit versions)
- IC Imaging Control Software Development Kit (SDK) including a .NET component, an ActiveX component, and a C++ class library for Windows

Features :

- Variable trigger (4µs to 1s)
- Digital I/O strobe
- CS with C mount adapter
- Power over Ethernet
- Direct power optional
- Optional external DC driven auto iris controller

Accessories :

- CS to M12 adapters
- C, CS, and M12 lenses
- 12VDC power supply
- 6-pin Hirose break-out cable
- External power and trigger cable

Specification : DMK 23G274 (Monochrome)

GENERAL BEHAVIOR	
Video formats @ Frame rate	1600x1200 Y800 @ 20, 15, 7.5, 3.75 fps 1600x1200 Y16 @ 20, 15, 7.5, 3.75 fps
Sensitivity	0.015 lx
Dynamic range	8 / 12 bit

INTERFACE (OPTICAL)	
IR cut filter	no
Sensor specification	ICX274AL
Type	progressive scan
Format	1/1.8 "
Resolution	H: 1600, V: 1200
Pixel size	H: 4.4 µm, V: 4.4 µm
Lens mount	C/CS

INTERFACE (ELECTRICAL)	
Supply voltage	11 to 13 VDC or 48 to 56 PoE
Current consumption	approx. 400 mA at 12 VDC

INTERFACE (MECHANICAL)	
Dimensions	H: 29 mm, W: 29 mm, L: 57 mm
Mass	65 g

ADJUSTMENTS (MANUAL)	
Shutter	1/100,000 to 30 s
Gain	0 to 36 dB

ADJUSTMENTS (AUTOMATIC)	
Shutter	1/100,000 to 30 s
Gain	0 to 36 dB

ENVIRONMENTAL	
Max. temperature (operation)	-5 °C to 45 °C
Max. temperature (storage)	-20 °C to 60 °C
Max. humidity (operation)	20 % to 80 % non-condensing
Max. humidity (storage)	20 % to 95 % non-condensing

Specification : DFK 23G274 (Color)

GENERAL BEHAVIOR	
Video formats @ Frame rate	1600x1200 RGB32 @ 20, 15, 7.5, 3.75 fps 1600x1200 Y800 @ 20, 15, 7.5, 3.75 fps 1600x1200 Y16 @ 20, 15, 7.5, 3.75 fps
Sensitivity	0.05 lx
Dynamic range	8 / 12 bit

INTERFACE (OPTICAL)	
IR cut filter	yes
Sensor specification	ICX274AQ
Type	progressive scan
Format	1/1.8 "
Resolution	H: 1600, V: 1200
Pixel size	H: 4.4 µm, V: 4.4 µm
Lens mount	C/CS

INTERFACE (ELECTRICAL)	
Supply voltage	11 to 13 VDC or 48 to 56 PoE
Current consumption	approx. 400 mA at 12 VDC

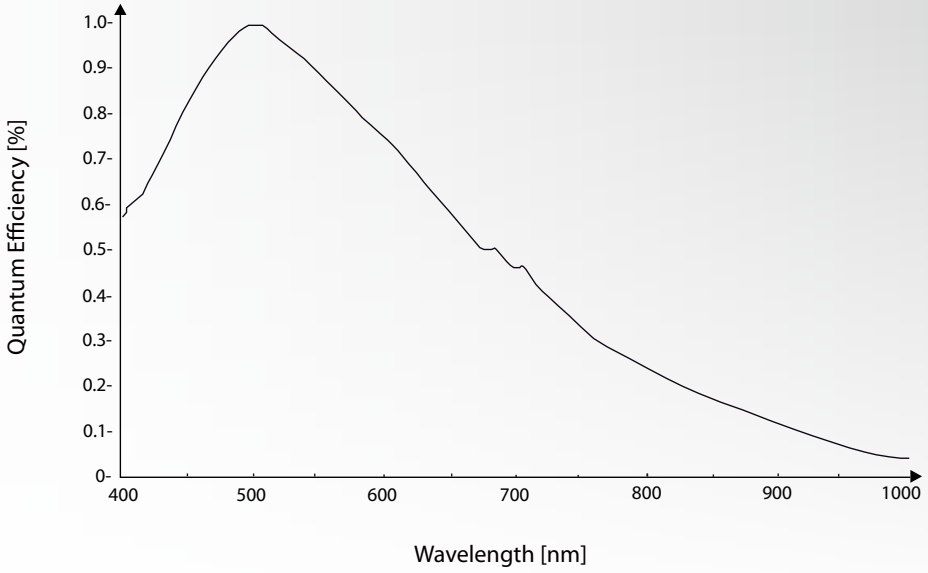
INTERFACE (MECHANICAL)	
Dimensions	H: 29 mm, W: 29 mm, L: 57 mm
Mass	65 g

ADJUSTMENTS (MANUAL)	
Shutter	1/100,000 to 30 s
Gain	0 to 36 dB
White balance	-2 dB to +6 dB

ADJUSTMENTS (AUTOMATIC)	
Shutter	1/100,000 to 30 s
Gain	0 to 36 dB
White balance	-2 dB to +6 dB

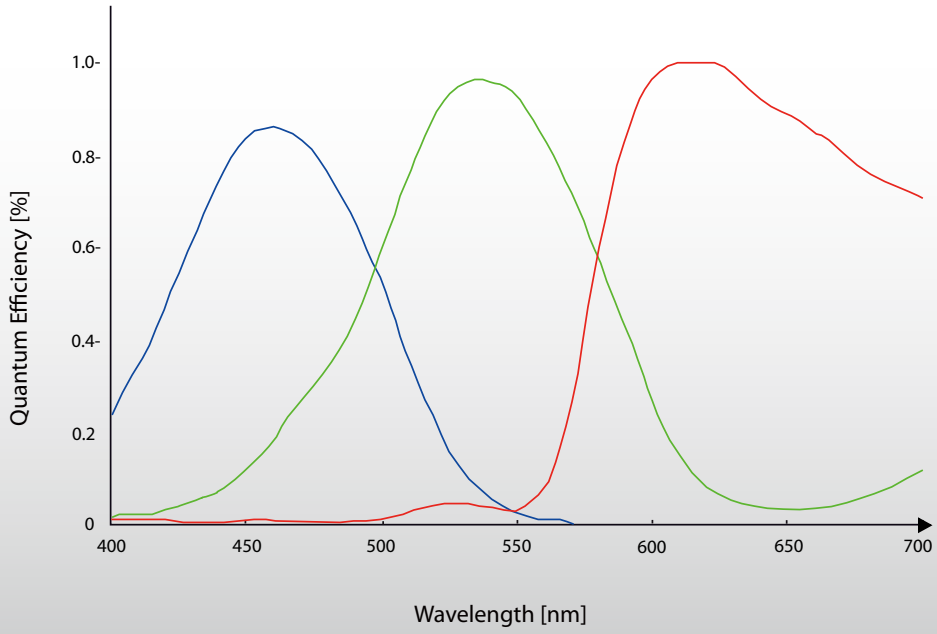
ENVIRONMENTAL	
Max. temperature (operation)	-5 °C to 45 °C
Max. temperature (storage)	-20 °C to 60 °C
Max. humidity (operation)	20 % to 80 % non-condensing
Max. humidity (storage)	20 % to 95 % non-condensing

Monochrome Spectral Response Curve



Sensor: Sony ICX 274AL - courtesy of SONY Deutschland GmbH

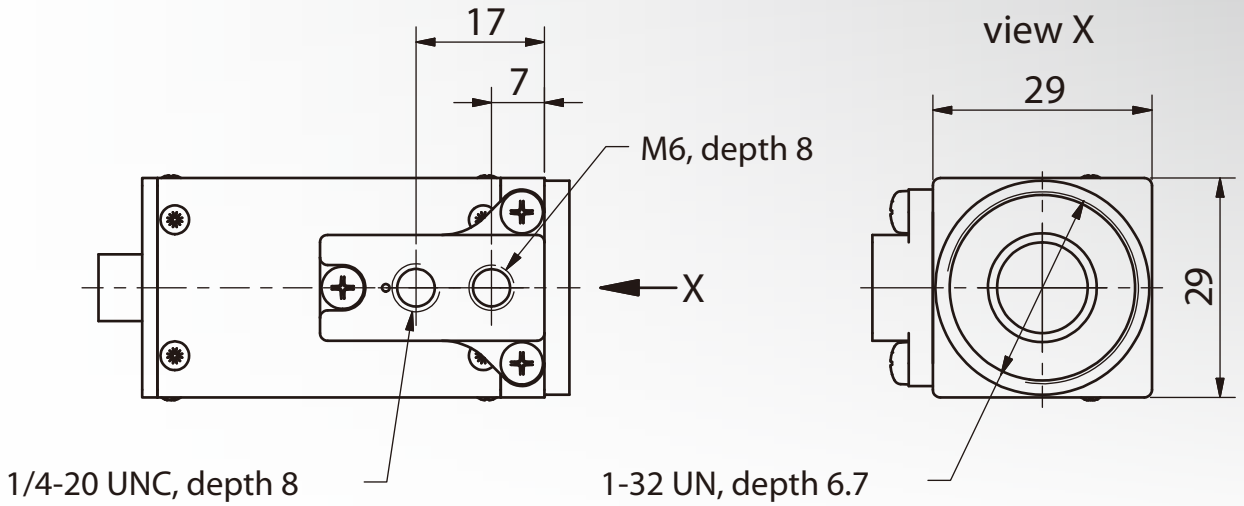
Color Spectral Response Curve

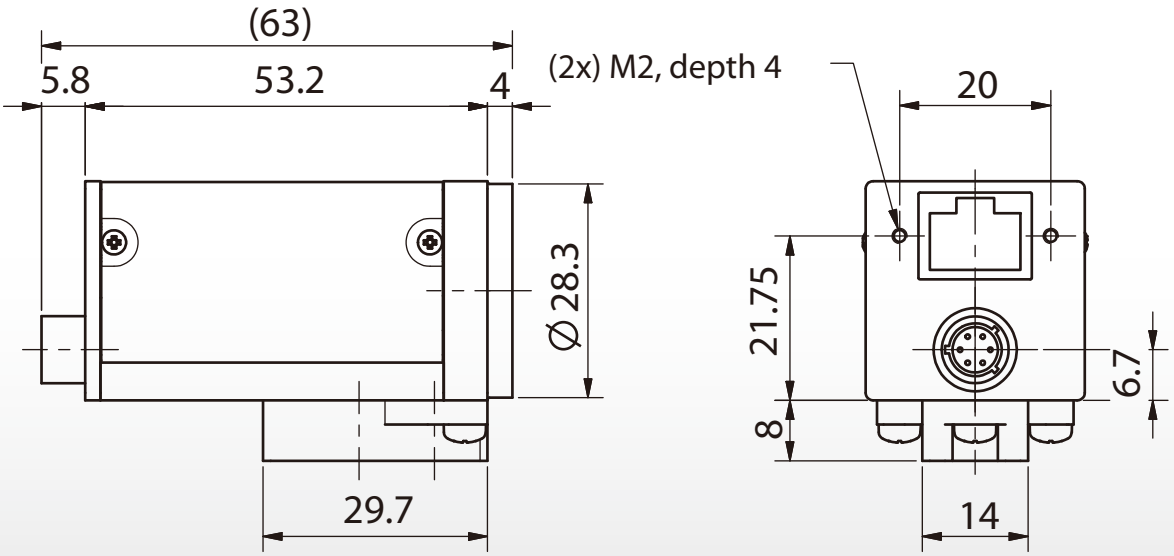


Sensor: Sony ICX 274AQ - courtesy of SONY Deutschland GmbH

DMK 23G274 / DFK 23G274 Dimensional Diagram

(with tripod adapter)

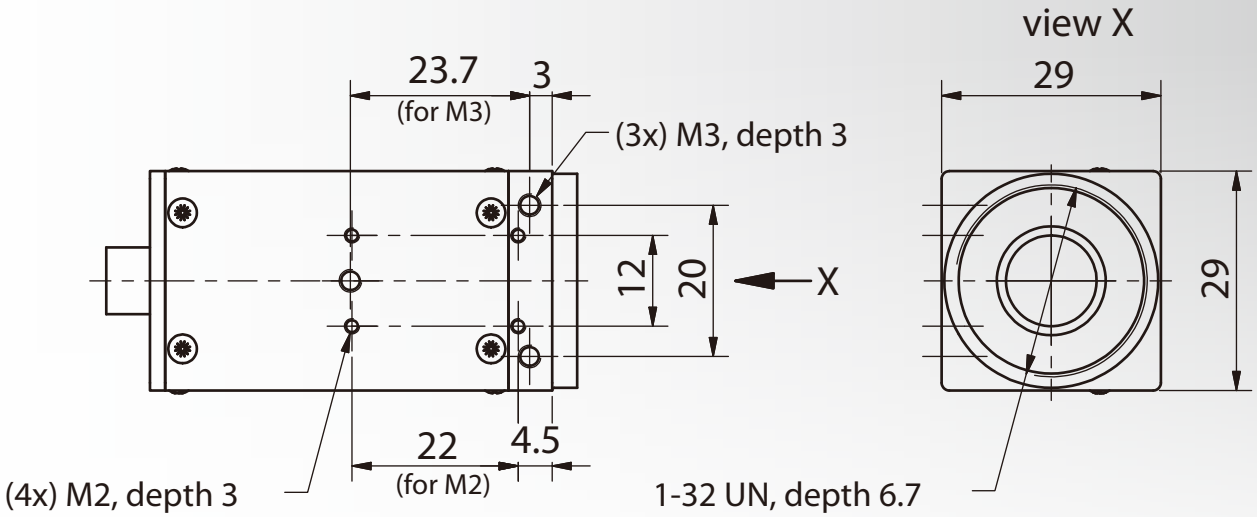


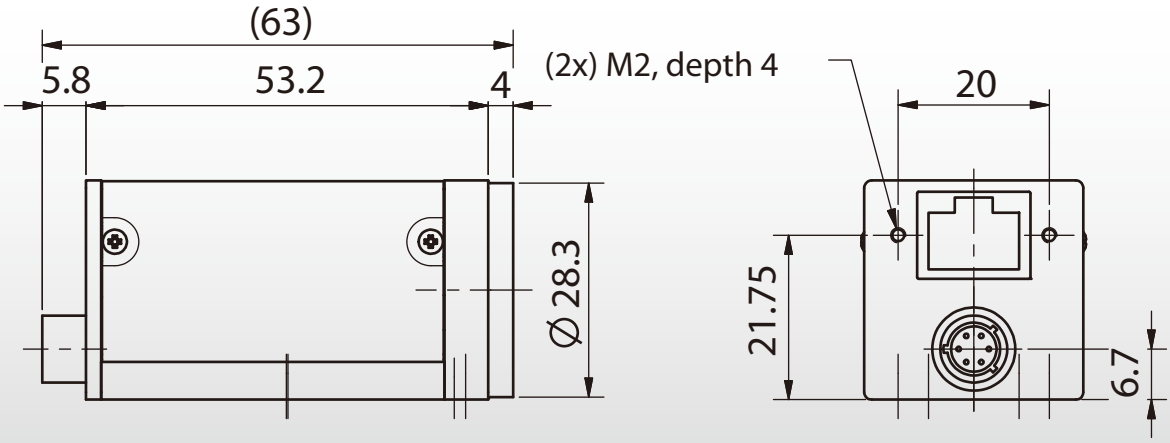


Dimensions: mm
Tolerances: DIN ISO 2768m

DMK 23G274 / DFK 23G274 Dimensional Diagram

(without tripod adapter)





Dimensions: mm
Tolerances: DIN ISO 2768m

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The Imaging Source "23" Series GigE Camera

DMK 23GP031 / DFK 23GP031

The Imaging Source DMK 23GP031 (monochrome) and DFK 23GP031 (color) Gigabit Ethernet cameras are the perfect solution for many industrial automation, quality assurance, security, surveillance, and medical applications. Utilizing the very sensitive Aptina 5 Megapixel MT9P031 monochrome and color rolling shutter CMOS sensors, these cameras feature a variety of input, output, strobe, and trigger options via an external 6-pin Hirose port. With up to 15 fps and a trigger delay of less than 5 micro seconds, the DMK 23GP031 and DFK 23GP031 Gigabit Ethernet cameras from The Imaging Source are a very low cost, yet highly versatile imaging solution.

Included :

- Camera, CS to C mount adapter and tripod mount
- Drivers compatible to WDM, DirectShow, DirectX®, TWAIN, ActivVisionTools, HALCON, VfW and LabVIEW® for Windows 7/8, Windows Vista, and Windows XP
- IC Capture camera control and aquisition software for Windows 7/8, Windows Vista, and Windows XP (32 and 64 bit versions)
- IC Imaging Control Software Development Kit (SDK) including a .NET component, an ActiveX component, and a C++ class library for Windows

Features :

- Variable trigger (4µs to 1s)
- Digital I/O strobe
- CS with C mount adapter
- Binning and ROI (CMOS only)
- Power over Ethernet
- Direct power optional
- Optional external DC driven auto iris controller

Accessories :

- CS to M12 adapters
- C, CS, and M12 lenses
- 12VDC power supply
- CAT 6A Cable
- 6-pin Hirose break-out cable
- External power and trigger cable

Specification : DMK 23GP031 (Monochrome)

GENERAL BEHAVIOR	
Video formats @ Frame rate	2592x1944 Y800 @ 15, 7.5, 3.75 fps 2592x1944 Y16 @ 15, 7.5, 3.75 fps
Sensitivity	0.015 lx
Dynamic range	8 / 12 bit

INTERFACE (OPTICAL)	
IR cut filter	no
Sensor specification	MT9P031
Shutter	Rolling
Format	1/2.5 "
Resolution	H: 2592, V: 1944
Pixel size	H: 2.2 µm, V: 2.2 µm
Lens mount	C/CS

INTERFACE (ELECTRICAL)	
Supply voltage	11 to 13 VDC or 48 to 56 PoE
Current consumption	approx. 400 mA at 12 VDC

INTERFACE (MECHANICAL)	
Dimensions	H: 29 mm, W: 29 mm, L: 57 mm
Mass	65 g

ADJUSTMENTS (MANUAL)	
Shutter	1/100,000 to 30 s
Gain	0 to 36 dB

ADJUSTMENTS (AUTOMATIC)	
Shutter	1/100,000 to 30 s
Gain	0 to 36 dB

ENVIRONMENTAL	
Max. temperature (operation)	-5 °C to 45 °C
Max. temperature (storage)	-20 °C to 60 °C
Max. humidity (operation)	20 % to 80 % non-condensing
Max. humidity (storage)	20 % to 95 % non-condensing

Specification : DFK 23GP031 (Color)

GENERAL BEHAVIOR	
Video formats @ Frame rate	2592x1944 RGB32 @ 15, 7.5, 3.75 fps 2592x1944 Y800 @ 15, 7.5, 3.75 fps 2592x1944 Y16 @ 15, 7.5, 3.75 fps
Sensitivity	0.05 lx
Dynamic range	8 / 12 bit

INTERFACE (OPTICAL)	
IR cut filter	yes
Sensor specification	MT9P031
Shutter	Rolling
Format	1/2.5 "
Resolution	H: 2592, V: 1944
Pixel size	H: 2.2 µm, V: 2.2 µm
Lens mount	C/CS

INTERFACE (ELECTRICAL)	
Supply voltage	11 to 13 VDC or 48 to 56 PoE
Current consumption	approx. 400 mA at 12 VDC

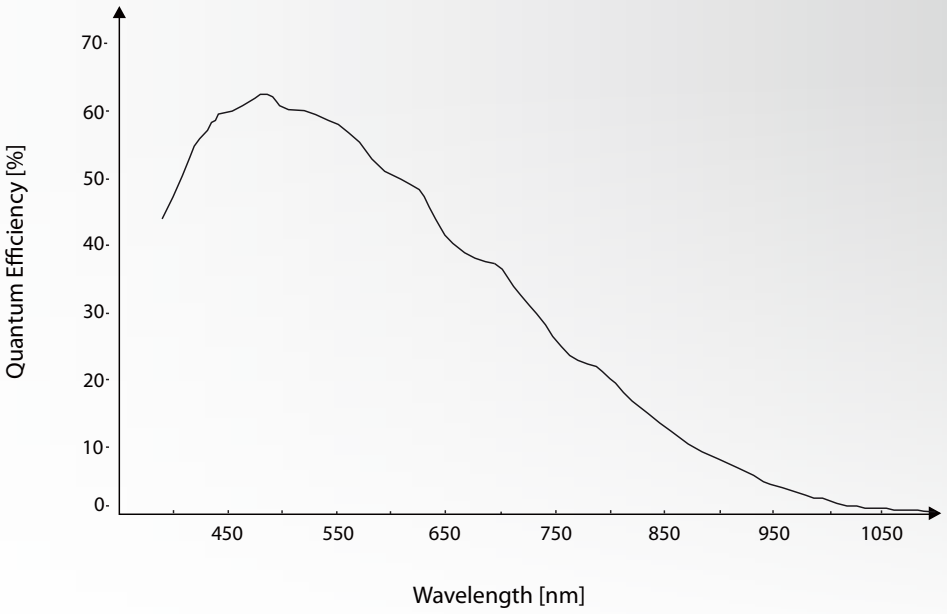
INTERFACE (MECHANICAL)	
Dimensions	H: 29 mm, W: 29 mm, L: 57 mm
Mass	65 g

ADJUSTMENTS (MANUAL)	
Shutter	1/100,000 to 30 s
Gain	0 to 36 dB
White balance	-2 dB to +6 dB

ADJUSTMENTS (AUTOMATIC)	
Shutter	1/100,000 to 30 s
Gain	0 to 36 dB
White balance	-2 dB to +6 dB

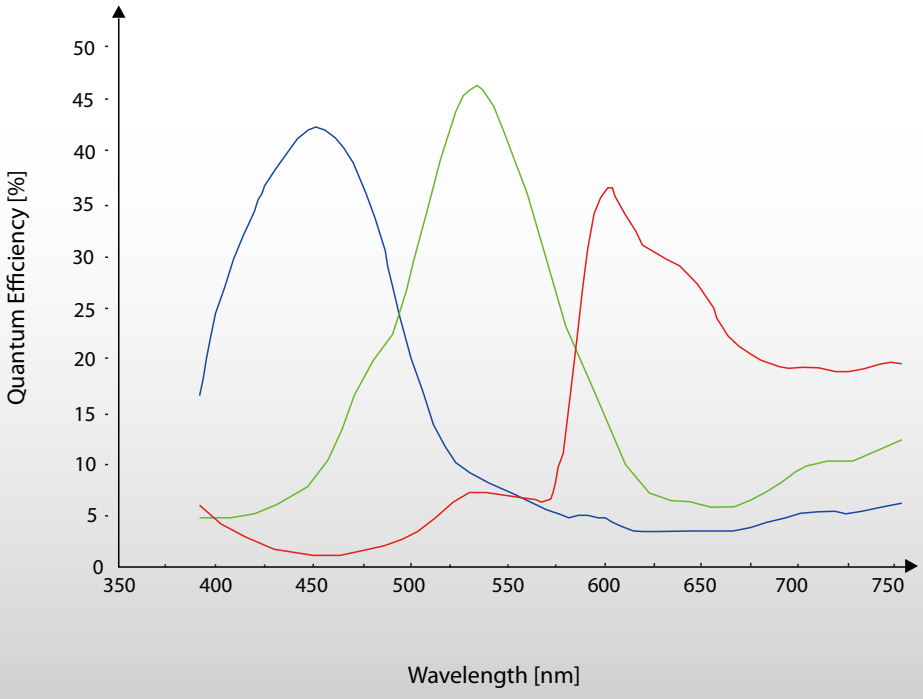
ENVIRONMENTAL	
Max. temperature (operation)	-5 °C to 45 °C
Max. temperature (storage)	-20 °C to 60 °C
Max. humidity (operation)	20 % to 80 % non-condensing
Max. humidity (storage)	20 % to 95 % non-condensing

Monochrome Spectral Response Curve



Sensor: Micron MT9P031 M - courtesy of Aptina Deutschland GmbH

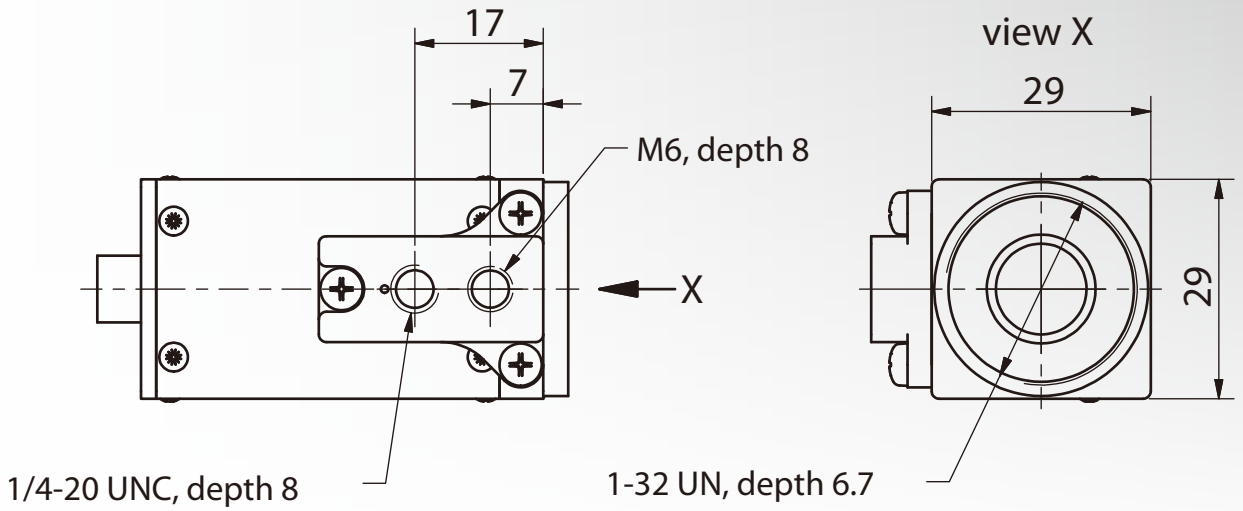
Color Spectral Response Curve

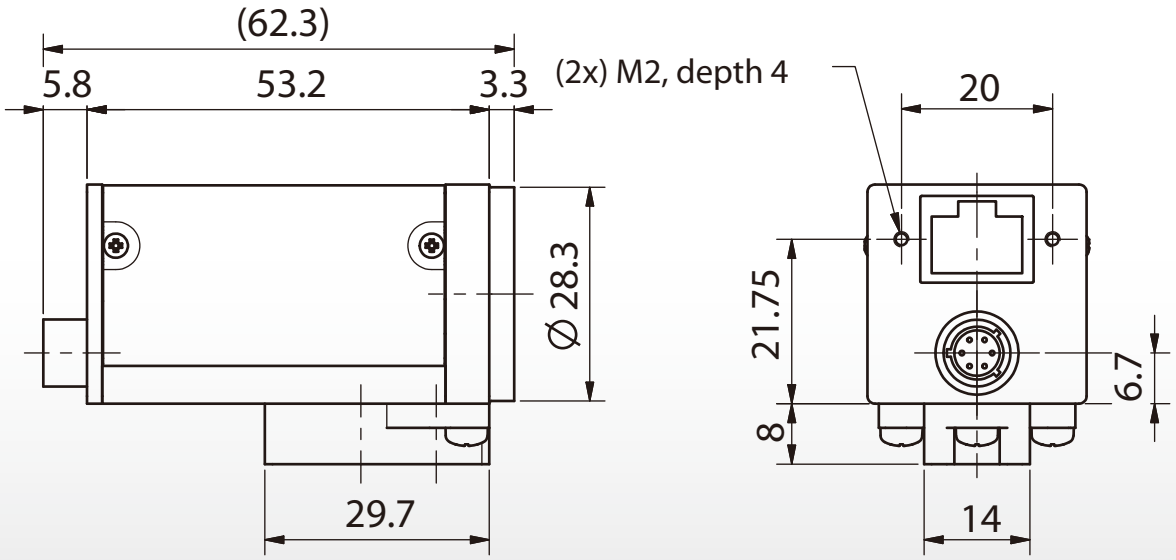


Sensor: Micron MT9P031 C - courtesy of Aptina Deutschland GmbH

DMK 23GP031 / DFK 23GP031 Dimensional Diagram

(with tripod adapter)

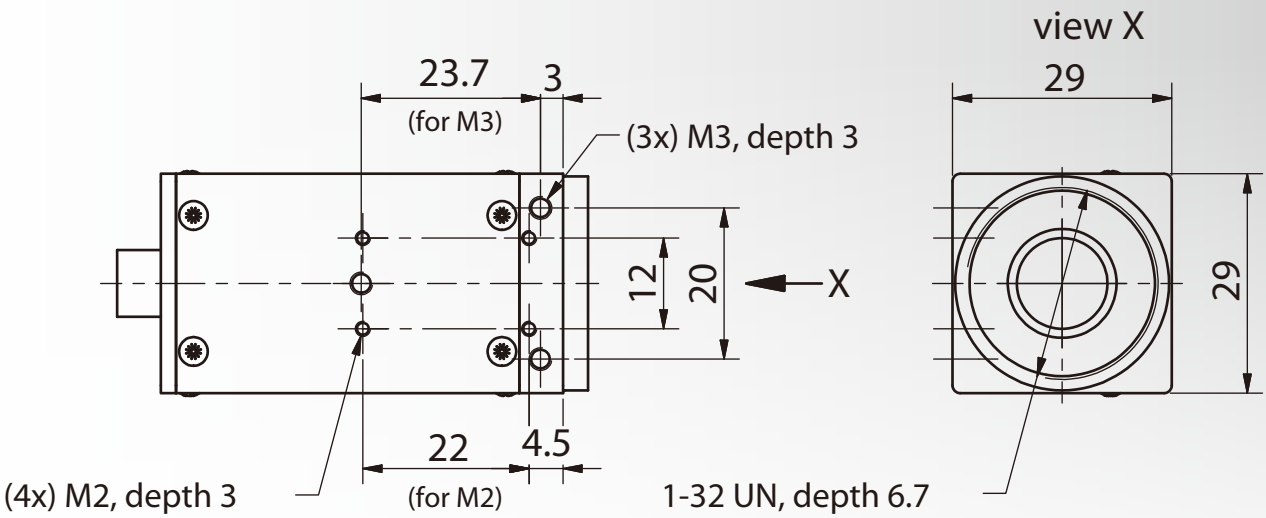


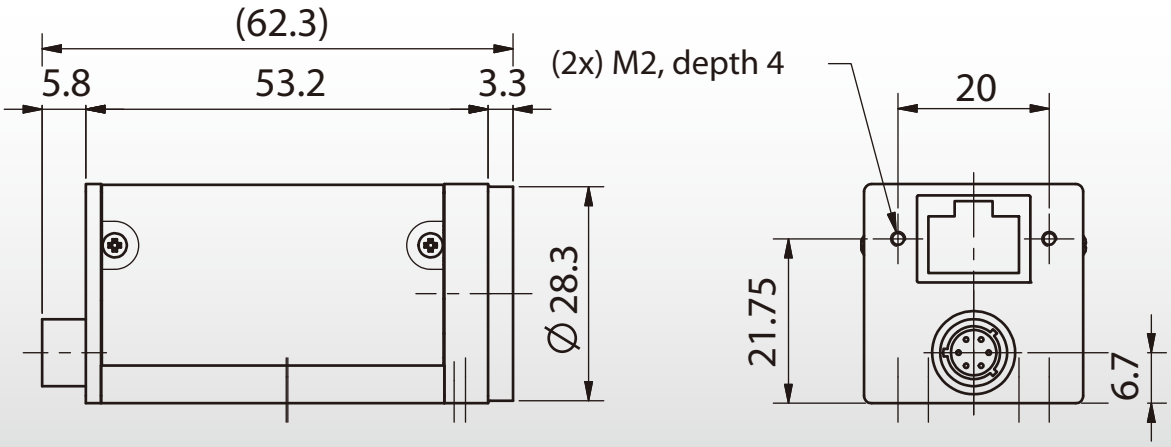


Dimensions: mm
Tolerances: DIN ISO 2768m

DMK 23GP031 / DFK 23GP031 Dimensional Diagram

(without tripod adapter)





Dimensions: mm
Tolerances: DIN ISO 2768m

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All weights and dimensions are approximate. Unless otherwise specified the lenses shown in the context of cameras are not shipped with these cameras.

The Imaging Source "USB 3.0" Series Cameras

- Dimensions 29 x 29 x 47 mm
- Wide range of CCD and CMOS sensors
- Very attractive pricing

Model	Resolution	Megapixel	Pixel Size	Frame Rate	Sensor	Sensor Size	A/D
DMK 23U618	640 x 480	0.3	5.6 µm	120 fps	Sony ICX618ALA	1/4" CCD	8/12 bit
DFK 23U618	640 x 480	0.3	5.6 µm	120 fps	Sony ICX618AQA	1/4" CCD	8/12 bit
DMK 23UV024	752 x 480	0.3	6 µm	100 fps	Aptina MT9V024	1/3" CMOS	8/12 bit
DFK 23UV024	752 x 480	0.3	6 µm	100 fps	Aptina MT9V024	1/3" CMOS	8/12 bit
DMK 23UM021	1280 x 960	1.2	3.75 µm	60 fps	Aptina MT9M021	1/3" CMOS	8/12 bit
DFK 23UM021	1280 x 960	1.2	3.75 µm	60 fps	Aptina MT9M021	1/3" CMOS	8/12 bit
DMK 23U445	1280 x 960	1.2	3.75 µm	30 fps	Sony ICX445ALA	1/3" CCD	8/12 bit
DFK 23U445	1280 x 960	1.2	3.75 µm	30 fps	Sony ICX445AQA	1/3" CCD	8/12 bit
DMK 23U274	1600 x 1200	2	4.4 µm	20 fps	Sony ICX274AL	1/1.8" CCD	8/12 bit
DFK 23U274	1600 x 1200	2	4.4 µm	20 fps	Sony ICX274AQ	1/1.8" CCD	8/12 bit
DMK 23UP031	2592 x 1944	5	2.2 µm	15 fps	Aptina MT9P031	1/2.5" CMOS	8/12 bit
DFK 23UP031	2592 x 1944	5	2.2 µm	15 fps	Aptina MT9P031	1/2.5" CMOS	8/12 bit

The Imaging Source "USB 3.0" series cameras are the perfect solution for many industrial automation, quality assurance, security, surveillance, and medical applications. Utilizing monochrome and color CCD and CMOS sensors up to 5 Megapixel, these cameras feature a variety of input, output, strobe, and trigger options via an external Hirose port. With up to 120 fps and a trigger delay of less than 5 micro seconds, the "USB 3.0" camera series from The Imaging Source is a low cost, yet highly versatile imaging solution.

Included :

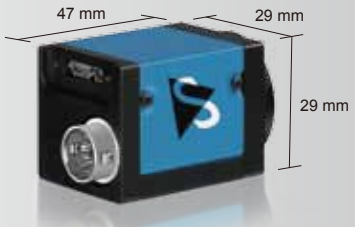
- Camera, CS to C mount adapter and tripod mount
- Drivers compatible to WDM, DirectShow, DirectX®, TWAIN, ActivVisionTools, HALCON, VfW and LabVIEW® for Windows 7/8, Windows Vista, and Windows XP
- IC Capture camera control and aquisition software for Windows 7/8, Windows Vista, and Windows XP (32 and 64 bit versions)
- IC Imaging Control Software Development Kit (SDK) including a .NET component, an ActiveX component, and a C++ class library for Windows

Features :

- Variable trigger (4µs to 1 s)
- Digital I/O strobe
- CS with C mount adapter
- Binning and ROI (CMOS only)
- Optional external DC driven auto iris controller

Accessories :

- CS to M12 adapters
- C, CS, and M12 lenses
- 6-pin Hirose trigger cable



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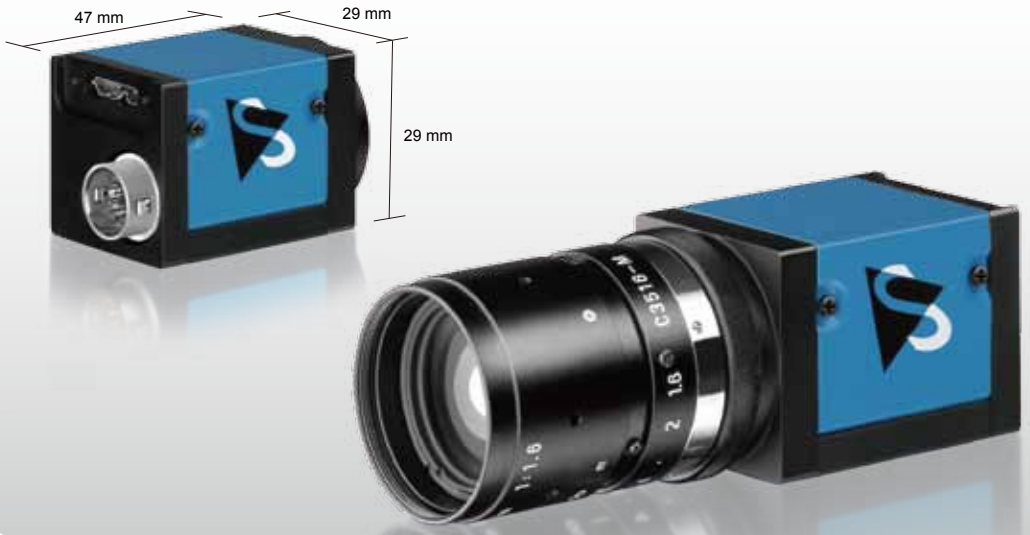
THE IMAGINGSOURCE
TECHNOLOGY BASED ON STANDARDS

The Imaging Source “USB 3.0” Series Cameras

DMK 23U618 / DFK 23U618



The Imaging Source DMK 23U618 (monochrome) and DFK 23U618 (color) USB 3.0 cameras are the perfect solution for many industrial automation, quality assurance, security, surveillance, and medical applications. Utilizing the very sensitive SONY Ex View HAD ICX 618ALA/AQA monochrome and color CCD sensors, these cameras feature a variety of input, output, strobe, and trigger options via an external 6-pin Hirose port. With up to 120 fps and a trigger delay of less than 5 micro seconds, the DMK 23U618 and DFK 23U618 USB 3.0 cameras from The Imaging Source are a low cost, yet highly versatile imaging solution.

Included :

- Camera, CS to C mount adapter and tripod mount
- Drivers compatible to WDM, DirectShow, DirectX®, TWAIN, ActivVisionTools, HALCON, VfW and LabVIEW® for Windows 7/8, Windows Vista, and Windows XP
- IC Capture camera control and aquisition software for Windows 7/8, Windows Vista, and Windows XP (32 and 64 bit versions)
- IC Imaging Control Software Development Kit (SDK) including a .NET component, an ActiveX component, and a C++ class library for Windows

Features :

- Variable trigger (4µs to 1 s)
- Digital I/O strobe
- CS with C mount adapter
- Optional external DC driven auto iris controller

Accessories :

- CS to M12 adapters
- C, CS, and M12 lenses
- 6-pin Hirose trigger cable

Specification : DMK 23U618 (Monochrome)

GENERAL BEHAVIOR	
Video formats @ Frame rate	640x480 Y800 @ 120, 90, 60, 30, 15, 7.5, 3.75 fps 640x480 Y16 @ 120, 90, 60, 30, 15, 7.5, 3.75 fps
Sensitivity	0.015 lx
Dynamic range	8 / 12 bit

INTERFACE (OPTICAL)	
IR cut filter	no
Sensor specification	ICX618ALA
Type	progressive scan
Format	1/4 "
Resolution	H: 640, V: 480
Pixel size	H: 5.6 µm, V: 5.6 µm
Lens mount	C/CS

INTERFACE (ELECTRICAL)	
Supply voltage	4.5 to 5.5 VDC
Current consumption	approx. 500 mA at 5 VDC

INTERFACE (MECHANICAL)	
Dimensions	H: 29 mm, W: 29 mm, L: 47 mm
Mass	65 g

ADJUSTMENTS (MANUAL)	
Shutter	1/100,000 to 30 s
Gain	0 to 36 dB

ADJUSTMENTS (AUTOMATIC)	
Shutter	1/100,000 to 30 s
Gain	0 to 36 dB

ENVIRONMENTAL	
Max. temperature (operation)	-5 °C to 45 °C
Max. temperature (storage)	-20 °C to 60 °C
Max. humidity (operation)	20 % to 80 % non-condensing
Max. humidity (storage)	20 % to 95 % non-condensing

Specification : DFK 23U618 (Color)

GENERAL BEHAVIOR	
Video formats @ Frame rate	640x480 RGB32 @ 120, 90, 60, 30, 15, 7.5, 3.75 fps 640x480 Y800 @ 120, 90, 60, 30, 15, 7.5, 3.75 fps 640x480 Y16 @ 120, 90, 60, 30, 15, 7.5, 3.75 fps
Sensitivity	0.05 lx
Dynamic range	8 / 12 bit

INTERFACE (OPTICAL)	
IR cut filter	yes
Sensor specification	ICX618AQA
Type	progressive scan
Format	1/4 "
Resolution	H: 640, V: 480
Pixel size	H: 5.6 µm, V: 5.6 µm
Lens mount	C/CS

INTERFACE (ELECTRICAL)	
Supply voltage	4.5 to 5.5 VDC
Current consumption	approx. 500 mA at 5 VDC

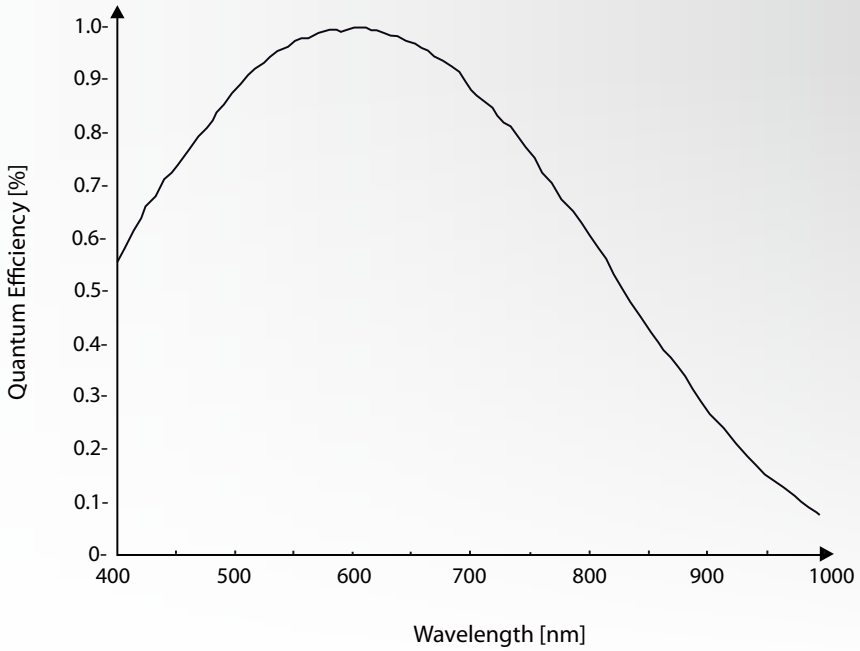
INTERFACE (MECHANICAL)	
Dimensions	H: 29 mm, W: 29 mm, L: 47 mm
Mass	65 g

ADJUSTMENTS (MANUAL)	
Shutter	1/100,000 to 30 s
Gain	0 to 36 dB
White balance	-2 dB to +6 dB

ADJUSTMENTS (AUTOMATIC)	
Shutter	1/100,000 to 30 s
Gain	0 to 36 dB
White balance	-2 dB to +6 dB

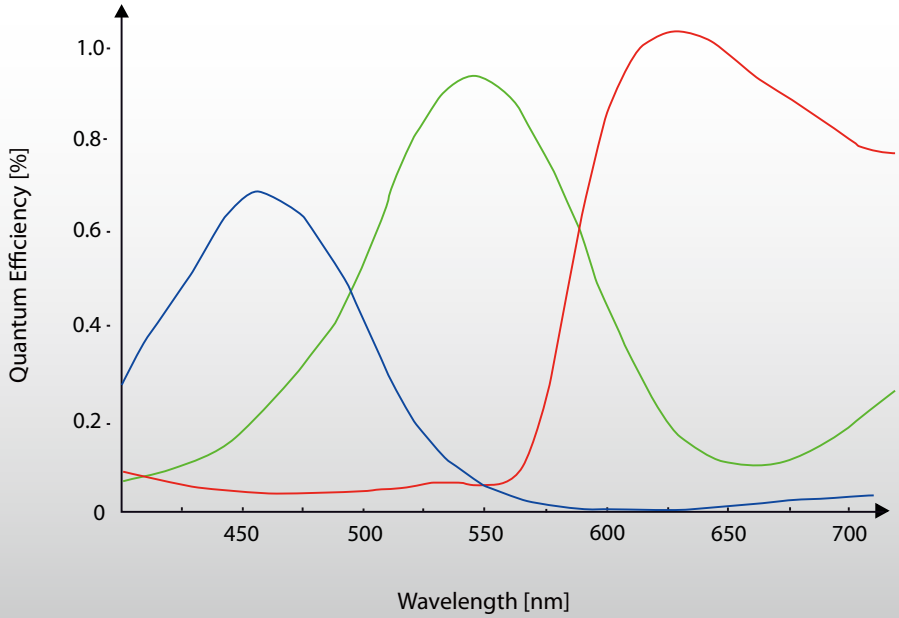
ENVIRONMENTAL	
Max. temperature (operation)	-5 °C to 45 °C
Max. temperature (storage)	-20 °C to 60 °C
Max. humidity (operation)	20 % to 80 % non-condensing
Max. humidity (storage)	20 % to 95 % non-condensing

Monochrome Spectral Response Curve



Sensor: Sony ICX 618 ALA - courtesy of SONY Deutschland GmbH

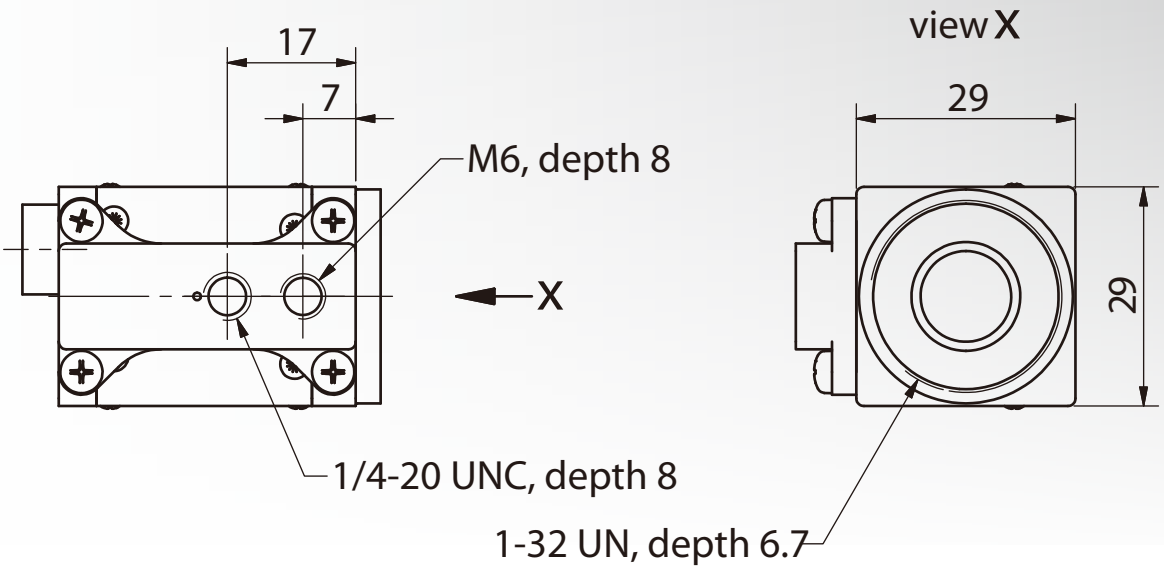
Color Spectral Response Curve

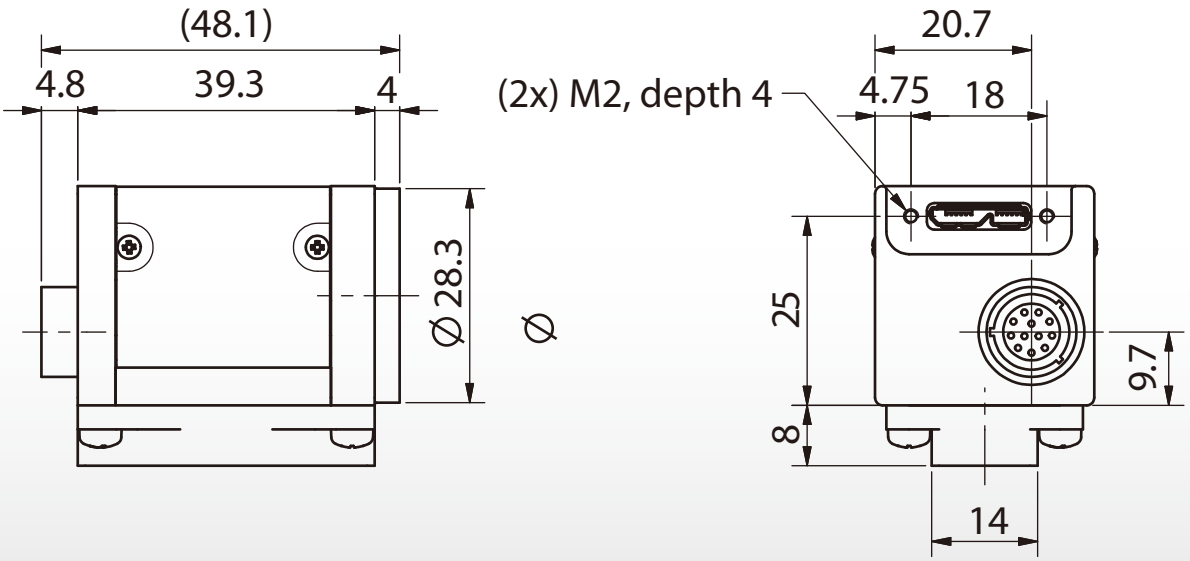


Sensor: Sony ICX 618 AQA - courtesy of SONY Deutschland GmbH

DMK 23U618 / DFK 23U618 Dimensional Diagram

(with tripod adapter)

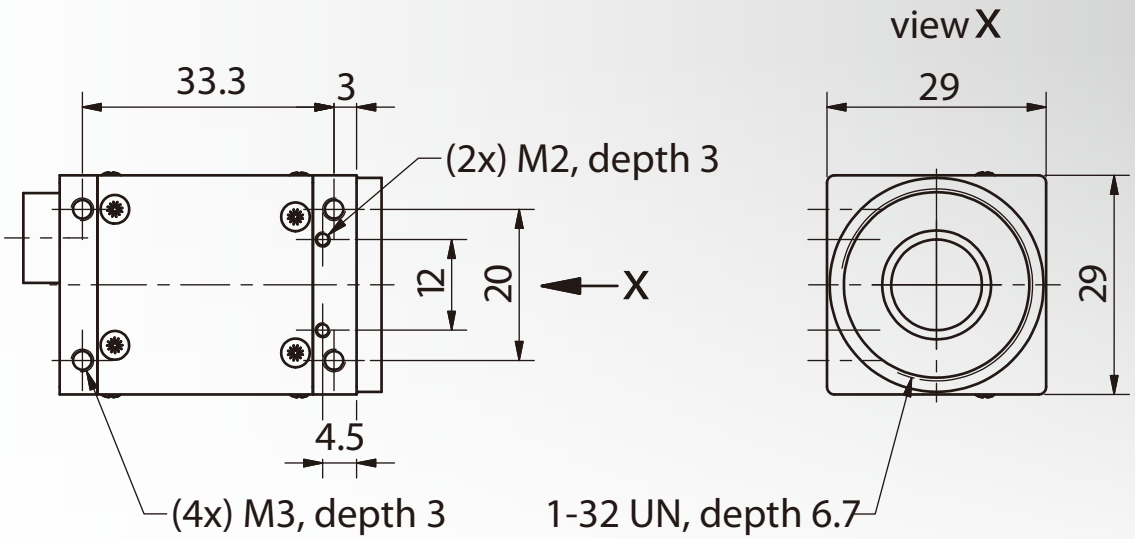


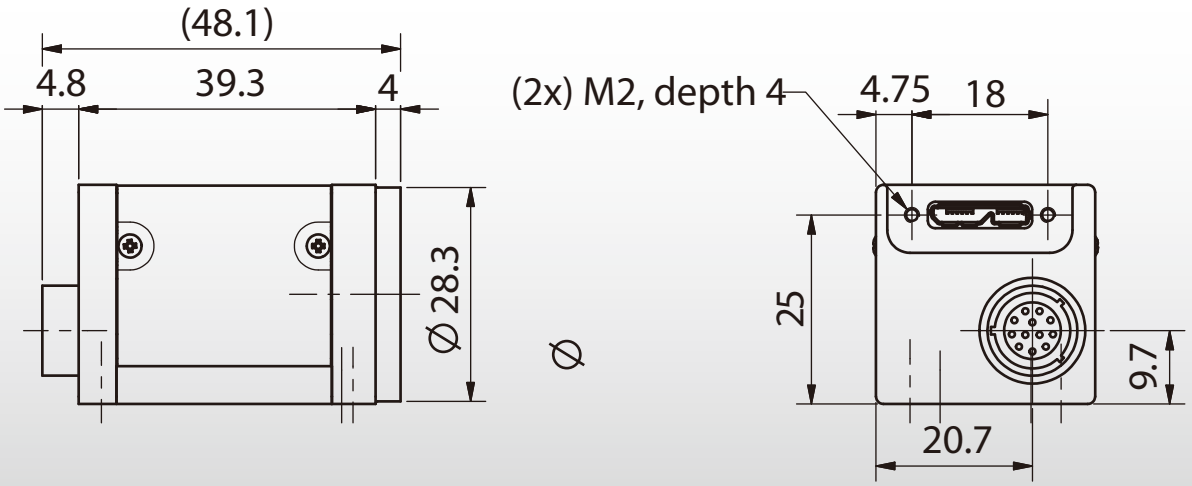


Dimensions: mm
Tolerances: DIN ISO 2768m

DMK 23U618 / DFK 23U618 Dimensional Diagram

(without tripod adapter)





Dimensions: mm
Tolerances: DIN ISO 2768m

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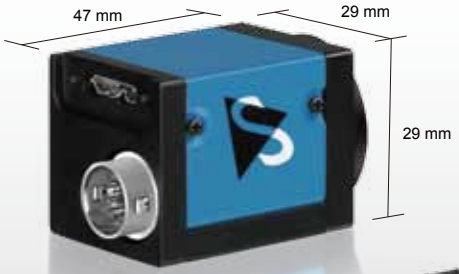
The Imaging Source "USB 3.0" Series Cameras

DMK 23UV024 / DFK 23UV024



The Imaging Source DMK 23UV024 (monochrome) and DFK 23UV024 (color) USB 3.0 cameras are the perfect solution for many industrial automation, quality assurance, security, surveillance, and medical applications. Utilizing the very sensitive Aptina WVGA MT9V024 monochrome and color global shutter CMOS sensors, these cameras feature a variety of input, output, strobe, and trigger options via an external 6-pin Hirose port. With up to 100 fps and a trigger delay of less than 5 micro seconds, the DMK 23UV024 and DFK 23UV024 USB 3.0 cameras from The Imaging Source are a very low cost, yet highly versatile imaging solution.

Included :

- Camera, CS to C mount adapter and tripod mount
- Drivers compatible to WDM, DirectShow, DirectX®, TWAIN, ActivVisionTools, HALCON, VfW and LabVIEW® for Windows 7/8, Windows Vista, and Windows XP
- IC Capture camera control and aquisition software for Windows 7/8, Windows Vista, and Windows XP (32 and 64 bit versions)
- IC Imaging Control Software Development Kit (SDK) including a .NET component, an ActiveX component, and a C++ class library for Windows

Features :

- Variable trigger (4µs to 1s)
- Digital I/O strobe
- CS with C mount adapter
- Binning and ROI (CMOS only)
- Optional external DC driven auto iris controller

Accessories :

- CS to M12 adapters
- C, CS, and M12 lenses
- 6-pin Hirose trigger cable

Specification : DMK 23UV024 (Monochrome)

GENERAL BEHAVIOR	
Video formats @ Frame rate	752x480 Y800 @ 60, 30, 15, 7.5, 3.75 fps 752x480 Y16 @ 60, 30, 15, 7.5, 3.75 fps
Sensitivity	0.015 lx
Dynamic range	8 / 12 bit

INTERFACE (OPTICAL)	
IR cut filter	no
Sensor specification	MT9V024
Shutter	Global
Format	1/3 "
Resolution	H: 752, V: 480
Pixel size	H: 6.0 µm, V: 6.0 µm
Lens mount	C/CS

INTERFACE (ELECTRICAL)	
Supply voltage	4.5 to 5.5 VDC
Current consumption	approx. 500 mA at 5 VDC

INTERFACE (MECHANICAL)	
Dimensions	H: 29 mm, W: 29 mm, L: 47 mm
Mass	65 g

ADJUSTMENTS (MANUAL)	
Shutter	1/100,000 to 30 s
Gain	0 to 36 dB

ADJUSTMENTS (AUTOMATIC)	
Shutter	1/100,000 to 30 s
Gain	0 to 36 dB

ENVIRONMENTAL	
Max. temperature (operation)	-5 °C to 45 °C
Max. temperature (storage)	-20 °C to 60 °C
Max. humidity (operation)	20 % to 80 % non-condensing
Max. humidity (storage)	20 % to 95 % non-condensing

Specification : DFK 23UV024 (Color)

GENERAL BEHAVIOR	
Video formats @ Frame rate	752x480 RGB32 @ 60, 30, 15, 7.5, 3.75 fps 752x480 Y800 @ 60, 30, 15, 7.5, 3.75 fps 752x480 Y16 @ 60, 30, 15, 7.5, 3.75 fps
Sensitivity	0.05 lx
Dynamic range	8 / 12 bit

INTERFACE (OPTICAL)	
IR cut filter	yes
Sensor specification	MT9V024
Shutter	Global
Format	1/3 "
Resolution	H: 752, V: 480
Pixel size	H: 6.0 µm, V: 6.0 µm
Lens mount	C/CS

INTERFACE (ELECTRICAL)	
Supply voltage	4.5 to 5.5 VDC
Current consumption	approx. 500 mA at 5 VDC

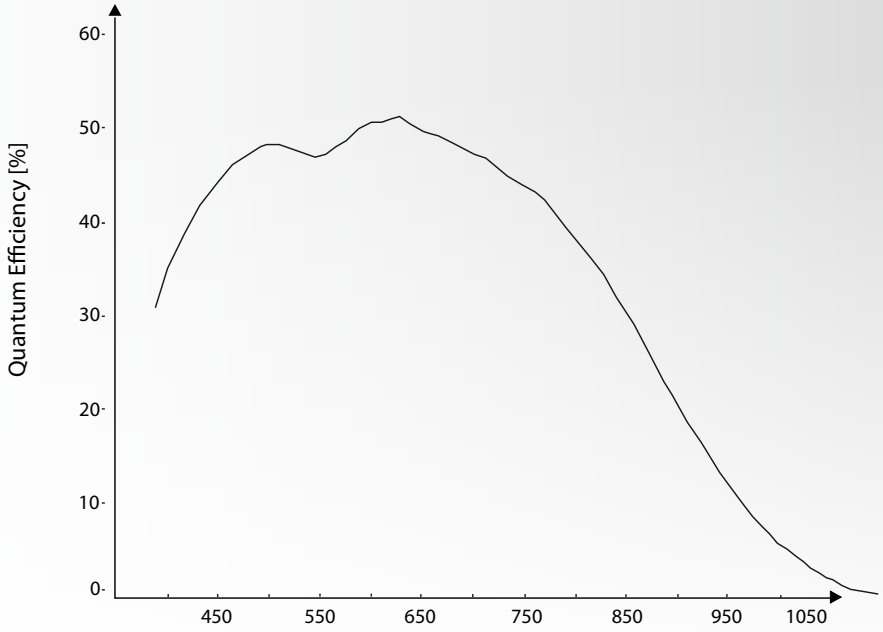
INTERFACE (MECHANICAL)	
Dimensions	H: 29 mm, W: 29 mm, L: 47 mm
Mass	65 g

ADJUSTMENTS (MANUAL)	
Shutter	1/100,000 to 30 s
Gain	0 to 36 dB
White balance	-2 dB to +6 dB

ADJUSTMENTS (AUTOMATIC)	
Shutter	1/100,000 to 30 s
Gain	0 to 36 dB
White balance	-2 dB to +6 dB

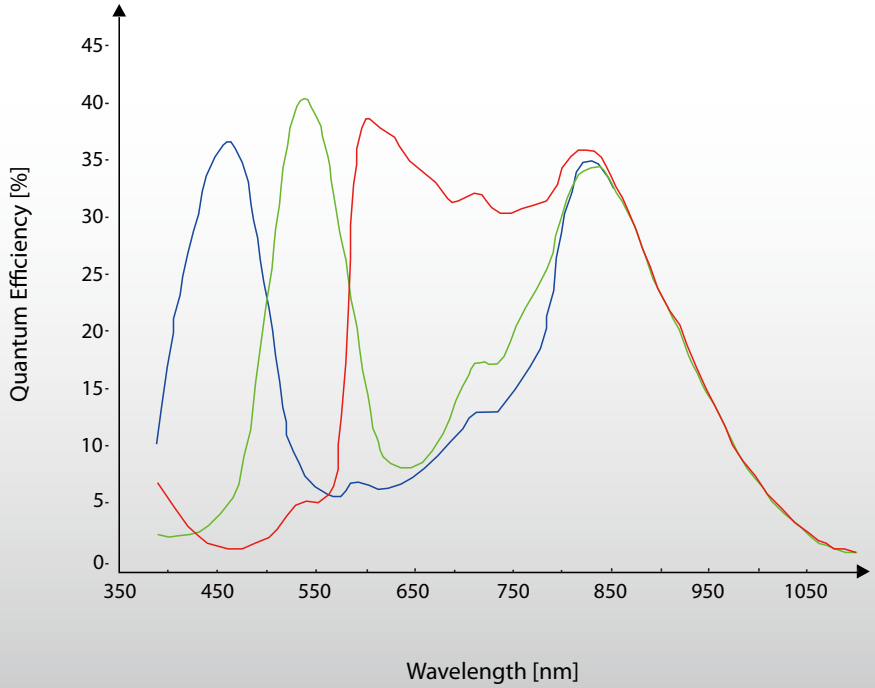
ENVIRONMENTAL	
Max. temperature (operation)	-5 °C to 45 °C
Max. temperature (storage)	-20 °C to 60 °C
Max. humidity (operation)	20 % to 80 % non-condensing
Max. humidity (storage)	20 % to 95 % non-condensing

Monochrome Spectral Response Curve



Sensor: Micron MT9V024 M - courtesy of Aptina Deutschland GmbH

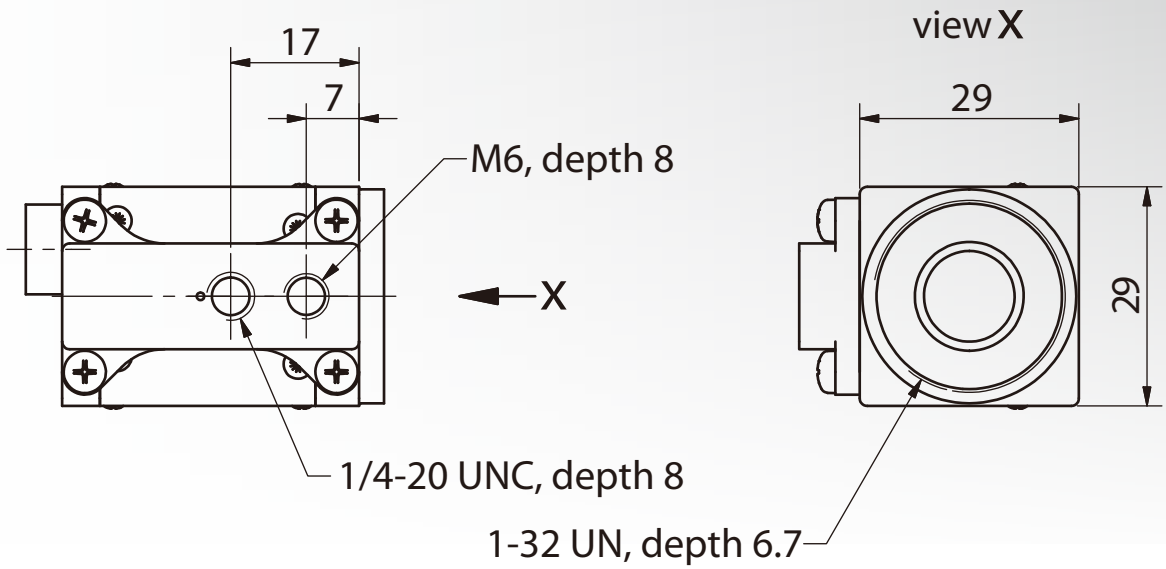
Color Spectral Response Curve

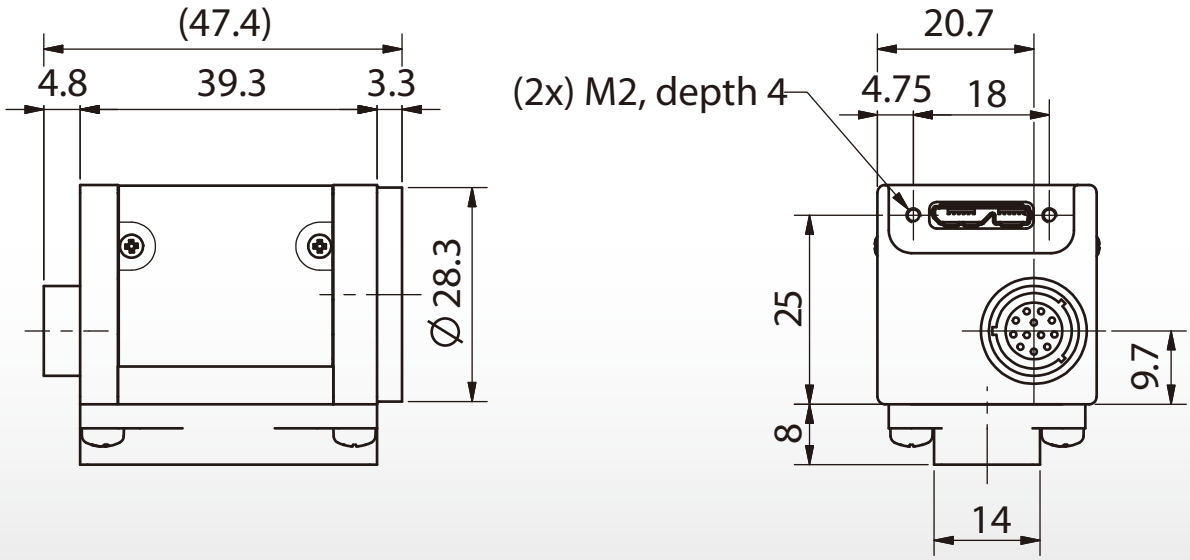


Sensor: Micron MT9V024 C - courtesy of Aptina Deutschland GmbH

DMK 23UV024 / DFK 23UV024 Dimensional Diagram

(with tripod adapter)

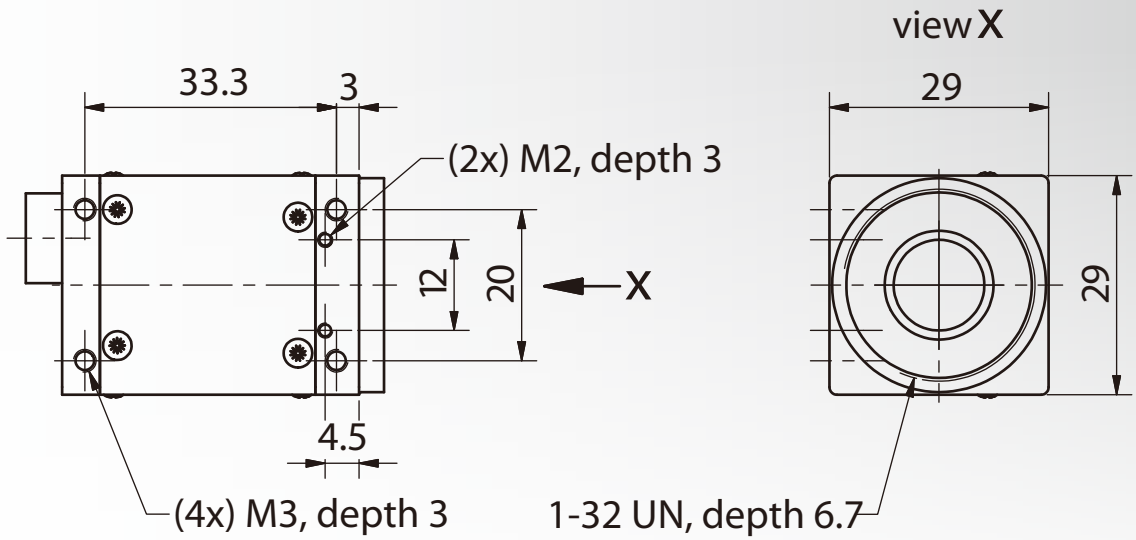


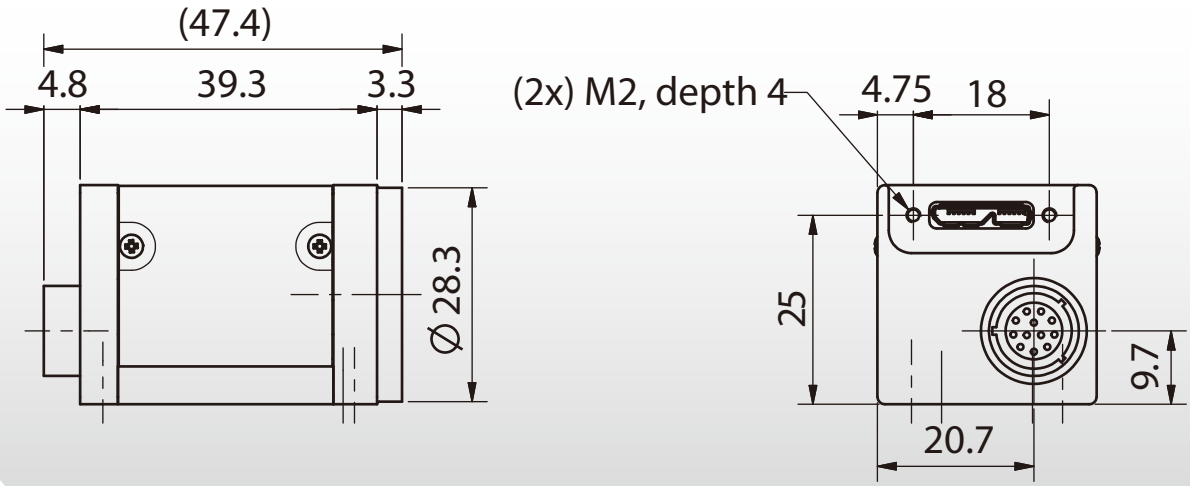


Dimensions: mm
Tolerances: DIN ISO 2768m

DMK 23UV024 / DFK 23UV024 Dimensional Diagram

(without tripod adapter)





Dimensions: mm
Tolerances: DIN ISO 2768m

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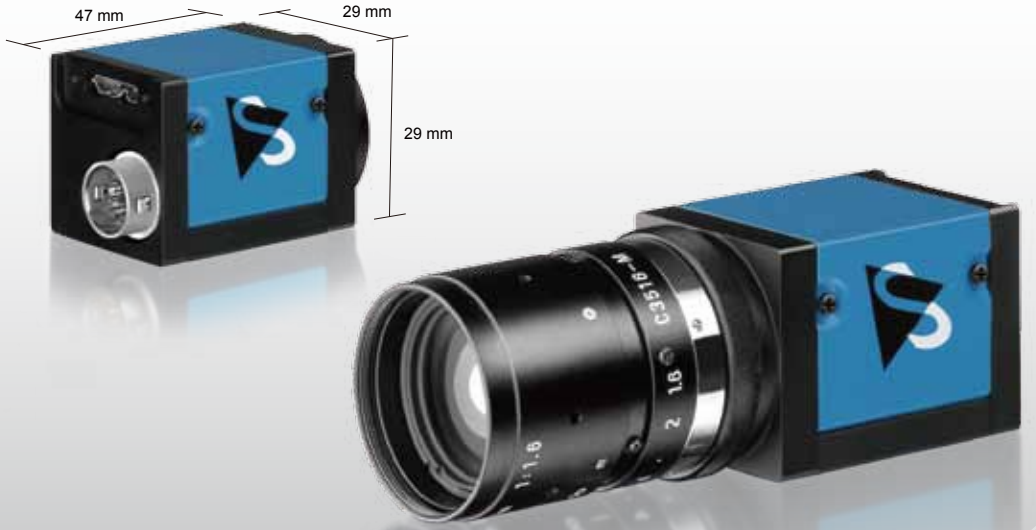
The Imaging Source "USB 3.0" Series Cameras

DMK 23UM021 / DFK 23UM021



The Imaging Source DMK 23UM021 (monochrome) and DFK 23UM021 (color) USB 3.0 cameras are the perfect solution for many industrial automation, quality assurance, security, surveillance, and medical applications. Utilizing the very sensitive Aptina 1.2 Megapixel MT9M021 monochrome and color global shutter CMOS sensors, these cameras feature a variety of input, output, strobe, and trigger options via an external 6-pin Hirose port. With up to 60 fps and a trigger delay of less than 5 micro seconds, the DMK 23UM021 and DFK 23UM021 USB 3.0 cameras from The Imaging Source are a very low cost, yet highly versatile imaging solution.

Included :

- Camera, CS to C mount adapter and tripod mount
- Drivers compatible to WDM, DirectShow, DirectX®, TWAIN, ActivVisionTools, HALCON, VfW and LabVIEW® for Windows 7/8, Windows Vista, and Windows XP
- IC Capture camera control and aquisition software for Windows 7/8, Windows Vista, and Windows XP (32 and 64 bit versions)
- IC Imaging Control Software Development Kit (SDK) including a .NET component, an ActiveX component, and a C++ class library for Windows

Features :

- Variable trigger (4µs to 1s)
- Digital I/O strobe
- CS with C mount adapter
- Binning and ROI (CMOS only)
- Optional external DC driven auto iris controller

Accessories :

- CS to M12 adapters
- C, CS, and M12 lenses
- 6-pin Hirose trigger cable

Specification : DMK 23UM021 (Monochrome)

GENERAL BEHAVIOR	
Video formats @ Frame rate	1280x960 Y800 @ 45, 30, 15, 7.5, 3.75 fps 1280x960 Y16 @ 45, 30, 15, 7.5, 3.75 fps
Sensitivity	0.015 lx
Dynamic range	8 / 12 bit

INTERFACE (OPTICAL)	
IR cut filter	no
Sensor specification	MT9M021
Shutter	Global
Format	1/3 "
Resolution	H: 1280, V: 960
Pixel size	H: 3.75 µm, V: 3.75 µm
Lens mount	C/CS

INTERFACE (ELECTRICAL)	
Supply voltage	4.5 to 5.5 VDC
Current consumption	approx. 500 mA at 5 VDC

INTERFACE (MECHANICAL)	
Dimensions	H: 29 mm, W: 29 mm, L: 47 mm
Mass	65 g

ADJUSTMENTS (MANUAL)	
Shutter	1/100,000 to 30 s
Gain	0 to 36 dB

ADJUSTMENTS (AUTOMATIC)	
Shutter	1/100,000 to 30 s
Gain	0 to 36 dB

ENVIRONMENTAL	
Max. temperature (operation)	-5 °C to 45 °C
Max. temperature (storage)	-20 °C to 60 °C
Max. humidity (operation)	20 % to 80 % non-condensing
Max. humidity (storage)	20 % to 95 % non-condensing

Specification : DFK 23UM021 (Color)

GENERAL BEHAVIOR	
Video formats @ Frame rate	1280x960 RGB32 @ 45, 30, 15, 7.5, 3.75 fps 1280x960 Y800 @ 45, 30, 15, 7.5, 3.75 fps 1280x960 Y16 @ 45, 30, 15, 7.5, 3.75 fps
Sensitivity	0.05 lx
Dynamic range	8 / 12 bit

INTERFACE (OPTICAL)	
IR cut filter	yes
Sensor specification	MT9M021
Shutter	Global
Format	1/3 "
Resolution	H: 1280, V: 960
Pixel size	H: 3.75 µm, V: 3.75 µm
Lens mount	C/CS

INTERFACE (ELECTRICAL)	
Supply voltage	4.5 to 5.5 VDC
Current consumption	approx. 500 mA at 5 VDC

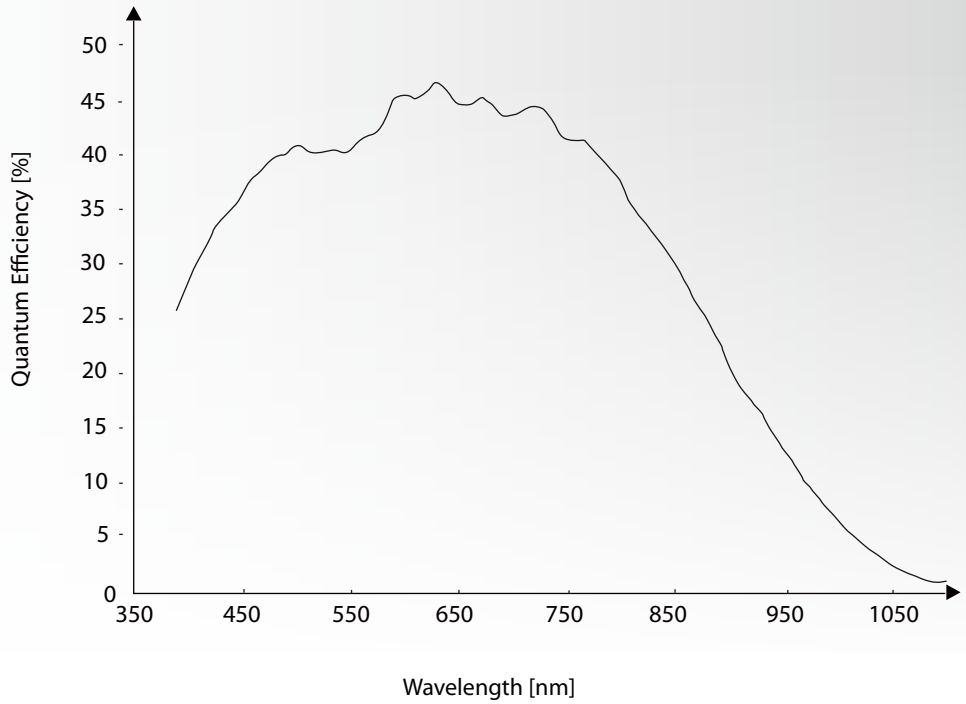
INTERFACE (MECHANICAL)	
Dimensions	H: 29 mm, W: 29 mm, L: 47 mm
Mass	65 g

ADJUSTMENTS (MANUAL)	
Shutter	1/100,000 to 30 s
Gain	0 to 36 dB
White balance	-2 dB to +6 dB

ADJUSTMENTS (AUTOMATIC)	
Shutter	1/100,000 to 30 s
Gain	0 to 36 dB
White balance	-2 dB to +6 dB

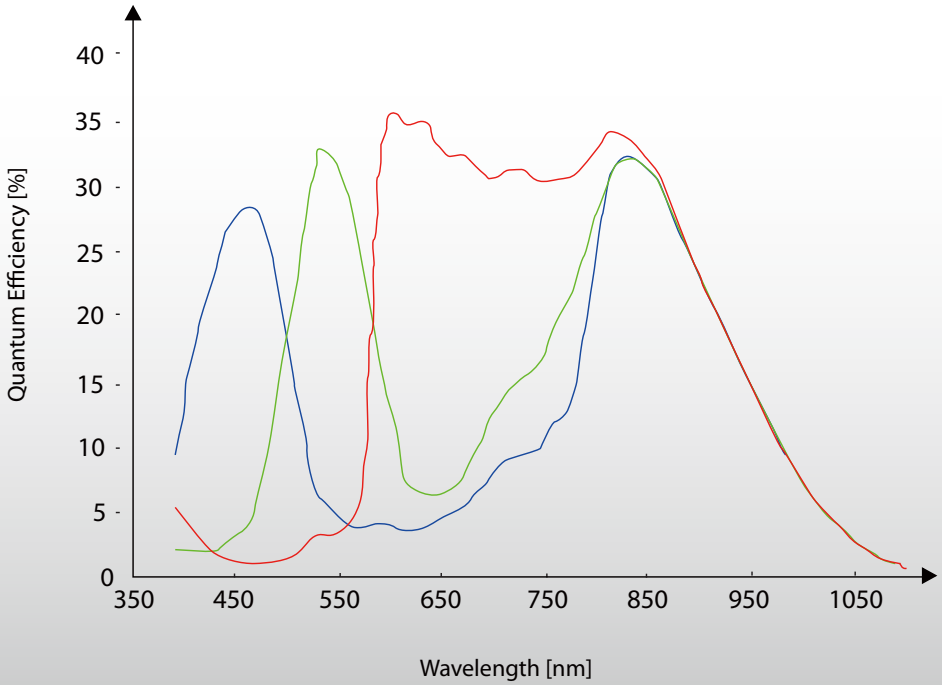
ENVIRONMENTAL	
Max. temperature (operation)	-5 °C to 45 °C
Max. temperature (storage)	-20 °C to 60 °C
Max. humidity (operation)	20 % to 80 % non-condensing
Max. humidity (storage)	20 % to 95 % non-condensing

Monochrome Spectral Response Curve



Sensor: Micron MT9M021M - courtesy of Aptina Deutschland GmbH

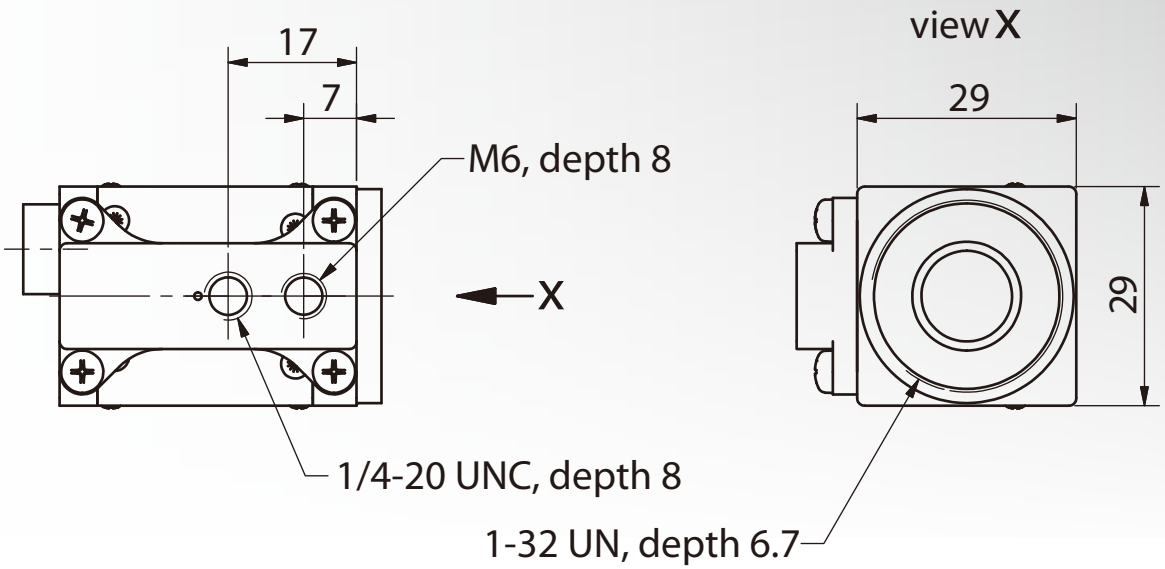
Color Spectral Response Curve

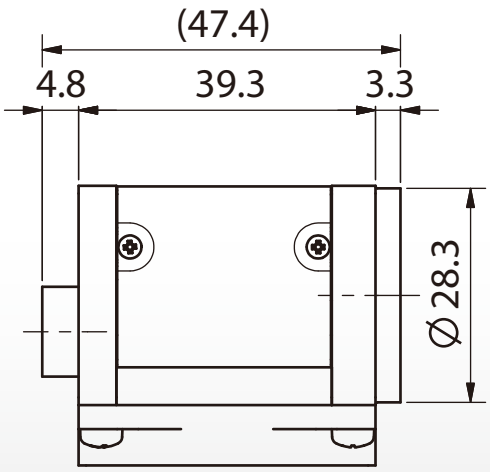


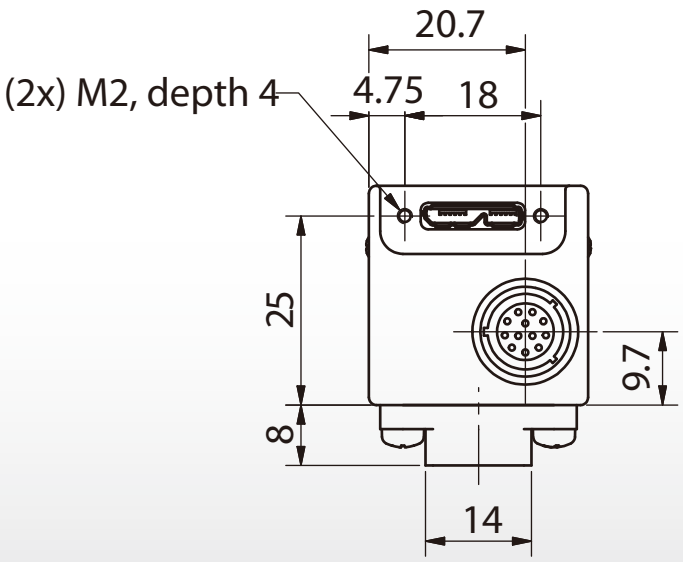
Sensor: Micron MT9M021C - courtesy of Aptina Deutschland GmbH

DMK 23UM021 / DFK 23UM021 Dimensional Diagram

(with tripod adapter)



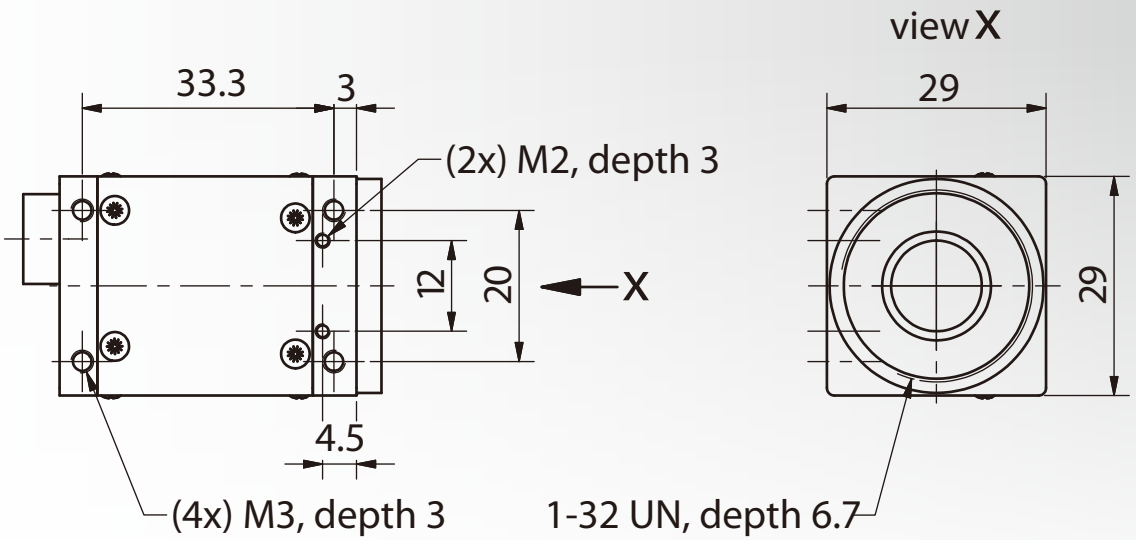


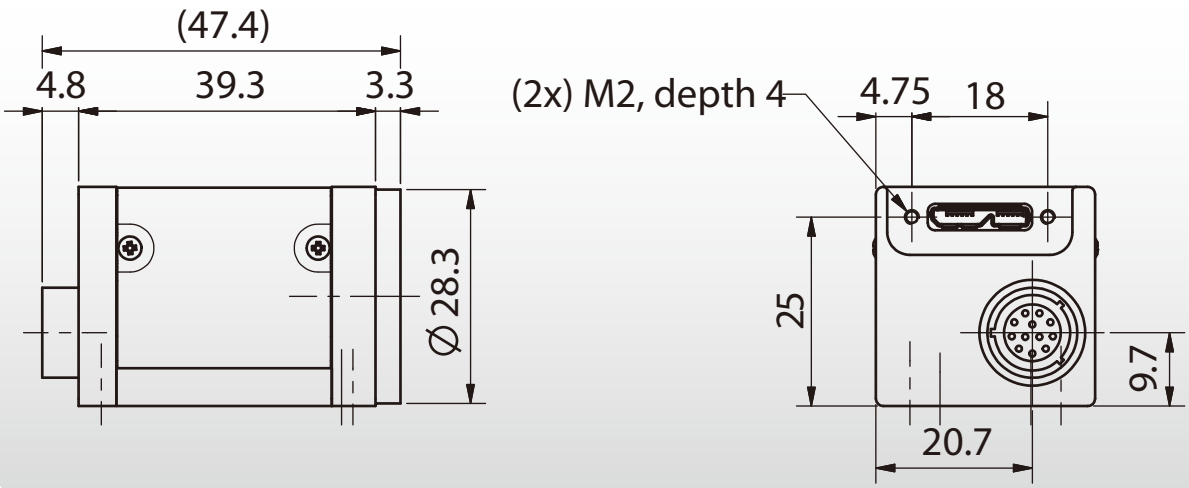


Dimensions: mm
Tolerances: DIN ISO 2768m

DMK 23UM021 / DFK 23UM021 Dimensional Diagram

(without tripod adapter)





Dimensions: mm
Tolerances: DIN ISO 2768m

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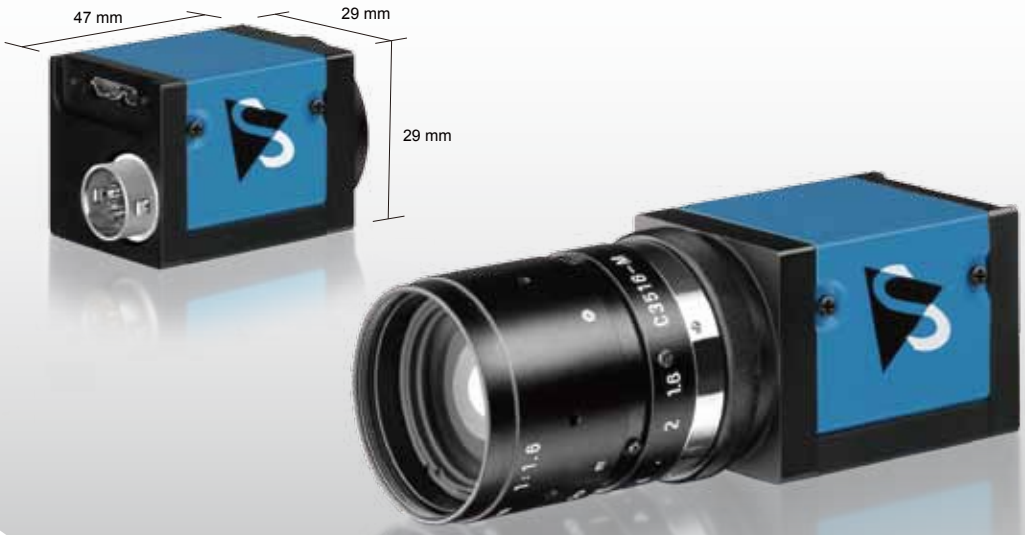
The Imaging Source "USB 3.0" Series Cameras

DMK 23U445 / DFK 23U445



The Imaging Source DMK 23U445 (monochrome) and DFK 23U445 (color) USB 3.0 cameras are the perfect solution for many industrial automation, quality assurance, security, surveillance, and medical applications. Utilizing the very sensitive SONY Ex View HAD ICX 445ALA/AQA monochrome and color CCD sensors, these cameras feature a variety of input, output, strobe, and trigger options via an external 6-pin Hirose port. With up to 30 fps and a trigger delay of less than 5 micro seconds, the DMK 23U445 and DFK 23U445 USB 3.0 cameras from The Imaging Source are a low cost, yet highly versatile imaging solution.

Included :

- Camera, CS to C mount adapter and tripod mount
- Drivers compatible to WDM, DirectShow, DirectX®, TWAIN, ActivVisionTools, HALCON, VfW and LabVIEW® for Windows 7/8, Windows Vista, and Windows XP
- IC Capture camera control and aquisition software for Windows 7/8, Windows Vista, and Windows XP (32 and 64 bit versions)
- IC Imaging Control Software Development Kit (SDK) including a .NET component, an ActiveX component, and a C++ class library for Windows

Features :

- Variable trigger (4µs to 1 s)
- Digital I/O strobe
- CS with C mount adapter
- Optional external DC driven auto iris controller

Accessories :

- CS to M12 adapters
- C, CS, and M12 lenses
- 6-pin Hirose trigger cable

Specification : DMK 23U445 (Monochrome)

GENERAL BEHAVIOR	
Video formats @ Frame rate	1280x960 Y800 @ 30, 20, 15, 7.5, 3.75 fps 1280x960 Y16 @ 30, 20, 15, 7.5, 3.75 fps
Sensitivity	0.015 lx
Dynamic range	8 / 12 bit

INTERFACE (OPTICAL)	
IR cut filter	no
Sensor specification	ICX445ALA
Type	progressive scan
Format	1/3 "
Resolution	H: 1280, V: 960
Pixel size	H: 3.75 µm, V: 3.75 µm
Lens mount	C/CS

INTERFACE (ELECTRICAL)	
Supply voltage	4.5 to 5.5 VDC
Current consumption	approx. 500 mA at 5 VDC

INTERFACE (MECHANICAL)	
Dimensions	H: 29 mm, W: 29 mm, L: 47 mm
Mass	65 g

ADJUSTMENTS (MANUAL)	
Shutter	1/100,000 to 30 s
Gain	0 to 36 dB

ADJUSTMENTS (AUTOMATIC)	
Shutter	1/100,000 to 30 s
Gain	0 to 36 dB

ENVIRONMENTAL	
Max. temperature (operation)	-5 °C to 45 °C
Max. temperature (storage)	-20 °C to 60 °C
Max. humidity (operation)	20 % to 80 % non-condensing
Max. humidity (storage)	20 % to 95 % non-condensing

Specification : DFK 23U445 (Color)

GENERAL BEHAVIOR	
Video formats @ Frame rate	1280x960 RGB32 @ 30, 20, 15, 7.5, 3.75 fps 1280x960 Y800 @ 30, 20, 15, 7.5, 3.75 fps 1280x960 Y16 @ 30, 20, 15, 7.5, 3.75 fps
Sensitivity	0.05 lx
Dynamic range	8 bit

INTERFACE (OPTICAL)	
IR cut filter	yes
Sensor specification	ICX445AQA
Type	progressive scan
Format	1/3 "
Resolution	H: 1280, V: 960
Pixel size	H: 3.75 µm, V: 3.75 µm
Lens mount	C/CS

INTERFACE (ELECTRICAL)	
Supply voltage	4.5 to 5.5 VDC
Current consumption	approx. 500 mA at 5 VDC

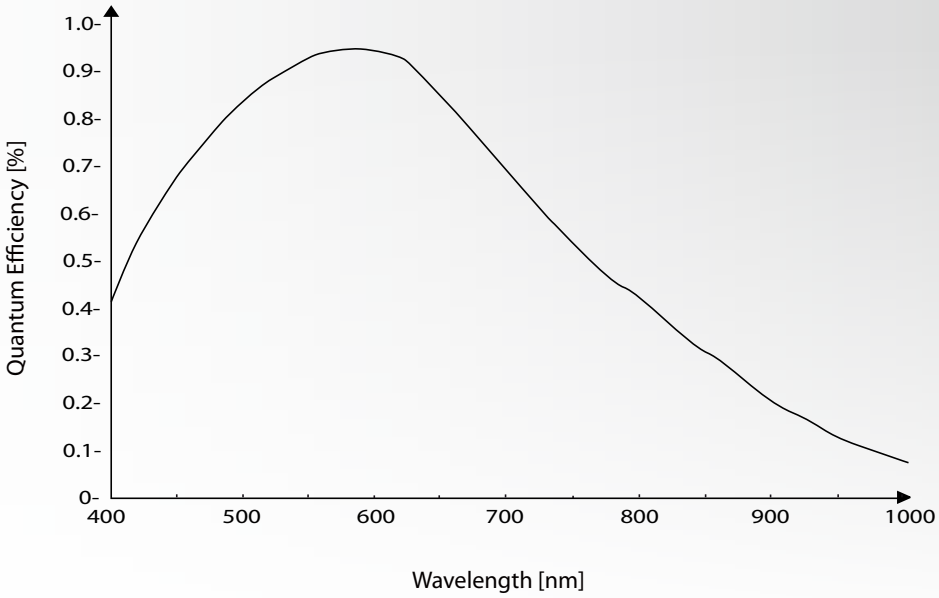
INTERFACE (MECHANICAL)	
Dimensions	H: 29 mm, W: 29 mm, L: 47 mm
Mass	65 g

ADJUSTMENTS (MANUAL)	
Shutter	1/100,000 to 30 s
Gain	0 to 36 dB
White balance	-2 dB to +6 dB

ADJUSTMENTS (AUTOMATIC)	
Shutter	1/100,000 to 30 s
Gain	0 to 36 dB
White balance	-2 dB to +6 dB

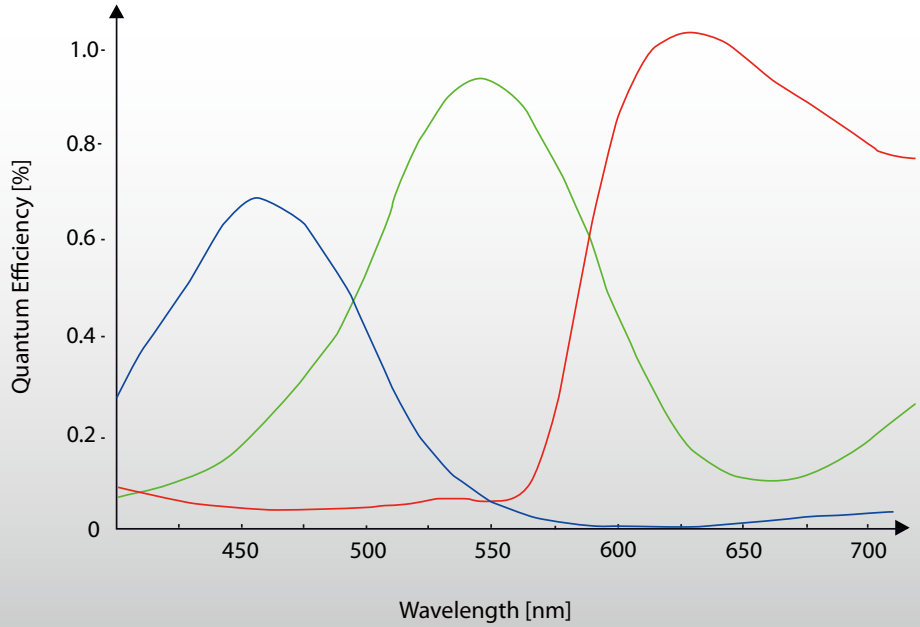
ENVIRONMENTAL	
Max. temperature (operation)	-5 °C to 45 °C
Max. temperature (storage)	-20 °C to 60 °C
Max. humidity (operation)	20 % to 80 % non-condensing
Max. humidity (storage)	20 % to 95 % non-condensing

Monochrome Spectral Response Curve



Sensor: Sony ICX 445ALA - courtesy of SONY Deutschland GmbH

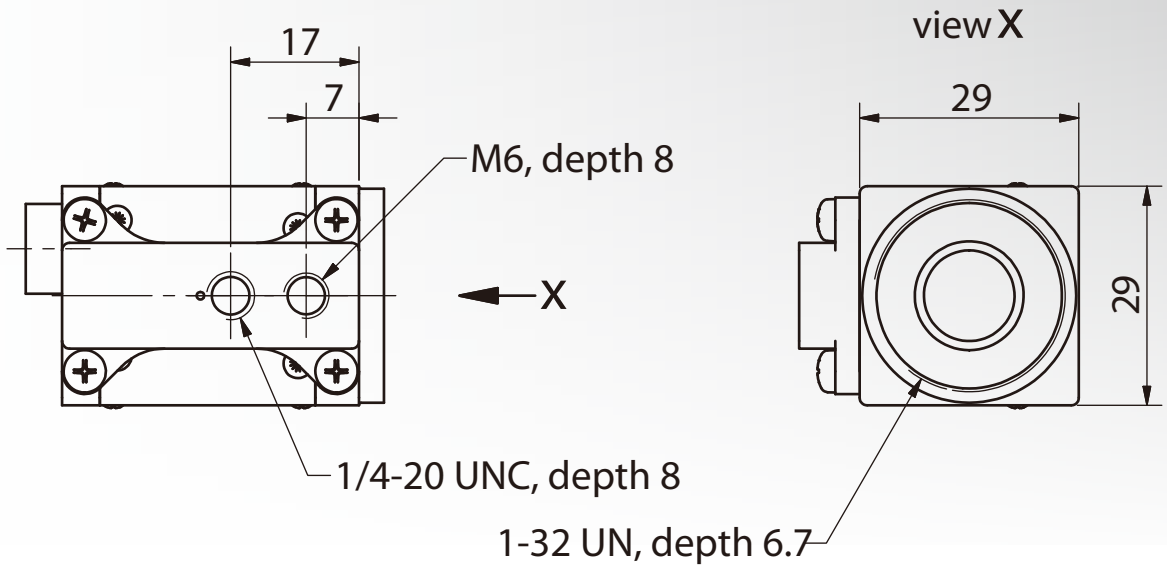
Color Spectral Response Curve

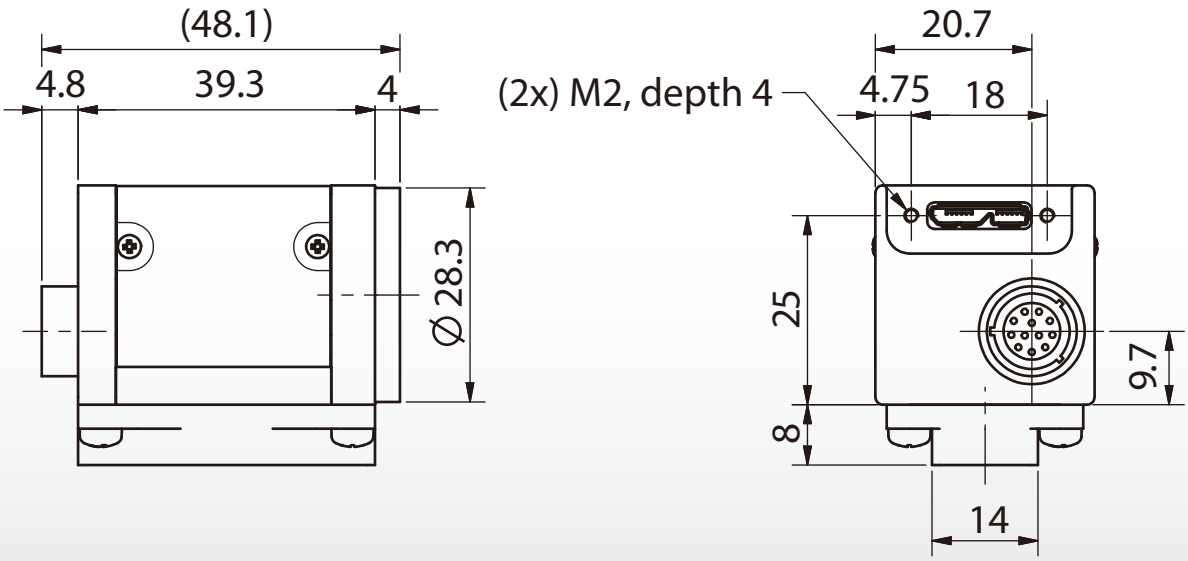


Sensor: Sony ICX 445AQA - courtesy of SONY Deutschland GmbH

DMK 23U445 / DFK 23U445 Dimensional Diagram

(with tripod adapter)

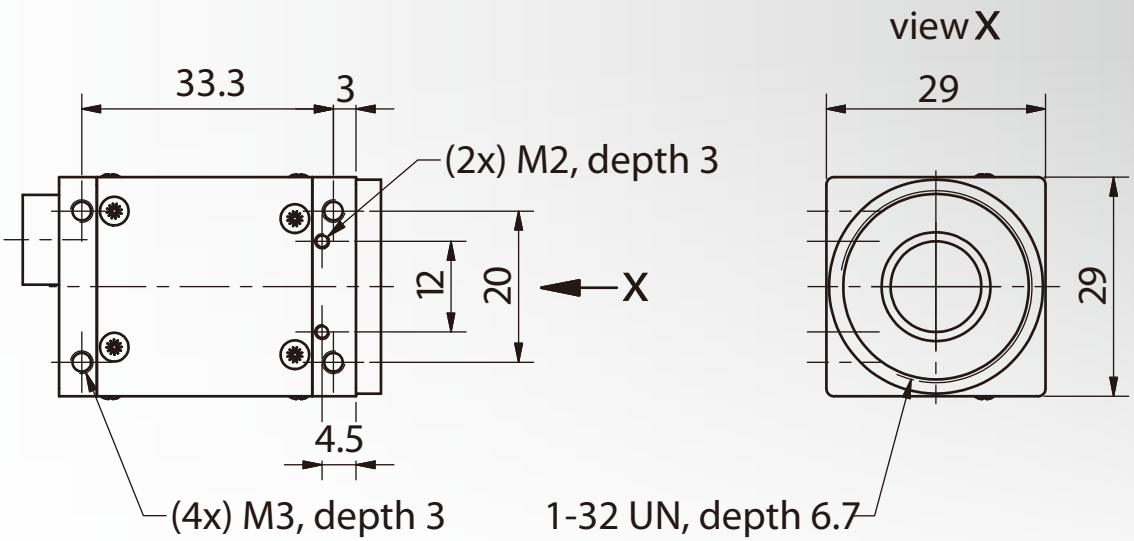


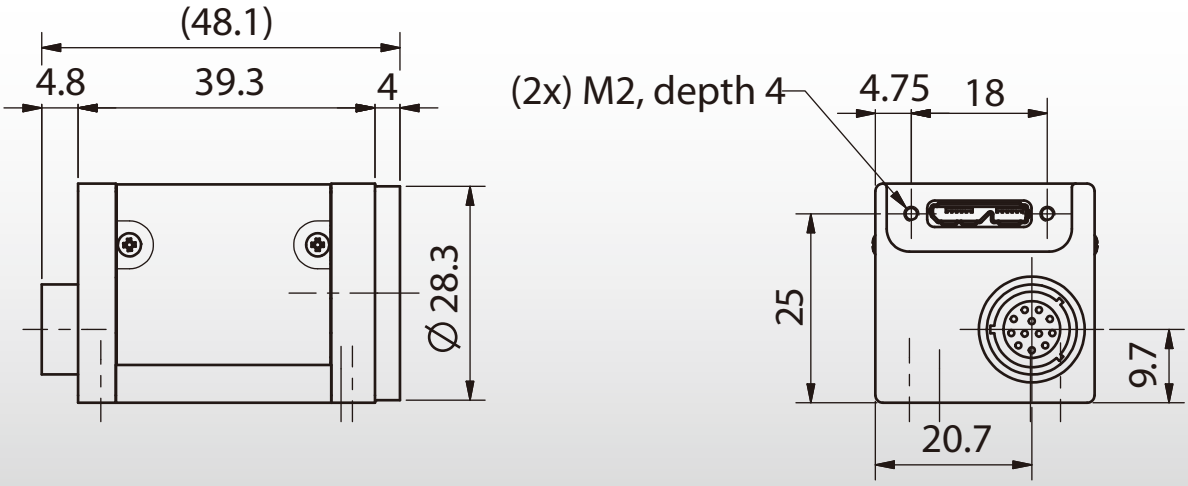


Dimensions: mm
Tolerances: DIN ISO 2768m

DMK 23U445 / DFK 23U445 Dimensional Diagram

(without tripod adapter)





Dimensions: mm
Tolerances: DIN ISO 2768m

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All weights and dimensions are approximate. Unless otherwise specified the lenses shown in the context of cameras are not shipped with these cameras.

The Imaging Source "USB 3.0" Series Cameras

DMK 23U274 / DFK 23U274

The Imaging Source DMK 23U274 (monochrome) and DFK 23U274 (color) USB 3.0 cameras are the perfect solution for many industrial automation, quality assurance, security, surveillance, and medical applications. Utilizing the very sensitive SONY Ex View HAD ICX 274ALA/AQA monochrome and color CCD sensors, these cameras feature a variety of input, output, strobe, and trigger options via a 6-pin external Hirose port. With up to 20 fps and a trigger delay of less than 5 micro seconds, the DMK 23U274 and DFK 23U274 USB 3.0 cameras from The Imaging Source are a low cost, yet highly versatile imaging solution.

Included :

- Camera, CS to C mount adapter and tripod mount
- Drivers compatible to WDM, DirectShow, DirectX®, TWAIN, ActivVisionTools, HALCON, VfW and LabVIEW® for Windows 7/8, Windows Vista, and Windows XP
- IC Capture camera control and aquisition software for Windows 7/8, Windows Vista, and Windows XP (32 and 64 bit versions)
- IC Imaging Control Software Development Kit (SDK) including a .NET component, an ActiveX component, and a C++ class library for Windows

Features :

- Variable trigger (4µs to 1 s)
- Digital I/O strobe
- CS with C mount adapter
- Optional external DC driven auto iris controller

Accessories :

- CS to M12 adapters
- C, CS, and M12 lenses
- 6-pin Hirose trigger cable

Specification : DMK 23U274 (Monochrome)

GENERAL BEHAVIOR	
Video formats @ Frame rate	1600x1200 Y800 @ 20, 15, 7.5, 3.75 fps 1600x1200 Y16 @ 20, 15, 7.5, 3.75 fps
Sensitivity	0.015 lx
Dynamic range	8 / 12 bit

INTERFACE (OPTICAL)	
IR cut filter	no
Sensor specification	ICX274AL
Type	progressive scan
Format	1/1.8 "
Resolution	H: 1600, V: 1200
Pixel size	H: 4.4 µm, V: 4.4 µm
Lens mount	C/CS

INTERFACE (ELECTRICAL)	
Supply voltage	4.5 to 5.5 VDC
Current consumption	approx. 500 mA at 5 VDC

INTERFACE (MECHANICAL)	
Dimensions	H: 29 mm, W: 29 mm, L: 47 mm
Mass	65 g

ADJUSTMENTS (MANUAL)	
Shutter	1/100,000 to 30 s
Gain	0 to 36 dB

ADJUSTMENTS (AUTOMATIC)	
Shutter	1/100,000 to 30 s
Gain	0 to 36 dB

ENVIRONMENTAL	
Max. temperature (operation)	-5 °C to 45 °C
Max. temperature (storage)	-20 °C to 60 °C
Max. humidity (operation)	20 % to 80 % non-condensing
Max. humidity (storage)	20 % to 95 % non-condensing

Specification : DFK 23U274 (Color)

GENERAL BEHAVIOR	
Video formats @ Frame rate	1600x1200 RGB32 @ 20, 15, 7.5, 3.75 fps 1600x1200 Y800 @ 20, 15, 7.5, 3.75 fps 1600x1200 Y16 @ 20, 15, 7.5, 3.75 fps
Sensitivity	0.05 lx
Dynamic range	8 / 12 bit

INTERFACE (OPTICAL)	
IR cut filter	yes
Sensor specification	ICX274AQ
Type	progressive scan
Format	1/1.8 "
Resolution	H: 1600, V: 1200
Pixel size	H: 4.4 µm, V: 4.4 µm
Lens mount	C/CS

INTERFACE (ELECTRICAL)	
Supply voltage	4.5 to 5.5 VDC
Current consumption	approx. 500 mA at 5 VDC

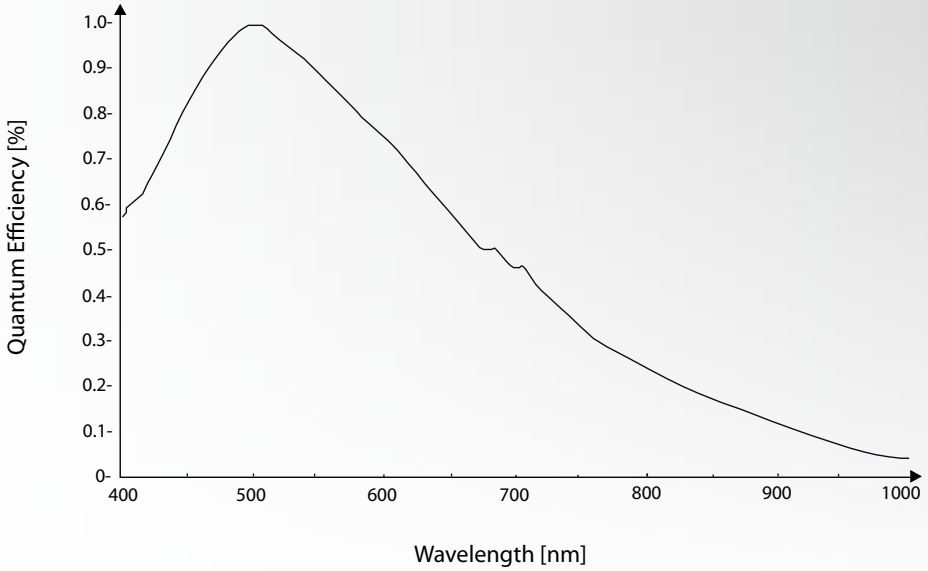
INTERFACE (MECHANICAL)	
Dimensions	H: 29 mm, W: 29 mm, L: 47 mm
Mass	65 g

ADJUSTMENTS (MANUAL)	
Shutter	1/100,000 to 30 s
Gain	0 to 36 dB
White balance	-2 dB to +6 dB

ADJUSTMENTS (AUTOMATIC)	
Shutter	1/100,000 to 30 s
Gain	0 to 36 dB
White balance	-2 dB to +6 dB

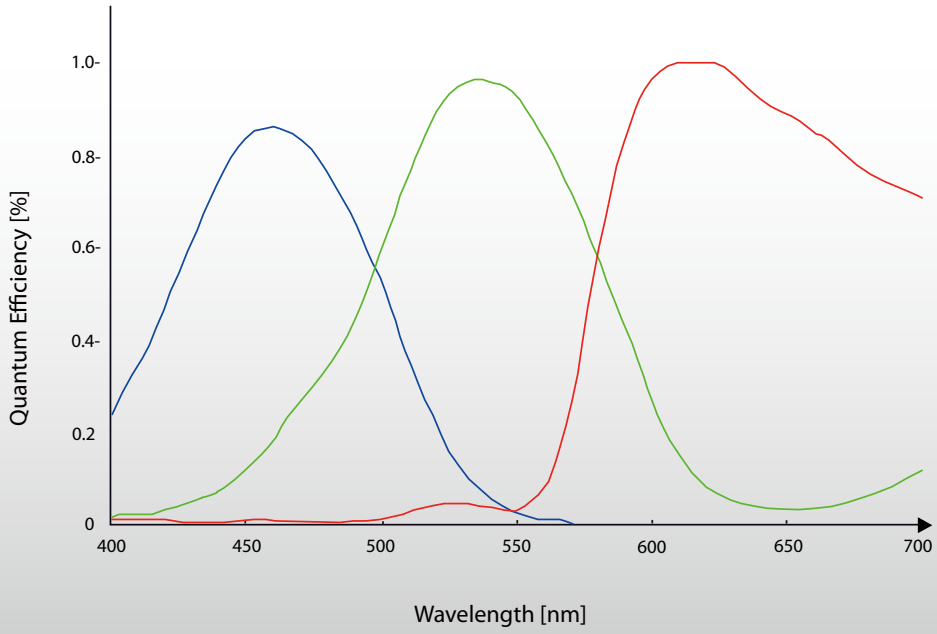
ENVIRONMENTAL	
Max. temperature (operation)	-5 °C to 45 °C
Max. temperature (storage)	-20 °C to 60 °C
Max. humidity (operation)	20 % to 80 % non-condensing
Max. humidity (storage)	20 % to 95 % non-condensing

Monochrome Spectral Response Curve



Sensor: Sony ICX 274AL - courtesy of SONY Deutschland GmbH

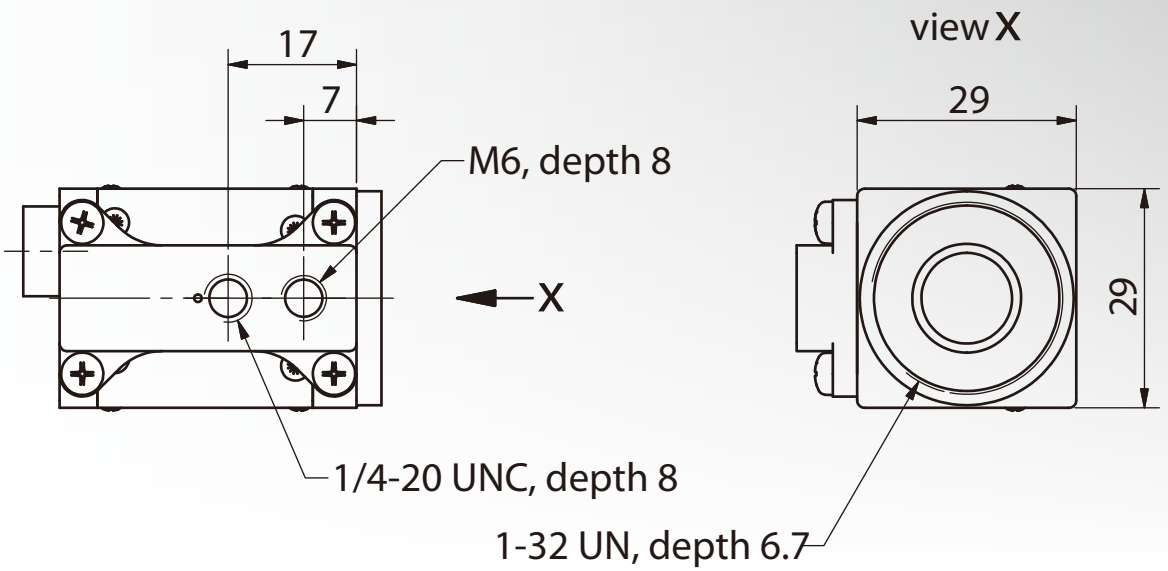
Color Spectral Response Curve

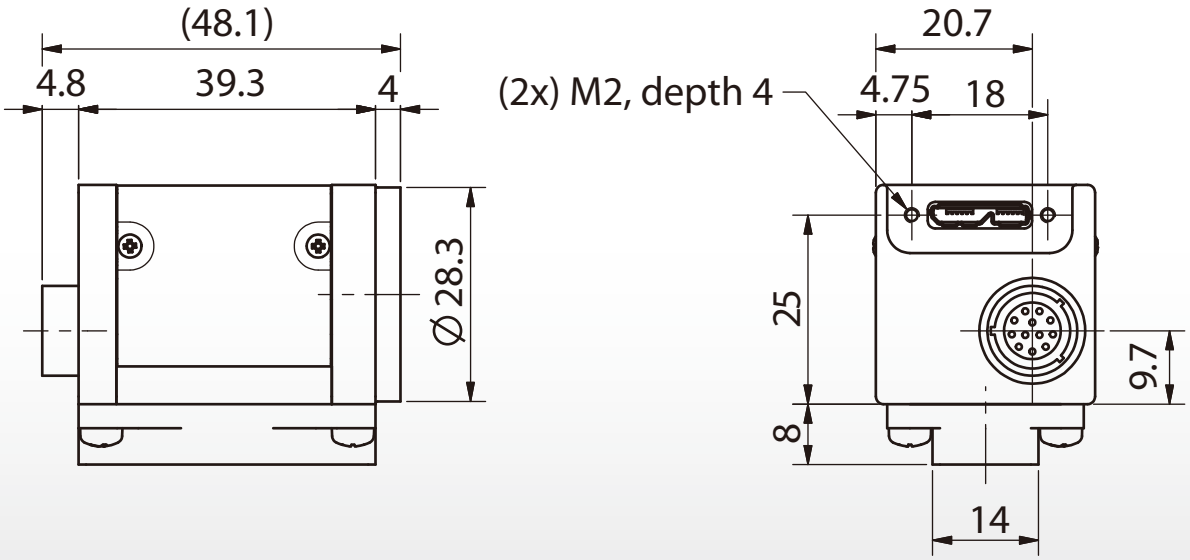


Sensor: Sony ICX 274AQ - courtesy of SONY Deutschland GmbH

DMK 23U274 / DFK 23U274 Dimensional Diagram

(with tripod adapter)

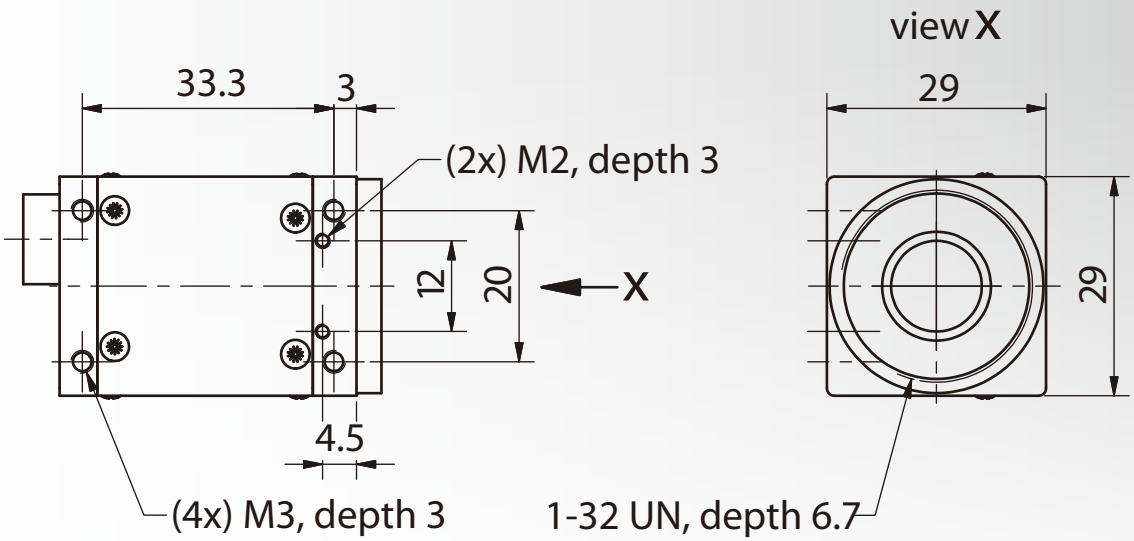


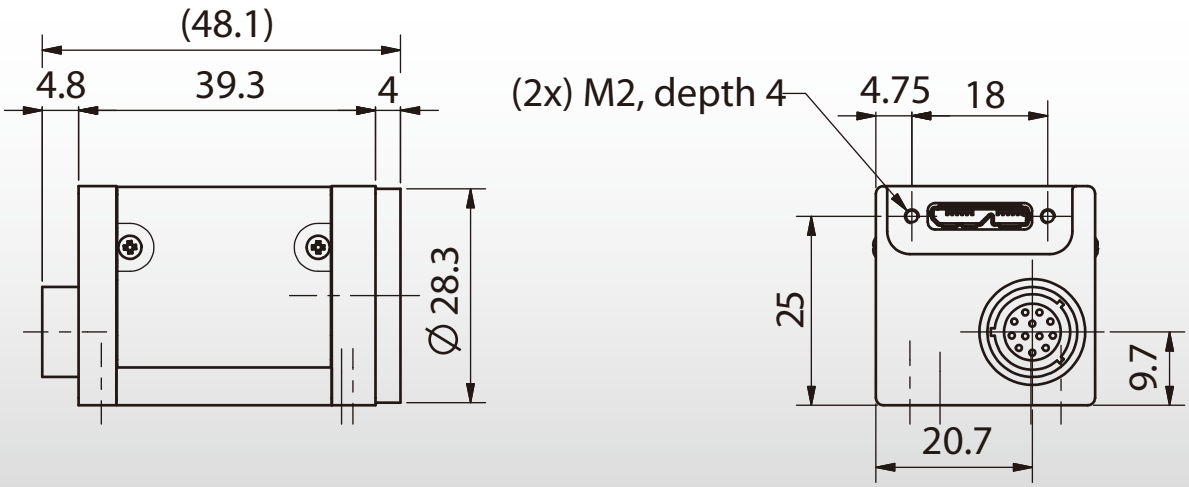


Dimensions: mm
Tolerances: DIN ISO 2768m

DMK 23U274 / DFK 23U274 Dimensional Diagram

(without tripod adapter)





Dimensions: mm
Tolerances: DIN ISO 2768m

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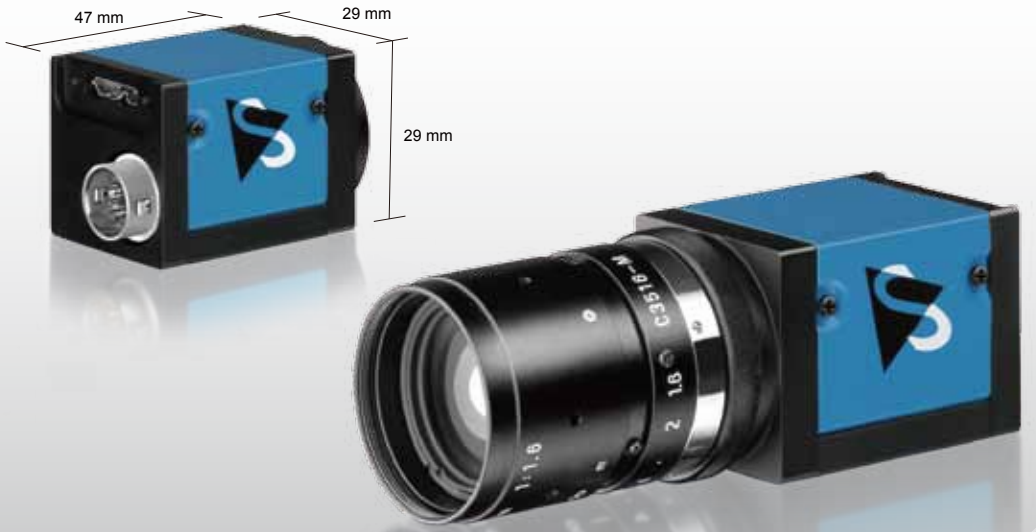
The Imaging Source "USB 3.0" Series Cameras

DMK 23UP031 / DFK 23UP031



The Imaging Source DMK 23UP031 (monochrome) and DFK 23UP031 (color) USB 3.0 cameras are the perfect solution for many industrial automation, quality assurance, security, surveillance, and medical applications. Utilizing the very sensitive Aptina 5 Megapixel MT9P031 monochrome and color rolling shutter CMOS sensors, these cameras feature a variety of input, output, strobe, and trigger options via an external 6-pin Hirose port. With up to 15 fps and a trigger delay of less than 5 micro seconds, the DMK 23UP031 and DFK 23UP031 USB 3.0 cameras from The Imaging Source are a very low cost, yet highly versatile imaging solution.

Included :

- Camera, CS to C mount adapter and tripod mount
- Drivers compatible to WDM, DirectShow, DirectX®, TWAIN, ActivVisionTools, HALCON, VfW and LabVIEW® for Windows 7/8, Windows Vista, and Windows XP
- IC Capture camera control and aquisition software for Windows 7/8, Windows Vista, and Windows XP (32 and 64 bit versions)
- IC Imaging Control Software Development Kit (SDK) including a .NET component, an ActiveX component, and a C++ class library for Windows

Features :

- Variable trigger (4µs to 1s)
- Digital I/O strobe
- CS with C mount adapter
- Binning and ROI (CMOS only)
- Optional external DC driven auto iris controller

Accessories :

- CS to M12 adapters
- C, CS, and M12 lenses
- 6-pin Hirose trigger cable

Specification : DMK 23UP031 (Monochrome)

GENERAL BEHAVIOR	
Video formats @ Frame rate	2592x1944 Y800 @ 15, 7.5, 3.75 fps 2592x1944 Y16 @ 15, 7.5, 3.75 fps
Sensitivity	0.015 lx
Dynamic range	8 / 12 bit

INTERFACE (OPTICAL)	
IR cut filter	no
Sensor specification	MT9P031
Shutter	Rolling
Format	1/2.5 "
Resolution	H: 2592, V: 1944
Pixel size	H: 2.2 µm, V: 2.2 µm
Lens mount	C/CS

INTERFACE (ELECTRICAL)	
Supply voltage	4.5 to 5.5 VDC
Current consumption	approx. 500 mA at 5 VDC

INTERFACE (MECHANICAL)	
Dimensions	H: 29 mm, W: 29 mm, L: 47 mm
Mass	65 g

ADJUSTMENTS (MANUAL)	
Shutter	1/100,000 to 30 s
Gain	0 to 36 dB

ADJUSTMENTS (AUTOMATIC)	
Shutter	1/100,000 to 30 s
Gain	0 to 36 dB

ENVIRONMENTAL	
Max. temperature (operation)	-5 °C to 45 °C
Max. temperature (storage)	-20 °C to 60 °C
Max. humidity (operation)	20 % to 80 % non-condensing
Max. humidity (storage)	20 % to 95 % non-condensing

Specification : DFK 23UP031 (Color)

GENERAL BEHAVIOR	
Video formats @ Frame rate	2592x1944 RGB32 @ 15, 7.5, 3.75 fps 2592x1944 Y800 @ 15, 7.5, 3.75 fps 2592x1944 Y16 @ 15, 7.5, 3.75 fps
Sensitivity	0.05 lx
Dynamic range	8 / 12 bit

INTERFACE (OPTICAL)	
IR cut filter	yes
Sensor specification	MT9P031
Shutter	Rolling
Format	1/2.5 "
Resolution	H: 2592, V: 1944
Pixel size	H: 2.2 µm, V: 2.2 µm
Lens mount	C/CS

INTERFACE (ELECTRICAL)	
Supply voltage	4.5 to 5.5 VDC
Current consumption	approx. 500 mA at 5 VDC

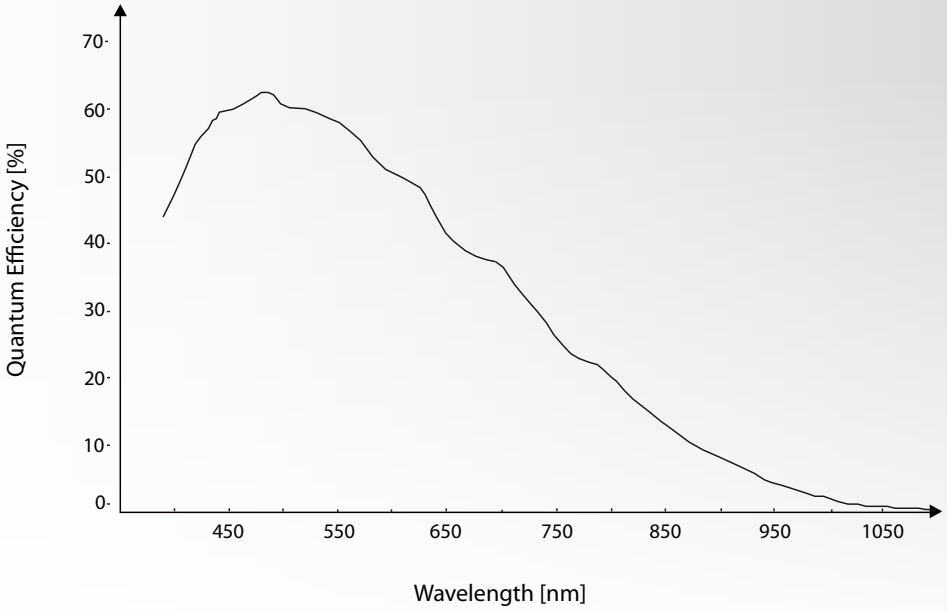
INTERFACE (MECHANICAL)	
Dimensions	H: 29 mm, W: 29 mm, L: 47 mm
Mass	65 g

ADJUSTMENTS (MANUAL)	
Shutter	1/100,000 to 30 s
Gain	0 to 36 dB
White balance	-2 dB to +6 dB

ADJUSTMENTS (AUTOMATIC)	
Shutter	1/100,000 to 30 s
Gain	0 to 36 dB
White balance	-2 dB to +6 dB

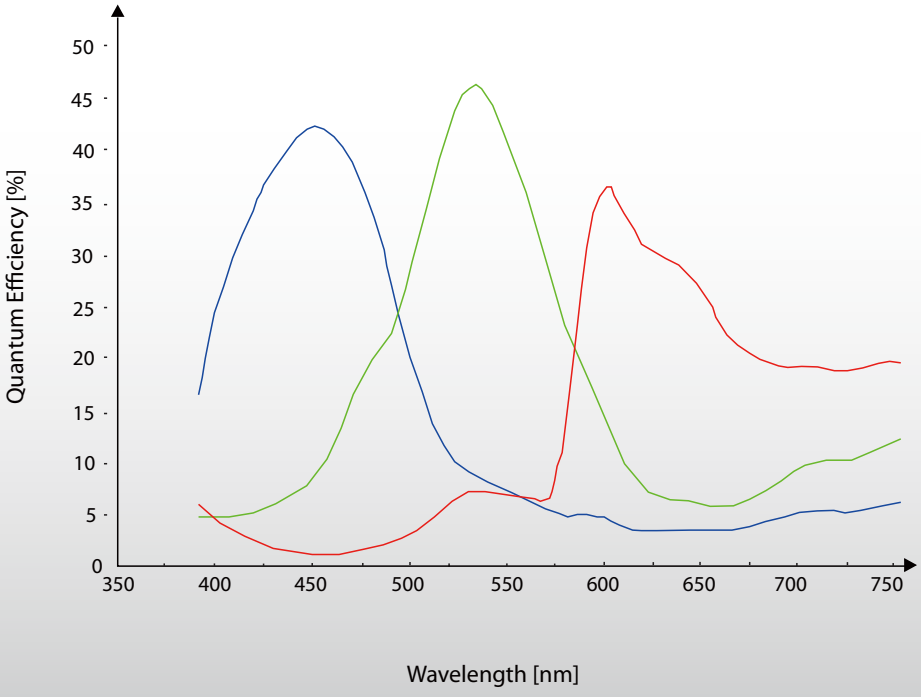
ENVIRONMENTAL	
Max. temperature (operation)	-5 °C to 45 °C
Max. temperature (storage)	-20 °C to 60 °C
Max. humidity (operation)	20 % to 80 % non-condensing
Max. humidity (storage)	20 % to 95 % non-condensing

Monochrome Spectral Response Curve



Sensor: Micron MT9P031 M - courtesy of Aptina Deutschland GmbH

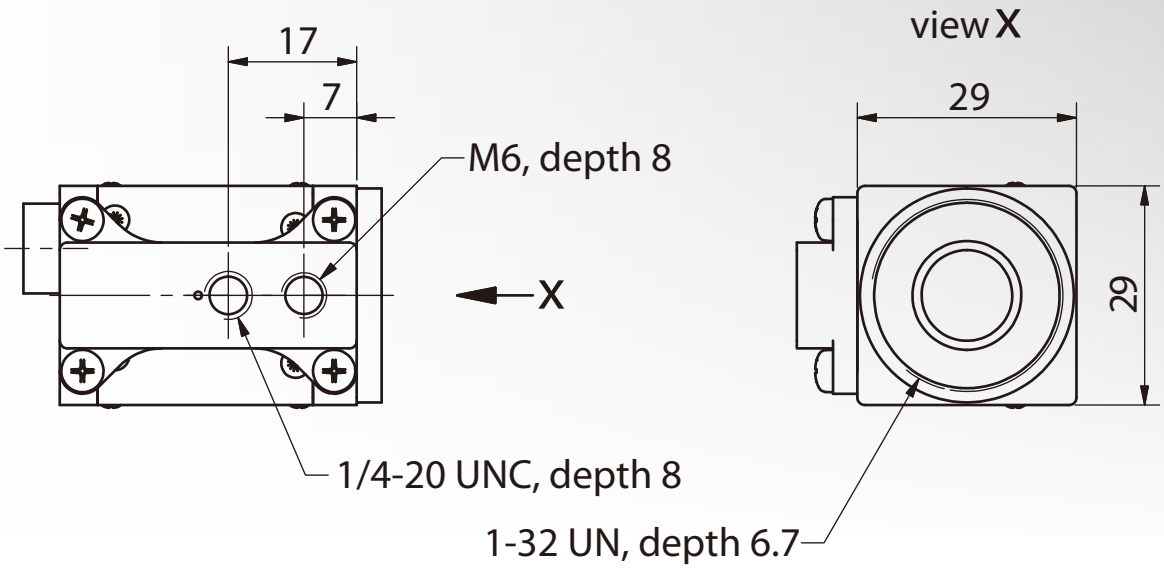
Color Spectral Response Curve

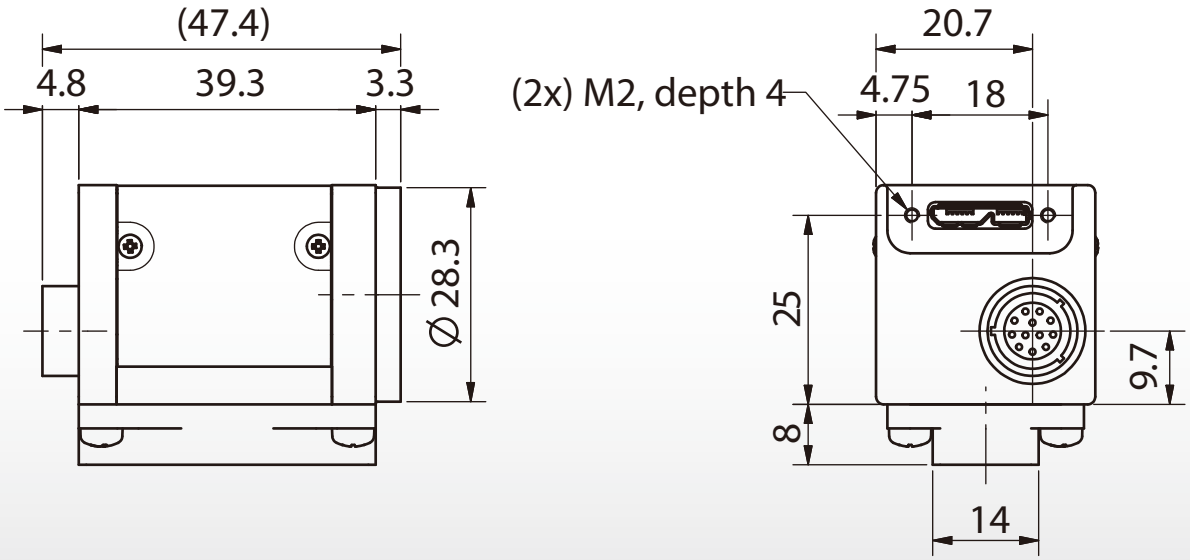


Sensor: Micron MT9P031 C - courtesy of Aptina Deutschland GmbH

DMK 23UP031 / DFK 23UP031 Dimensional Diagram

(with tripod adapter)

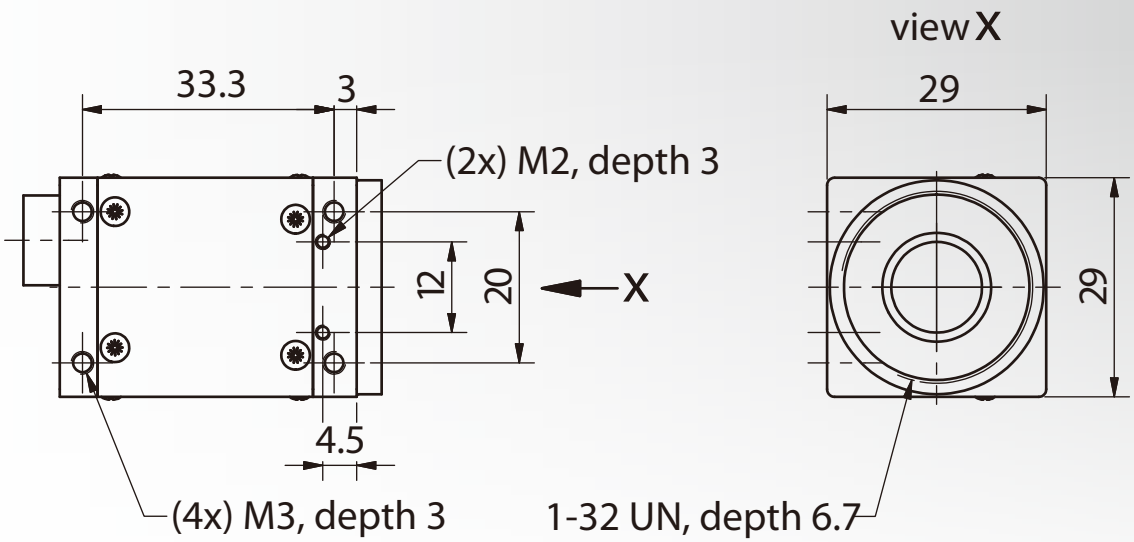


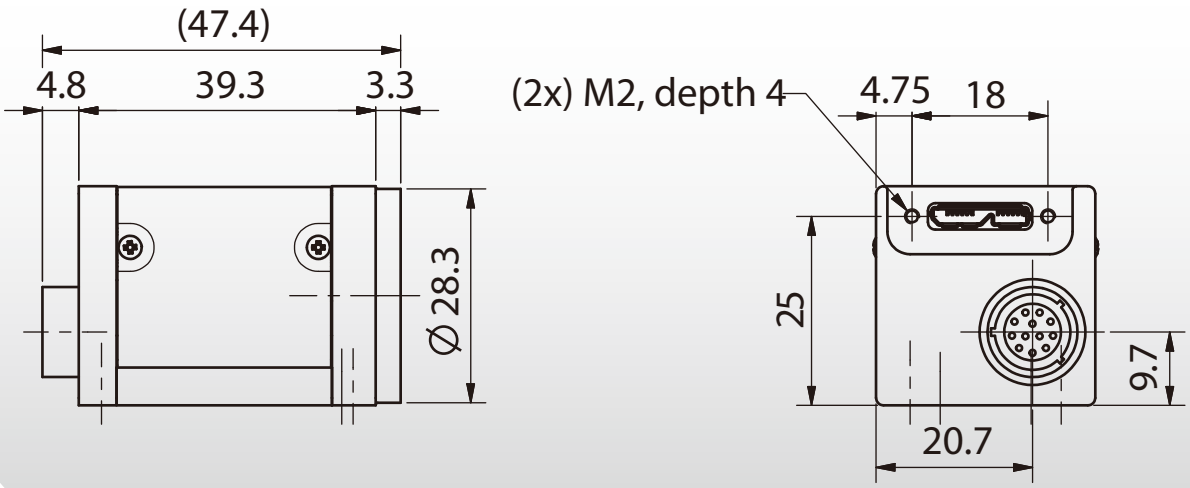


Dimensions: mm
Tolerances: DIN ISO 2768m

DMK 23UP031 / DFK 23UP031 Dimensional Diagram

(without tripod adapter)





Dimensions: mm
Tolerances: DIN ISO 2768m

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All weights and dimensions are approximate. Unless otherwise specified the lenses shown in the context of cameras are not shipped with these cameras.

The Imaging Source "IEEE 1394b" Series Cameras

- Dimensions 29 x 29 x 47 mm
- Wide range of CCD and CMOS sensors
- Very attractive pricing

Model	Resolution	Megapixel	Pixel Size	Frame Rate	Sensor	Sensor Size	A/D
DMK 23F618	640 x 480	0.3	5.6 µm	120 fps	Sony ICX618ALA	1/4" CCD	8/12 bit
DFK 23F618	640 x 480	0.3	5.6 µm	120 fps	Sony ICX618AQA	1/4" CCD	8/12 bit
DMK 23FV024	752 x 480	0.3	6 µm	100 fps	Aptina MT9V024	1/3" CMOS	8/12 bit
DFK 23FV024	752 x 480	0.3	6 µm	100 fps	Aptina MT9V024	1/3" CMOS	8/12 bit
DMK 23FM021	1280 x 960	1.2	3.75 µm	60 fps	Aptina MT9M021	1/3" CMOS	8/12 bit
DFK 23FM021	1280 x 960	1.2	3.75 µm	60 fps	Aptina MT9M021	1/3" CMOS	8/12 bit
DMK 23F445	1280 x 960	1.2	3.75 µm	30 fps	Sony ICX445ALA	1/3" CCD	8/12 bit
DFK 23F445	1280 x 960	1.2	3.75 µm	30 fps	Sony ICX445AQA	1/3" CCD	8/12 bit
DMK 23F274	1600 x 1200	2	4.4 µm	20 fps	Sony ICX274AL	1/1.8" CCD	8/12 bit
DFK 23F274	1600 x 1200	2	4.4 µm	20 fps	Sony ICX274AQ	1/1.8" CCD	8/12 bit
DMK 23FP031	2592 x 1944	5	2.2 µm	15 fps	Aptina MT9P031	1/2.5" CMOS	8/12 bit
DFK 23FP031	2592 x 1944	5	2.2 µm	15 fps	Aptina MT9P031	1/2.5" CMOS	8/12 bit

The Imaging Source "IEEE 1394b" series cameras are the perfect solution for many industrial automation, quality assurance, security, surveillance, and medical applications. Utilizing monochrome and color CCD and CMOS sensors up to 5 Megapixel, these cameras feature a variety of input, output, strobe, and trigger options via an external Hirose port. With up to 120 fps and a trigger delay of less than 5 micro seconds, the "IEEE 1394b" camera series from The Imaging Source is a low cost, yet highly versatile imaging solution.

Included :

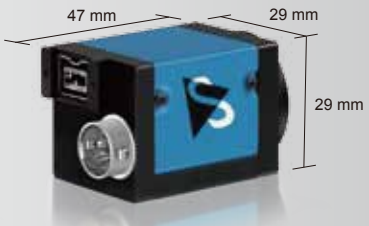
- Camera, CS to C mount adapter and tripod mount
- Drivers compatible to WDM, DirectShow, DirectX®, TWAIN, ActivVisionTools, HALCON, VfW and LabVIEW® for Windows 7/8, Windows Vista, and Windows XP
- IC Capture camera control and aquisition software for Windows 7/8, Windows Vista, and Windows XP (32 and 64 bit versions)
- IC Imaging Control Software Development Kit (SDK) including a .NET component, an ActiveX component, and a C++ class library for Windows

Features :

- Variable trigger (4µs to 1 s)
- Digital I/O strobe
- CS with C mount adapter
- Binning and ROI (CMOS only)
- Optional external DC driven auto iris controller

Accessories :

- CS to M12 adapters
- C, CS, and M12 lenses
- 6-pin Hirose trigger cable



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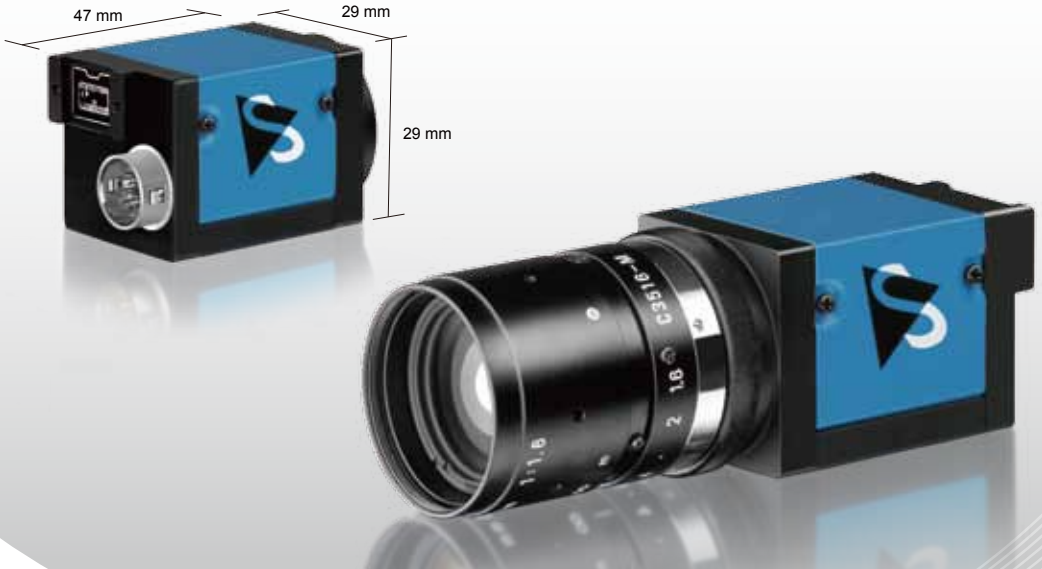
THE IMAGINGSOURCE
TECHNOLOGY BASED ON STANDARDS

The Imaging Source "IEEE 1394b" Series Cameras

DMK 23F618 / DFK 23F618



The Imaging Source DMK 23F618 (monochrome) and DFK 23F618 (color) IEEE 1394b cameras are the perfect solution for many industrial automation, quality assurance, security, surveillance, and medical applications. Utilizing the very sensitive SONY Ex View HAD ICX 618ALA/AQA monochrome and color CCD sensors, these cameras feature a variety of input, output, strobe, and trigger options via an external 6-pin Hirose port. With up to 120 fps and a trigger delay of less than 5 micro seconds, the DMK 23F618 and DFK 23F618 IEEE 1394b cameras from The Imaging Source are a low cost, yet highly versatile imaging solution.

Included :

- Camera, CS to C mount adapter and tripod mount
- Drivers compatible to WDM, DirectShow, DirectX®, TWAIN, ActivVisionTools, HALCON, VfW and LabVIEW® for Windows 7/8, Windows Vista, and Windows XP
- IC Capture camera control and aquisition software for Windows 7/8, Windows Vista, and Windows XP (32 and 64 bit versions)
- IC Imaging Control Software Development Kit (SDK) including a .NET component, an ActiveX component, and a C++ class library for Windows

Features :

- Variable trigger (4µs to 1s)
- Digital I/O strobe
- CS with C mount adapter
- Optional external DC driven auto iris controller

Accessories :

- CS to M12 adapters
- C, CS, and M12 lenses
- 6-pin Hirose trigger cable

Specification : DMK 23F618 (Monochrome)

GENERAL BEHAVIOR	
Video formats @ Frame rate	640x480 Y800 @ 120, 90, 60, 30, 15, 7.5, 3.75 fps 640x480 Y16 @ 120, 90, 60, 30, 15, 7.5, 3.75 fps
Sensitivity	0.015 lx
Dynamic range	8 / 12 bit

INTERFACE (OPTICAL)	
IR cut filter	no
Sensor specification	ICX618ALA
Type	progressive scan
Format	1/4 "
Resolution	H: 640, V: 480
Pixel size	H: 5.6 µm, V: 5.6 µm
Lens mount	C/CS

INTERFACE (ELECTRICAL)	
Supply voltage	8 to 30 VDC
Current consumption	approx. 200 mA at 12 VDC

INTERFACE (MECHANICAL)	
Dimensions	H: 29 mm, W: 29 mm, L: 47 mm
Mass	65 g

ADJUSTMENTS (MANUAL)	
Shutter	1/100,000 to 30 s
Gain	0 to 36 dB

ADJUSTMENTS (AUTOMATIC)	
Shutter	1/100,000 to 30 s
Gain	0 to 36 dB

ENVIRONMENTAL	
Max. temperature (operation)	-5 °C to 45 °C
Max. temperature (storage)	-20 °C to 60 °C
Max. humidity (operation)	20 % to 80 % non-condensing
Max. humidity (storage)	20 % to 95 % non-condensing

Specification : DFK 23F618 (Color)

GENERAL BEHAVIOR	
Video formats @ Frame rate	640x480 RGB32 @ 120, 90, 60, 30, 15, 7.5, 3.75 fps 640x480 Y800 @ 120, 90, 60, 30, 15, 7.5, 3.75 fps 640x480 Y16 @ 120, 90, 60, 30, 15, 7.5, 3.75 fps
Sensitivity	0.05 lx
Dynamic range	8 / 12 bit

INTERFACE (OPTICAL)	
IR cut filter	yes
Sensor specification	ICX618AQA
Type	progressive scan
Format	1/4 "
Resolution	H: 640, V: 480
Pixel size	H: 5.6 µm, V: 5.6 µm
Lens mount	C/CS

INTERFACE (ELECTRICAL)	
Supply voltage	8 to 30 VDC
Current consumption	approx. 200 mA at 12 VDC

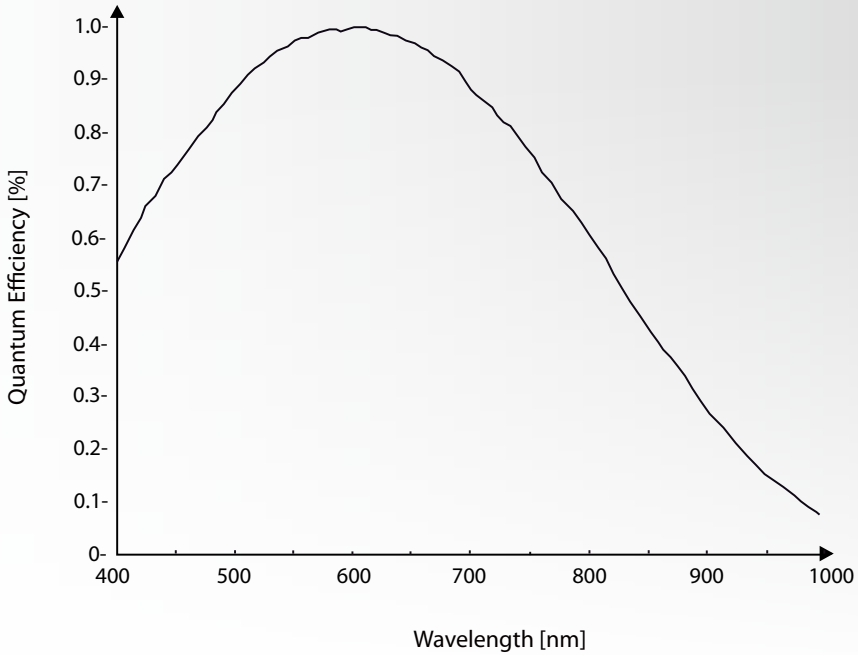
INTERFACE (MECHANICAL)	
Dimensions	H: 29 mm, W: 29 mm, L: 47 mm
Mass	65 g

ADJUSTMENTS (MANUAL)	
Shutter	1/100,000 to 30 s
Gain	0 to 36 dB
White balance	-2 dB to +6 dB

ADJUSTMENTS (AUTOMATIC)	
Shutter	1/100,000 to 30 s
Gain	0 to 36 dB
White balance	-2 dB to +6 dB

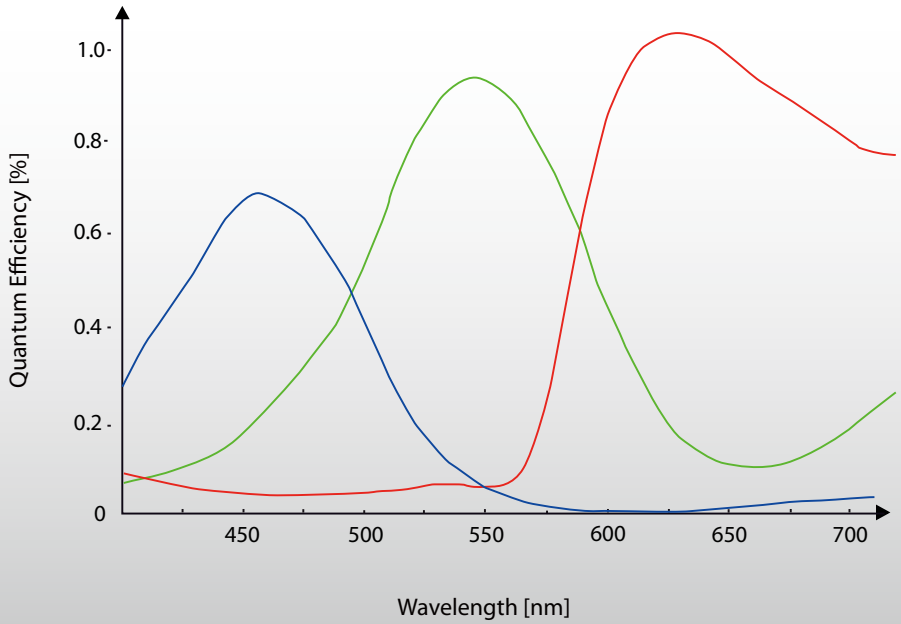
ENVIRONMENTAL	
Max. temperature (operation)	-5 °C to 45 °C
Max. temperature (storage)	-20 °C to 60 °C
Max. humidity (operation)	20 % to 80 % non-condensing
Max. humidity (storage)	20 % to 95 % non-condensing

Monochrome Spectral Response Curve



Sensor: Sony ICX 618 ALA - courtesy of SONY Deutschland GmbH

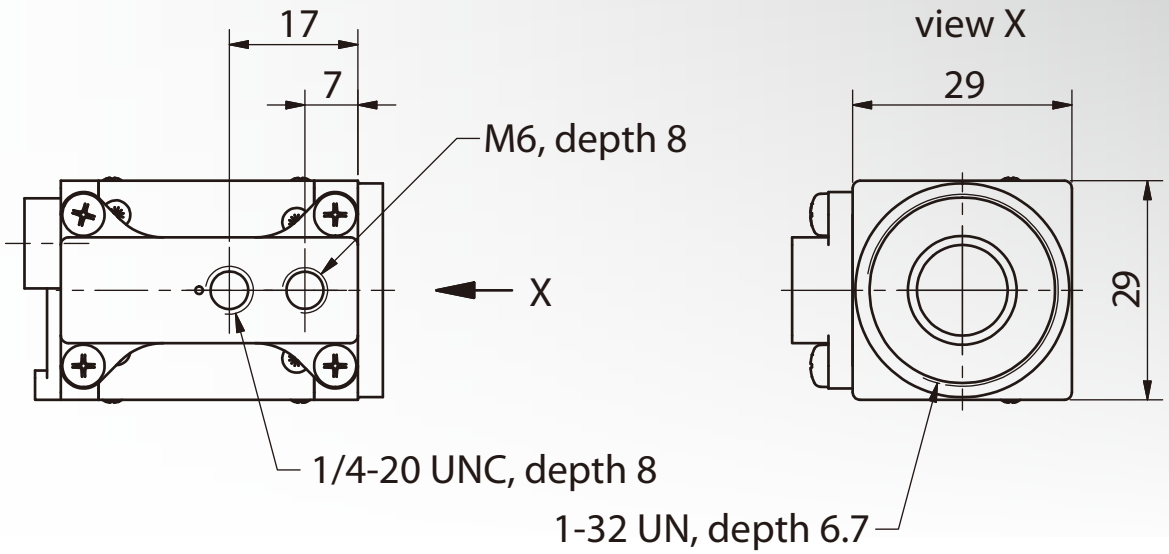
Color Spectral Response Curve

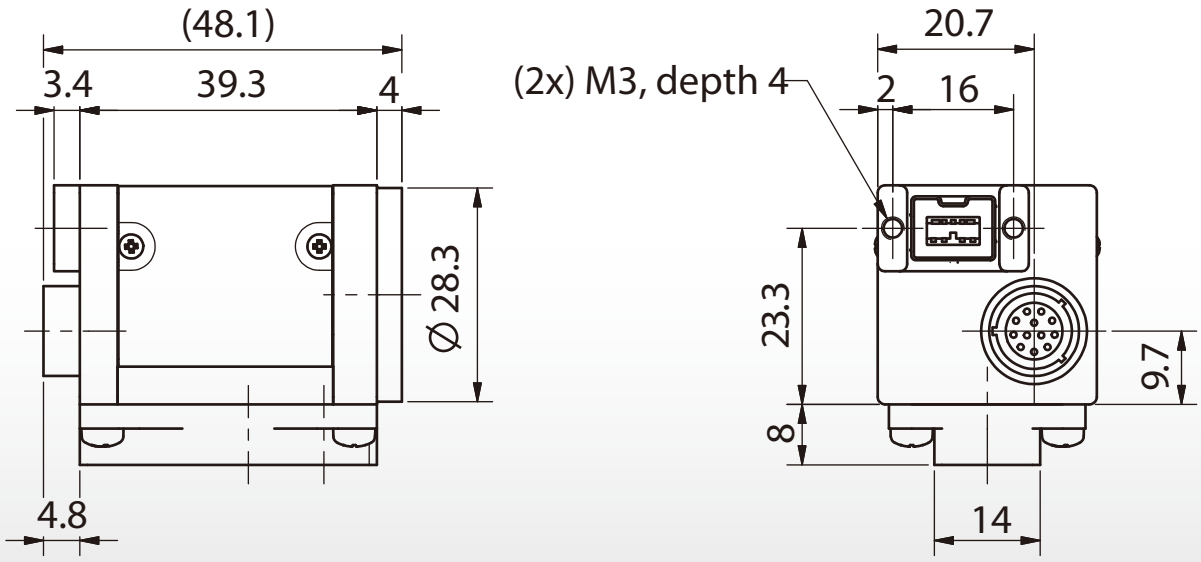


Sensor: Sony ICX 618 AQA - courtesy of SONY Deutschland GmbH

DMK 23F618 / DFK 23F618 Dimensional Diagram

(with tripod adapter)

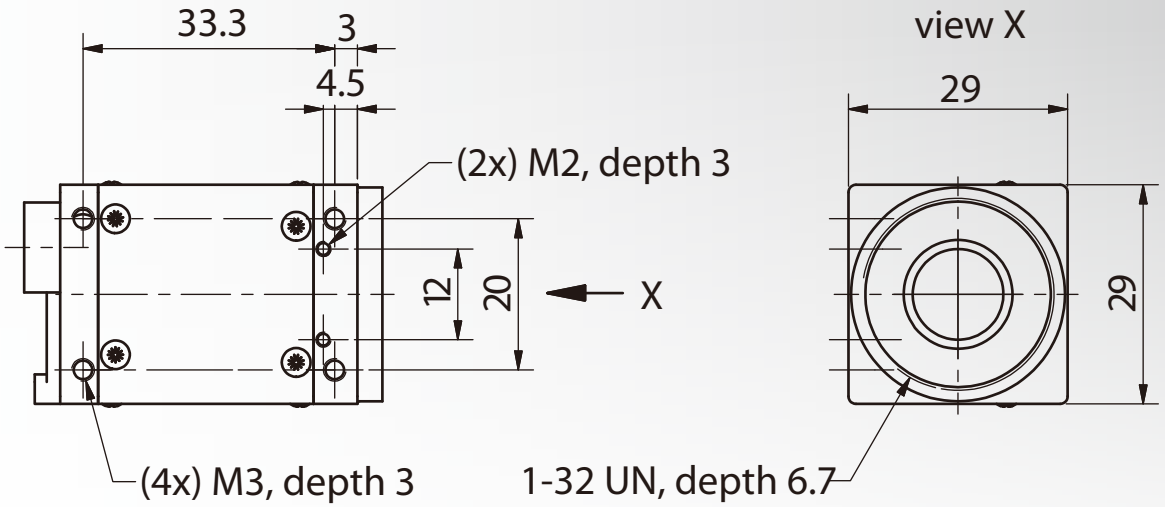


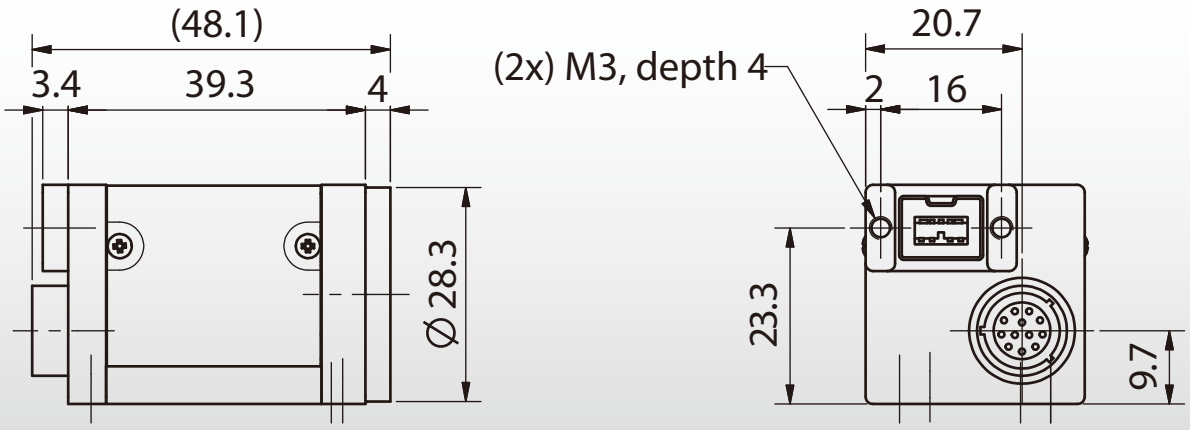


Dimensions: mm
Tolerances: DIN ISO 2768m

DMK 23F618 / DFK 23F618 Dimensional Diagram

(without tripod adapter)





Dimensions: mm
Tolerances: DIN ISO 2768m

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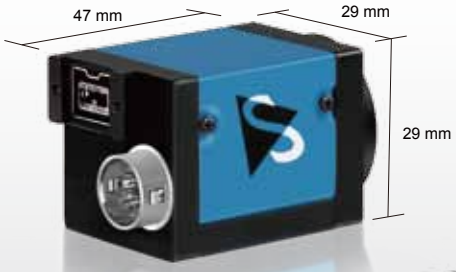
All weights and dimensions are approximate. Unless otherwise specified the lenses shown in the context of cameras are not shipped with these cameras.

The Imaging Source "IEEE 1394b" Series Cameras

DMK 23FV024 / DFK 23FV024



The Imaging Source DMK 23FV024 (monochrome) and DFK 23FV024 (color) IEEE 1394b cameras are the perfect solution for many industrial automation, quality assurance, security, surveillance, and medical applications. Utilizing the very sensitive Aptina WVGA MT9V024 monochrome and color global shutter CMOS sensors, these cameras feature a variety of input, output, strobe, and trigger options via an external 6-pin Hirose port. With up to 100 fps and a trigger delay of less than 5 micro seconds, the DMK 23FV024 and DFK 23FV024 IEEE 1394b cameras from The Imaging Source are a very low cost, yet highly versatile imaging solution.

Included :

- Camera, CS to C mount adapter and tripod mount
- Drivers compatible to WDM, DirectShow, DirectX®, TWAIN, ActivVisionTools, HALCON, VfW and LabVIEW® for Windows 7/8, Windows Vista, and Windows XP
- IC Capture camera control and aquisition software for Windows 7/8, Windows Vista, and Windows XP (32 and 64 bit versions)
- IC Imaging Control Software Development Kit (SDK) including a .NET component, an ActiveX component, and a C++ class library for Windows

Features :

- Variable trigger (4µs to 1s)
- Digital I/O strobe
- CS with C mount adapter
- Binning and ROI (CMOS only)
- Optional external DC driven auto iris controller

Accessories :

- CS to M12 adapters
- C, CS, and M12 lenses
- 6-pin Hirose trigger cable

Specification : DMK 23FV024 (Monochrome)

GENERAL BEHAVIOR	
Video formats @ Frame rate	752x480 Y800 @ 60, 30, 15, 7.5, 3.75 fps 752x480 Y16 @ 60, 30, 15, 7.5, 3.75 fps
Sensitivity	0.015 lx
Dynamic range	8 / 12 bit

INTERFACE (OPTICAL)	
IR cut filter	no
Sensor specification	MT9V024
Shutter	Global
Format	1/3 "
Resolution	H: 752, V: 480
Pixel size	H: 6.0 µm, V: 6.0 µm
Lens mount	C/CS

INTERFACE (ELECTRICAL)	
Supply voltage	8 to 30 VDC
Current consumption	approx. 200 mA at 12 VDC

INTERFACE (MECHANICAL)	
Dimensions	H: 29 mm, W: 29 mm, L: 47 mm
Mass	65 g

ADJUSTMENTS (MANUAL)	
Shutter	1/100,000 to 30 s
Gain	0 to 36 dB

ADJUSTMENTS (AUTOMATIC)	
Shutter	1/100,000 to 30 s
Gain	0 to 36 dB

ENVIRONMENTAL	
Max. temperature (operation)	-5 °C to 45 °C
Max. temperature (storage)	-20 °C to 60 °C
Max. humidity (operation)	20 % to 80 % non-condensing
Max. humidity (storage)	20 % to 95 % non-condensing

Specification : DFK 23FV024 (Color)

GENERAL BEHAVIOR	
Video formats @ Frame rate	752x480 RGB32 @ 60, 30, 15, 7.5, 3.75 fps 752x480 Y800 @ 60, 30, 15, 7.5, 3.75 fps 752x480 Y16 @ 60, 30, 15, 7.5, 3.75 fps
Sensitivity	0.05 lx
Dynamic range	8 / 12 bit

INTERFACE (OPTICAL)	
IR cut filter	yes
Sensor specification	MT9V024
Shutter	Global
Format	1/3 "
Resolution	H: 752, V: 480
Pixel size	H: 6.0 µm, V: 6.0 µm
Lens mount	C/CS

INTERFACE (ELECTRICAL)	
Supply voltage	8 to 30 VDC
Current consumption	approx. 200 mA at 12 VDC

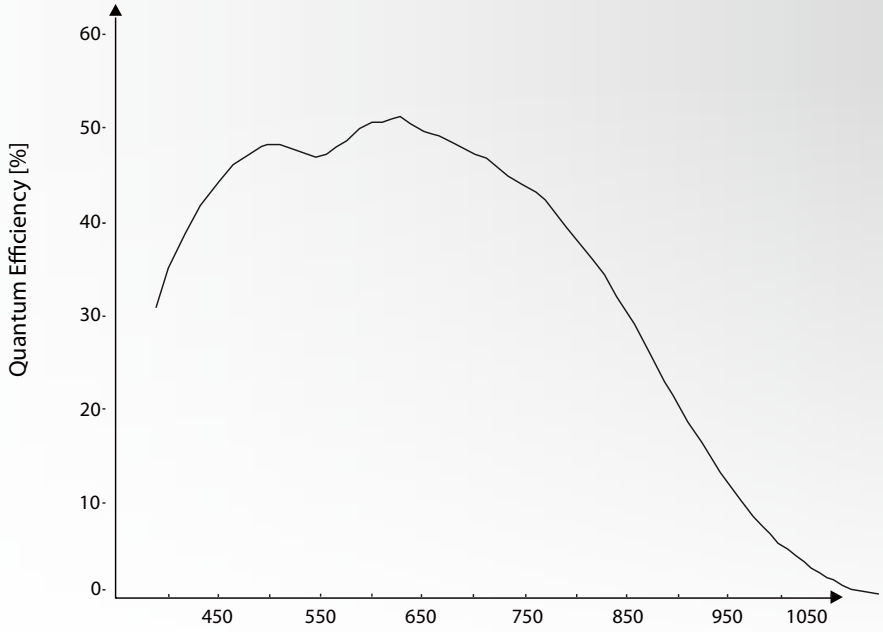
INTERFACE (MECHANICAL)	
Dimensions	H: 29 mm, W: 29 mm, L: 47 mm
Mass	65 g

ADJUSTMENTS (MANUAL)	
Shutter	1/100,000 to 30 s
Gain	0 to 36 dB
White balance	-2 dB to +6 dB

ADJUSTMENTS (AUTOMATIC)	
Shutter	1/100,000 to 30 s
Gain	0 to 36 dB
White balance	-2 dB to +6 dB

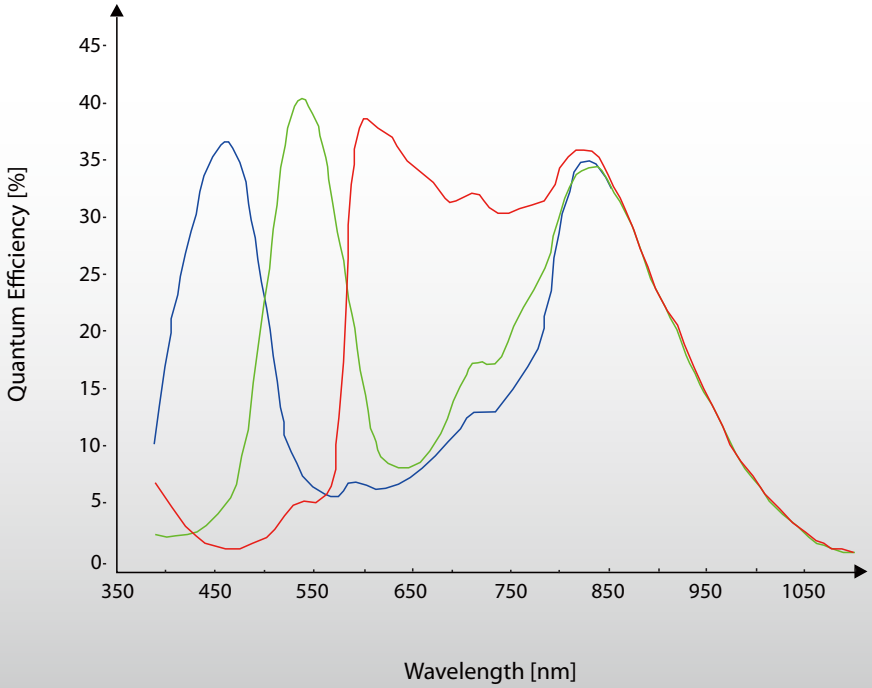
ENVIRONMENTAL	
Max. temperature (operation)	-5 °C to 45 °C
Max. temperature (storage)	-20 °C to 60 °C
Max. humidity (operation)	20 % to 80 % non-condensing
Max. humidity (storage)	20 % to 95 % non-condensing

Monochrome Spectral Response Curve



Sensor: Micron MT9V024 M - courtesy of Aptina Deutschland GmbH

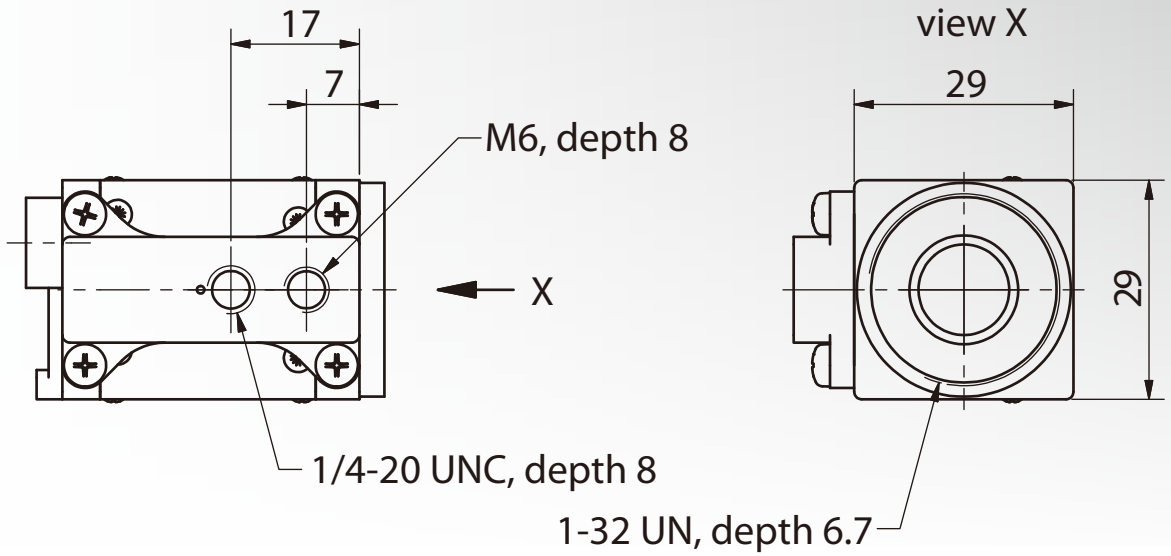
Color Spectral Response Curve

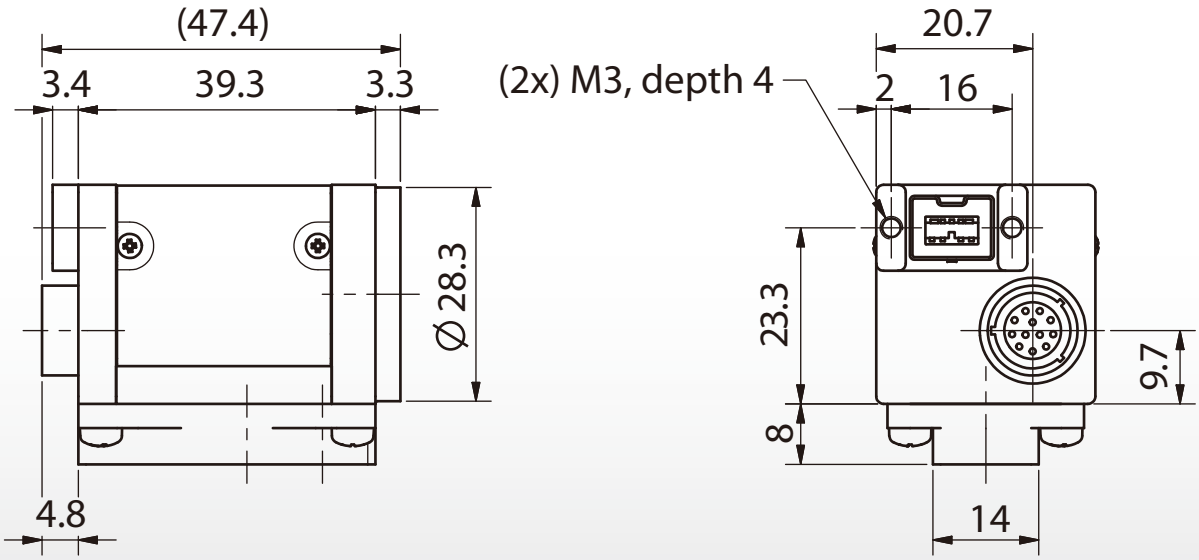


Sensor: Micron MT9V024 C - courtesy of Aptina Deutschland GmbH

DMK 23FV024 / DFK 23FV024 Dimensional Diagram

(with tripod adapter)

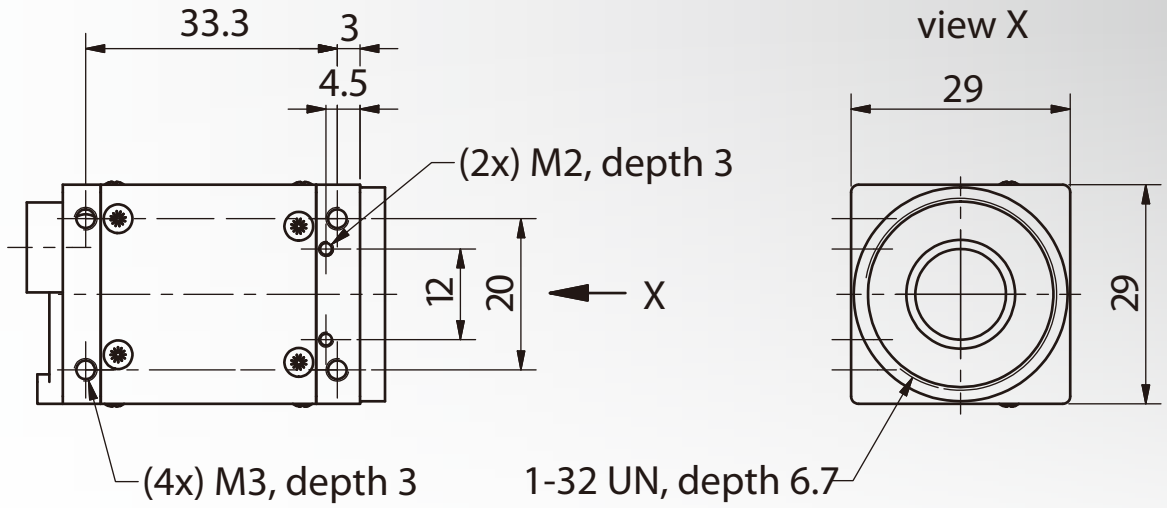


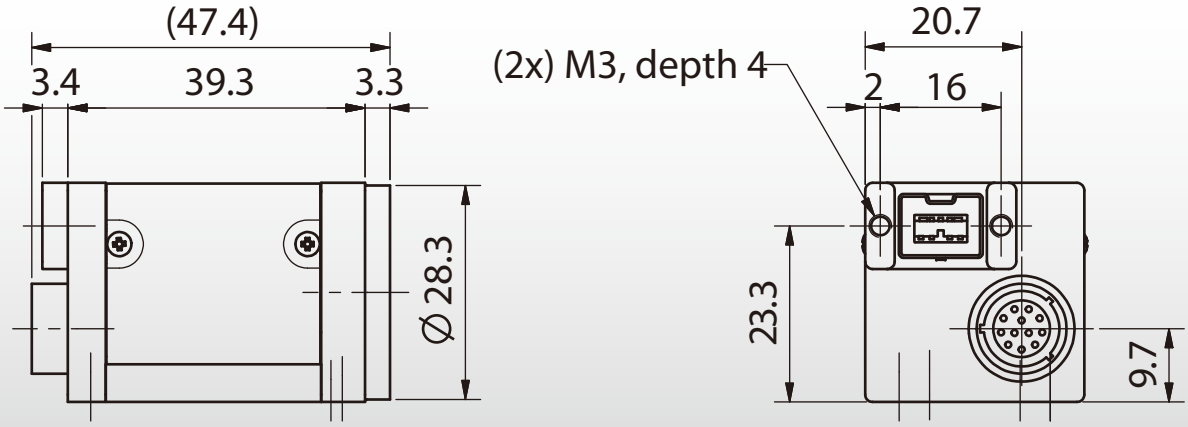


Dimensions: mm
Tolerances: DIN ISO 2768m

DMK 23FV024 / DFK 23FV024 Dimensional Diagram

(without tripod adapter)





Dimensions: mm
Tolerances: DIN ISO 2768m

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All weights and dimensions are approximate. Unless otherwise specified the lenses shown in the context of cameras are not shipped with these cameras.

The Imaging Source "IEEE 1394b" Series Cameras

DMK 23FM021 / DFK 23FM021

The Imaging Source DMK 23FM021 (monochrome) and DFK 23FM021 (color) IEEE 1394b cameras are the perfect solution for many industrial automation, quality assurance, security, surveillance, and medical applications. Utilizing the very sensitive Aptina 1.2 Megapixel MT9M021 monochrome and color global shutter CMOS sensors, these cameras feature a variety of input, output, strobe, and trigger options via an external 6-pin Hirose port. With up to 60 fps and a trigger delay of less than 5 micro seconds, the DMK 23FM021 and DFK 23FM021 IEEE 1394b cameras from The Imaging Source are a very low cost, yet highly versatile imaging solution.

Included :

- Camera, CS to C mount adapter and tripod mount
- Drivers compatible to WDM, DirectShow, DirectX®, TWAIN, ActivVisionTools, HALCON, VfW and LabVIEW® for Windows 7/8, Windows Vista, and Windows XP
- IC Capture camera control and aquisition software for Windows 7/8, Windows Vista, and Windows XP (32 and 64 bit versions)
- IC Imaging Control Software Development Kit (SDK) including a .NET component, an ActiveX component, and a C++ class library for Windows

Features :

- Variable trigger (4µs to 1s)
- Digital I/O strobe
- CS with C mount adapter
- Binning and ROI (CMOS only)
- Optional external DC driven auto iris controller

Accessories :

- CS to M12 adapters
- C, CS, and M12 lenses
- 6-pin Hirose trigger cable

Specification : DMK 23FM021 (Monochrome)

GENERAL BEHAVIOR	
Video formats @ Frame rate	1280x960 Y800 @ 45, 30, 15, 7.5, 3.75 fps 1280x960 Y16 @ 45, 30, 15, 7.5, 3.75 fps
Sensitivity	0.015 lx
Dynamic range	8 / 12 bit

INTERFACE (OPTICAL)	
IR cut filter	no
Sensor specification	MT9M021
Shutter	Global
Format	1/3 "
Resolution	H: 1280, V: 960
Pixel size	H: 3.75 µm, V: 3.75 µm
Lens mount	C/CS

INTERFACE (ELECTRICAL)	
Supply voltage	8 to 30 VDC
Current consumption	approx. 200 mA at 12 VDC

INTERFACE (MECHANICAL)	
Dimensions	H: 29 mm, W: 29 mm, L: 47 mm
Mass	65 g

ADJUSTMENTS (MANUAL)	
Shutter	1/100,000 to 30 s
Gain	0 to 36 dB

ADJUSTMENTS (AUTOMATIC)	
Shutter	1/100,000 to 30 s
Gain	0 to 36 dB

ENVIRONMENTAL	
Max. temperature (operation)	-5 °C to 45 °C
Max. temperature (storage)	-20 °C to 60 °C
Max. humidity (operation)	20 % to 80 % non-condensing
Max. humidity (storage)	20 % to 95 % non-condensing

Specification : DFK 23FM021 (Color)

GENERAL BEHAVIOR	
Video formats @ Frame rate	1280x960 RGB32 @ 45, 30, 15, 7.5, 3.75 fps 1280x960 Y800 @ 45, 30, 15, 7.5, 3.75 fps 1280x960 Y16 @ 45, 30, 15, 7.5, 3.75 fps
Sensitivity	0.05 lx
Dynamic range	8 / 12 bit

INTERFACE (OPTICAL)	
IR cut filter	yes
Sensor specification	MT9M021
Shutter	Global
Format	1/3 "
Resolution	H: 1280, V: 960
Pixel size	H: 3.75 µm, V: 3.75 µm
Lens mount	C/CS

INTERFACE (ELECTRICAL)	
Supply voltage	8 to 30 VDC
Current consumption	approx. 200 mA at 12 VDC

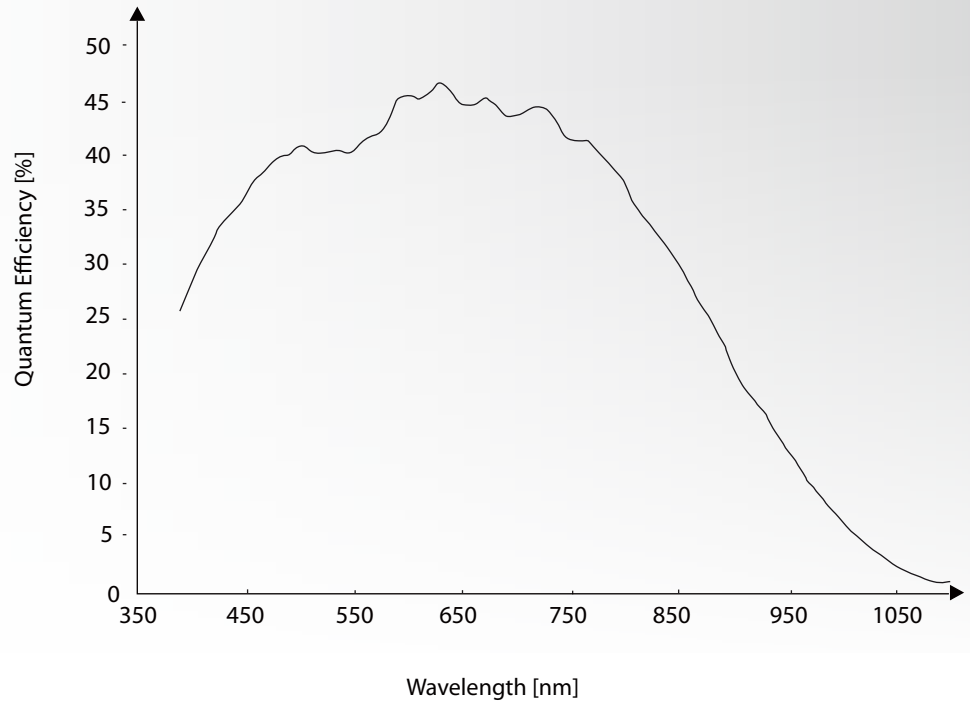
INTERFACE (MECHANICAL)	
Dimensions	H: 29 mm, W: 29 mm, L: 47 mm
Mass	65 g

ADJUSTMENTS (MANUAL)	
Shutter	1/100,000 to 30 s
Gain	0 to 36 dB
White balance	-2 dB to +6 dB

ADJUSTMENTS (AUTOMATIC)	
Shutter	1/100,000 to 30 s
Gain	0 to 36 dB
White balance	-2 dB to +6 dB

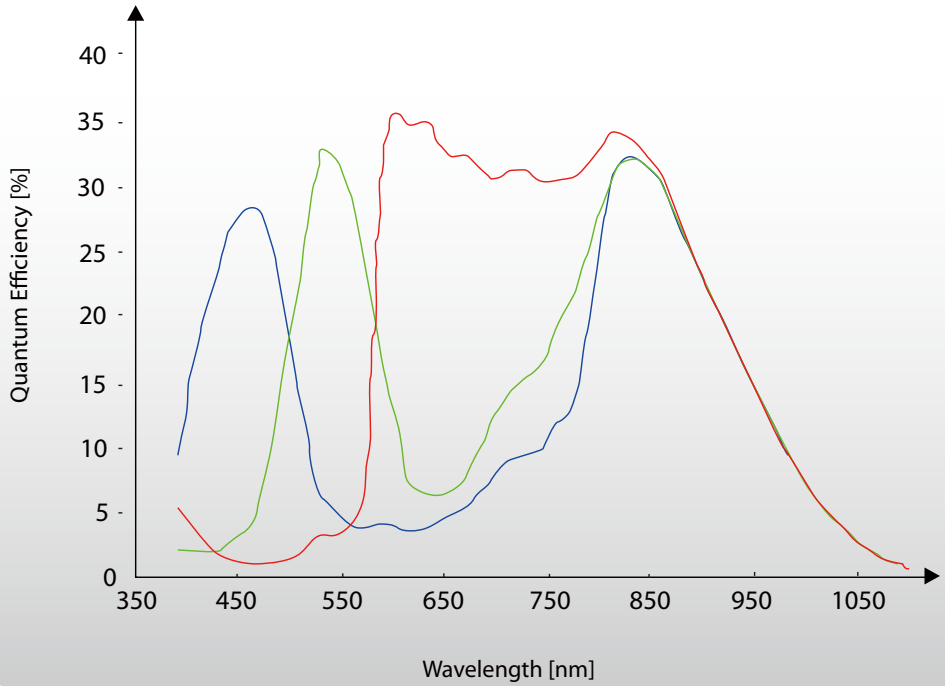
ENVIRONMENTAL	
Max. temperature (operation)	-5 °C to 45 °C
Max. temperature (storage)	-20 °C to 60 °C
Max. humidity (operation)	20 % to 80 % non-condensing
Max. humidity (storage)	20 % to 95 % non-condensing

Monochrome Spectral Response Curve



Sensor: Micron MT9M021M - courtesy of Aptina Deutschland GmbH

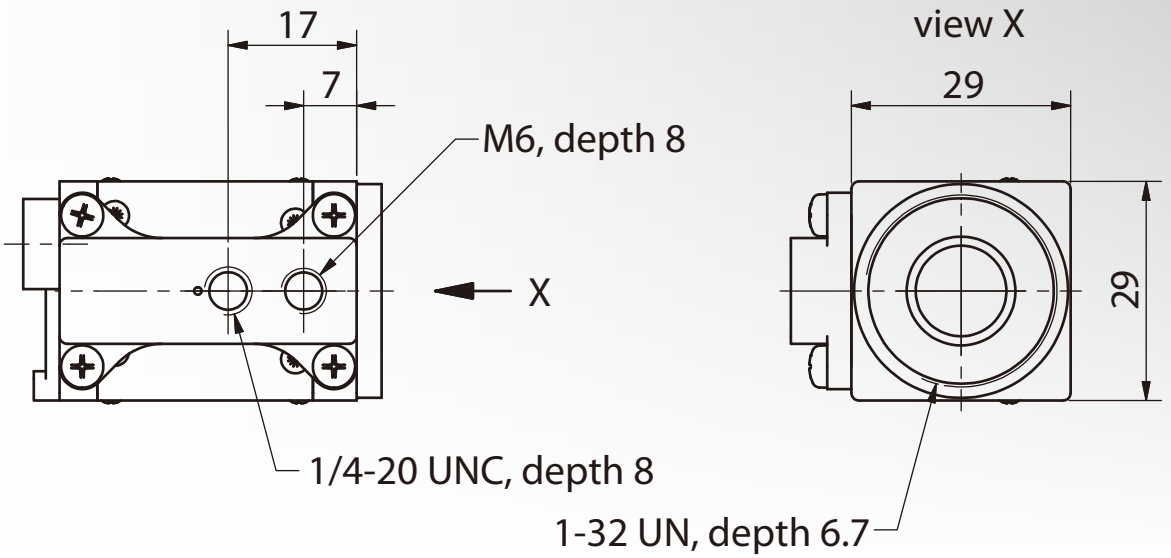
Color Spectral Response Curve

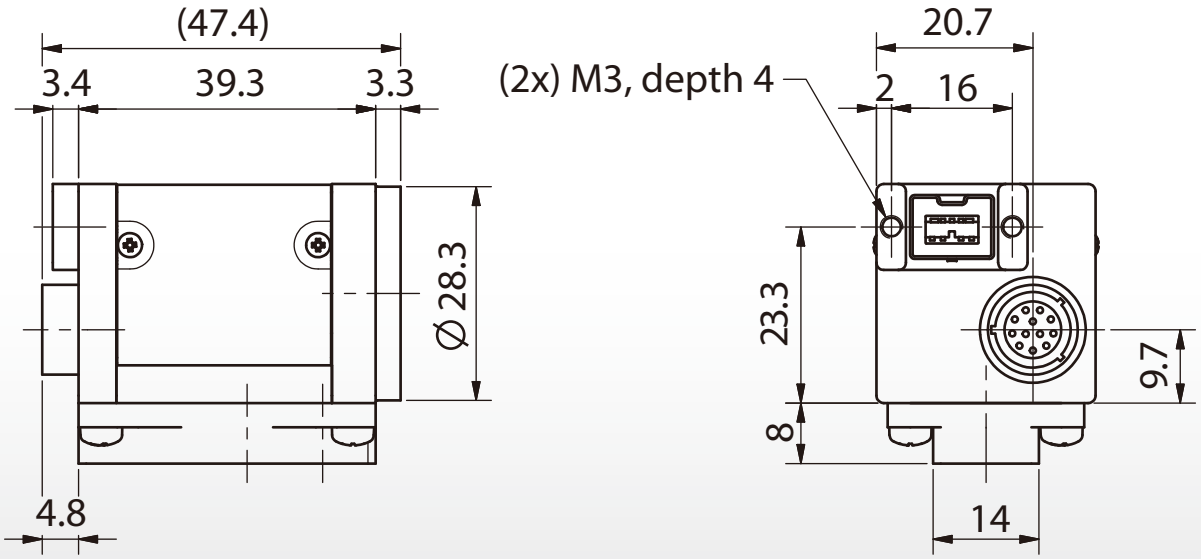


Sensor: Micron MT9M021C - courtesy of Aptina Deutschland GmbH

DMK 23FM021 / DFK 23FM021 Dimensional Diagram

(with tripod adapter)

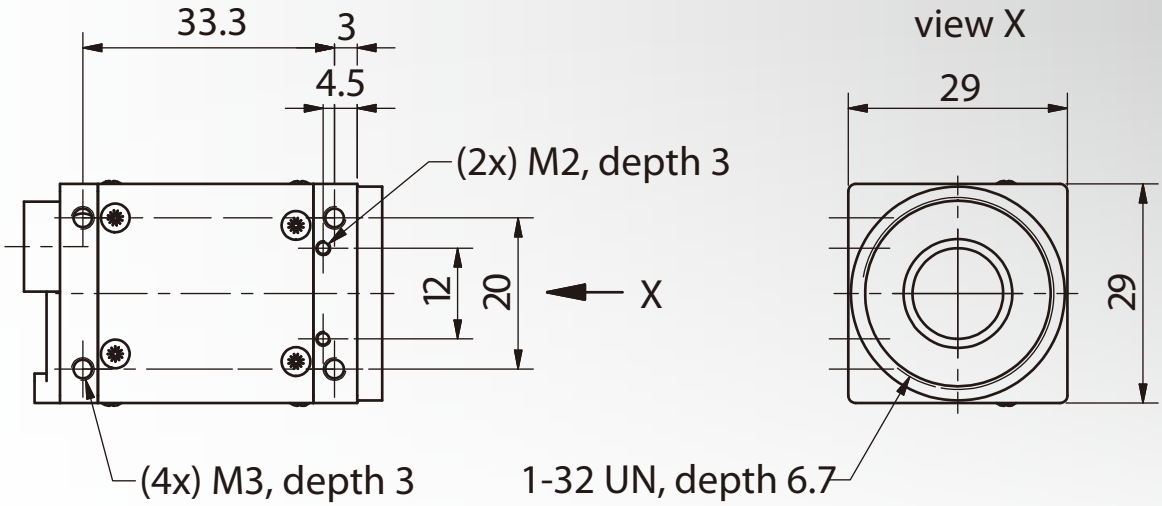


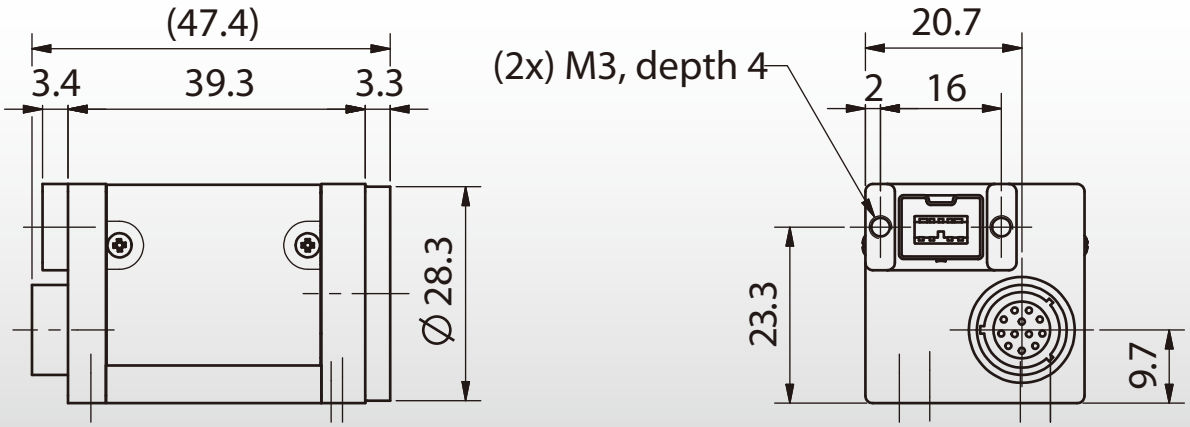


Dimensions: mm
Tolerances: DIN ISO 2768m

DMK 23FM021 / DFK 23FM021 Dimensional Diagram

(without tripod adapter)





Dimensions: mm
Tolerances: DIN ISO 2768m

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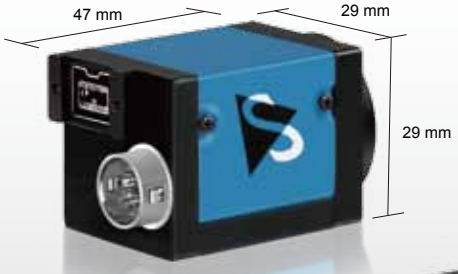
The Imaging Source "IEEE 1394b" Series Cameras

DMK 23F445 / DFK 23F445



The Imaging Source DMK 23F445 (monochrome) and DFK 23F445 (color) IEEE 1394b cameras are the perfect solution for many industrial automation, quality assurance, security, surveillance, and medical applications. Utilizing the very sensitive SONY Ex View HAD ICX 445ALA/AQA monochrome and color CCD sensors, these cameras feature a variety of input, output, strobe, and trigger options via an external 6-pin Hirose port. With up to 30 fps and a trigger delay of less than 5 micro seconds, the DMK 23F445 and DFK 23F445 IEEE 1394b cameras from The Imaging Source are a low cost, yet highly versatile imaging solution.

Included :

- Camera, CS to C mount adapter and tripod mount
- Drivers compatible to WDM, DirectShow, DirectX®, TWAIN, ActivVisionTools, HALCON, VfW and LabVIEW® for Windows 7/8, Windows Vista, and Windows XP
- IC Capture camera control and aquisition software for Windows 7/8, Windows Vista, and Windows XP (32 and 64 bit versions)
- IC Imaging Control Software Development Kit (SDK) including a .NET component, an ActiveX component, and a C++ class library for Windows

Features :

- Variable trigger (4µs to 1s)
- Digital I/O strobe
- CS with C mount adapter
- Optional external DC driven auto iris controller

Accessories :

- CS to M12 adapters
- C, CS, and M12 lenses
- 6-pin Hirose trigger cable

Specification : DMK 23F445 (Monochrome)

GENERAL BEHAVIOR	
Video formats @ Frame rate	1280x960 Y800 @ 30, 20, 15, 7.5, 3.75 fps 1280x960 Y16 @ 30, 20, 15, 7.5, 3.75 fps
Sensitivity	0.015 lx
Dynamic range	8 / 12 bit

INTERFACE (OPTICAL)	
IR cut filter	no
Sensor specification	ICX445ALA
Type	progressive scan
Format	1/3 "
Resolution	H: 1280, V: 960
Pixel size	H: 3.75 µm, V: 3.75 µm
Lens mount	C/CS

INTERFACE (ELECTRICAL)	
Supply voltage	8 to 30 VDC
Current consumption	approx. 200 mA at 12 VDC

INTERFACE (MECHANICAL)	
Dimensions	H: 29 mm, W: 29 mm, L: 47 mm
Mass	65 g

ADJUSTMENTS (MANUAL)	
Shutter	1/100,000 to 30 s
Gain	0 to 36 dB

ADJUSTMENTS (AUTOMATIC)	
Shutter	1/100,000 to 30 s
Gain	0 to 36 dB

ENVIRONMENTAL	
Max. temperature (operation)	-5 °C to 45 °C
Max. temperature (storage)	-20 °C to 60 °C
Max. humidity (operation)	20 % to 80 % non-condensing
Max. humidity (storage)	20 % to 95 % non-condensing

Specification : DFK 23F445 (Color)

GENERAL BEHAVIOR	
Video formats @ Frame rate	1280x960 RGB32 @ 30, 20, 15, 7.5, 3.75 fps 1280x960 Y800 @ 30, 20, 15, 7.5, 3.75 fps 1280x960 Y16 @ 30, 20, 15, 7.5, 3.75 fps
Sensitivity	0.05 lx
Dynamic range	8 bit

INTERFACE (OPTICAL)	
IR cut filter	yes
Sensor specification	ICX445AQA
Type	progressive scan
Format	1/3 "
Resolution	H: 1280, V: 960
Pixel size	H: 3.75 µm, V: 3.75 µm
Lens mount	C/CS

INTERFACE (ELECTRICAL)	
Supply voltage	8 to 30 VDC
Current consumption	approx. 200 mA at 12 VDC

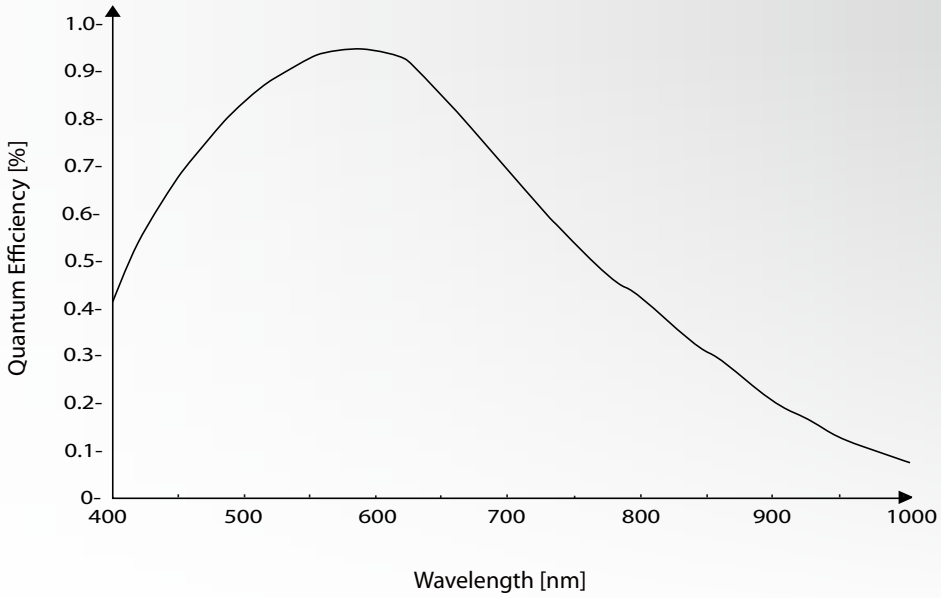
INTERFACE (MECHANICAL)	
Dimensions	H: 29 mm, W: 29 mm, L: 47 mm
Mass	65 g

ADJUSTMENTS (MANUAL)	
Shutter	1/100,000 to 30 s
Gain	0 to 36 dB
White balance	-2 dB to +6 dB

ADJUSTMENTS (AUTOMATIC)	
Shutter	1/100,000 to 30 s
Gain	0 to 36 dB
White balance	-2 dB to +6 dB

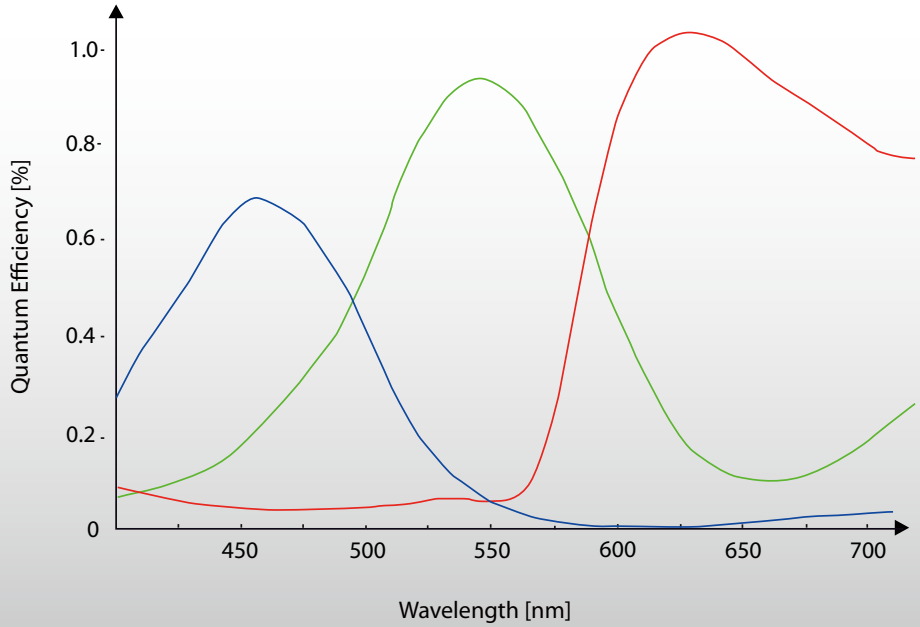
ENVIRONMENTAL	
Max. temperature (operation)	-5 °C to 45 °C
Max. temperature (storage)	-20 °C to 60 °C
Max. humidity (operation)	20 % to 80 % non-condensing
Max. humidity (storage)	20 % to 95 % non-condensing

Monochrome Spectral Response Curve



Sensor: Sony ICX 445ALA - courtesy of SONY Deutschland GmbH

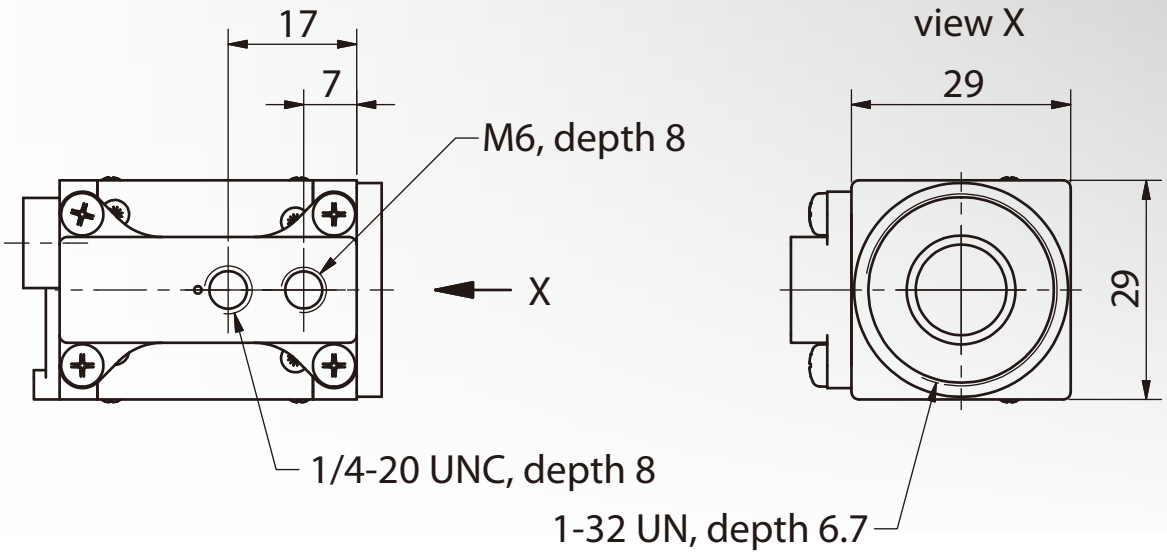
Color Spectral Response Curve

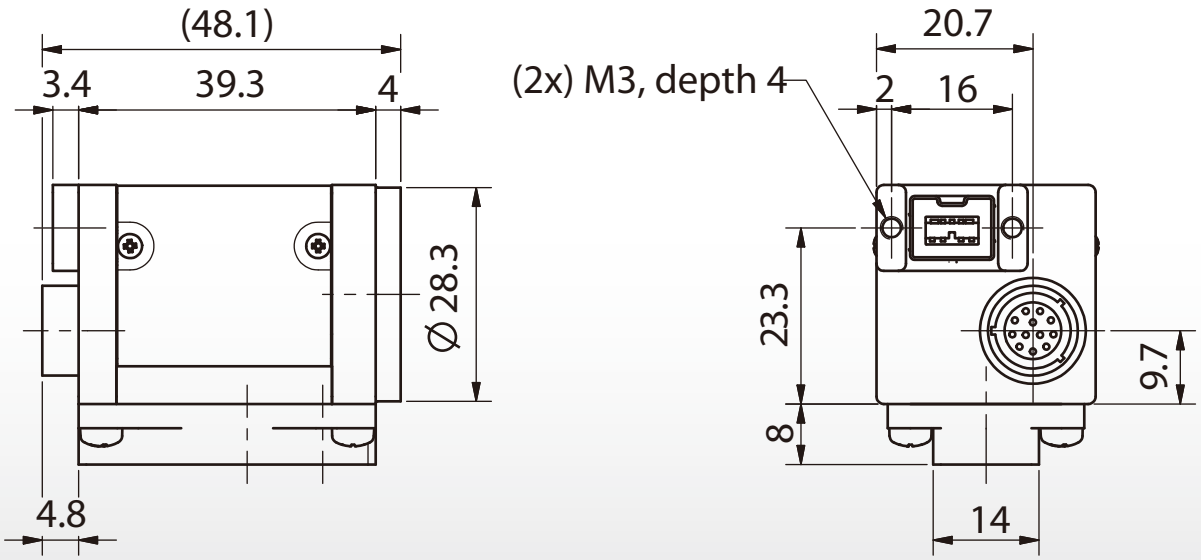


Sensor: Sony ICX 445AQA - courtesy of SONY Deutschland GmbH

DMK 23F445 / DFK 23F445 Dimensional Diagram

(with tripod adapter)

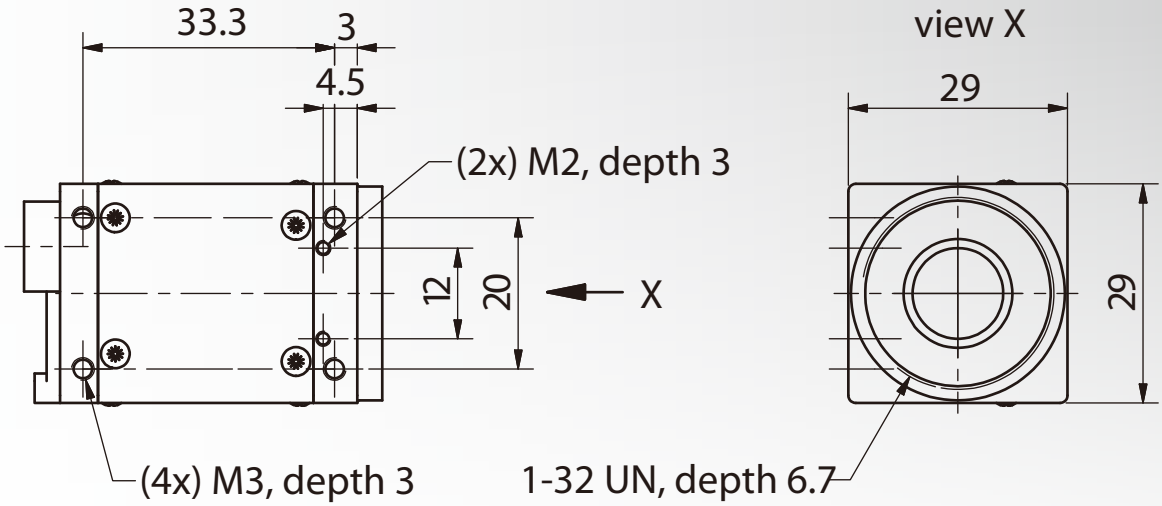


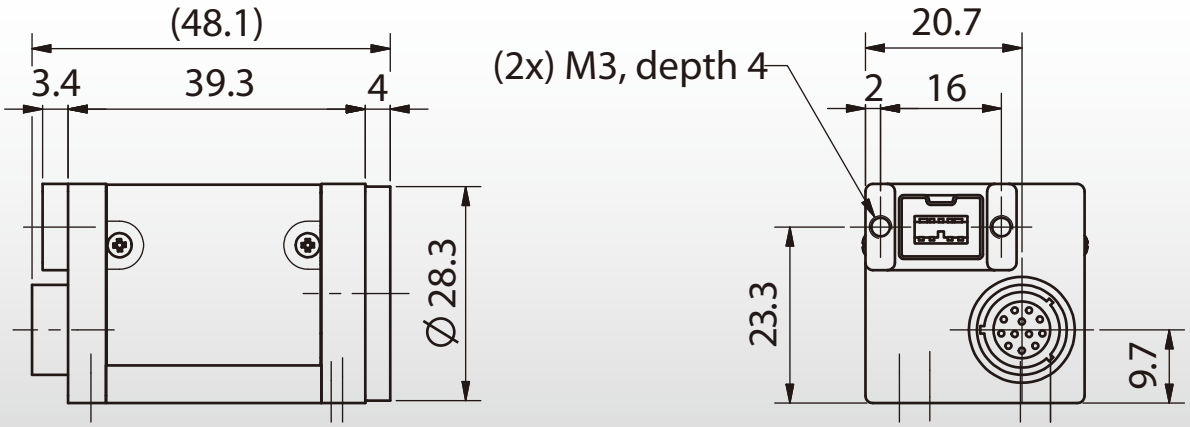


Dimensions: mm
Tolerances: DIN ISO 2768m

DMK 23F445 / DFK 23F445 Dimensional Diagram

(without tripod adapter)





Dimensions: mm
Tolerances: DIN ISO 2768m

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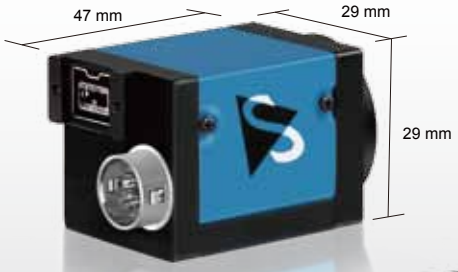
The Imaging Source "IEEE 1394b" Series Cameras

DMK 23F274 / DFK 23F274



The Imaging Source DMK 23F274 (monochrome) and DFK 23F274 (color) IEEE 1394b cameras are the perfect solution for many industrial automation, quality assurance, security, surveillance, and medical applications. Utilizing the very sensitive SONY Ex View HAD ICX 274ALA/AQA monochrome and color CCD sensors, these cameras feature a variety of input, output, strobe, and trigger options via a 6-pin external Hirose port. With up to 20 fps and a trigger delay of less than 5 micro seconds, the DMK 23F274 and DFK 23F274 IEEE 1394b cameras from The Imaging Source are a low cost, yet highly versatile imaging solution.

Included :

- Camera, CS to C mount adapter and tripod mount
- Drivers compatible to WDM, DirectShow, DirectX®, TWAIN, ActivVisionTools, HALCON, VfW and LabVIEW® for Windows 7/8, Windows Vista, and Windows XP
- IC Capture camera control and aquisition software for Windows 7/8, Windows Vista, and Windows XP (32 and 64 bit versions)
- IC Imaging Control Software Development Kit (SDK) including a .NET component, an ActiveX component, and a C++ class library for Windows

Features :

- Variable trigger (4µs to 1s)
- Digital I/O strobe
- CS with C mount adapter
- Optional external DC driven auto iris controller

Accessories :

- CS to M12 adapters
- C, CS, and M12 lenses
- 6-pin Hirose trigger cable

Specification : DMK 23F274 (Monochrome)

GENERAL BEHAVIOR	
Video formats @ Frame rate	1600x1200 Y800 @ 20, 15, 7.5, 3.75 fps 1600x1200 Y16 @ 20, 15, 7.5, 3.75 fps
Sensitivity	0.015 lx
Dynamic range	8 / 12 bit

INTERFACE (OPTICAL)	
IR cut filter	no
Sensor specification	ICX274AL
Type	progressive scan
Format	1/1.8 "
Resolution	H: 1600, V: 1200
Pixel size	H: 4.4 µm, V: 4.4 µm
Lens mount	C/CS

INTERFACE (ELECTRICAL)	
Supply voltage	8 to 30 VDC
Current consumption	approx. 200 mA at 12 VDC

INTERFACE (MECHANICAL)	
Dimensions	H: 29 mm, W: 29 mm, L: 47 mm
Mass	65 g

ADJUSTMENTS (MANUAL)	
Shutter	1/100,000 to 30 s
Gain	0 to 36 dB

ADJUSTMENTS (AUTOMATIC)	
Shutter	1/100,000 to 30 s
Gain	0 to 36 dB

ENVIRONMENTAL	
Max. temperature (operation)	-5 °C to 45 °C
Max. temperature (storage)	-20 °C to 60 °C
Max. humidity (operation)	20 % to 80 % non-condensing
Max. humidity (storage)	20 % to 95 % non-condensing

Specification : DFK 23F274 (Color)

GENERAL BEHAVIOR	
Video formats @ Frame rate	1600x1200 RGB32 @ 20, 15, 7.5, 3.75 fps 1600x1200 Y800 @ 20, 15, 7.5, 3.75 fps 1600x1200 Y16 @ 20, 15, 7.5, 3.75 fps
Sensitivity	0.05 lx
Dynamic range	8 / 12 bit

INTERFACE (OPTICAL)	
IR cut filter	yes
Sensor specification	ICX274AQ
Type	progressive scan
Format	1/1.8 "
Resolution	H: 1600, V: 1200
Pixel size	H: 4.4 µm, V: 4.4 µm
Lens mount	C/CS

INTERFACE (ELECTRICAL)	
Supply voltage	8 to 30 VDC
Current consumption	approx. 200 mA at 12 VDC

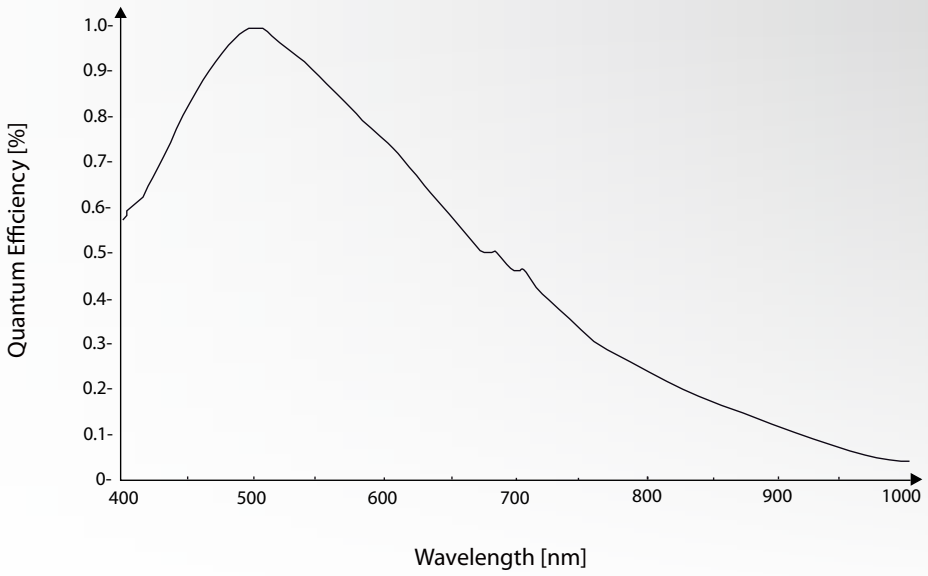
INTERFACE (MECHANICAL)	
Dimensions	H: 29 mm, W: 29 mm, L: 47 mm
Mass	65 g

ADJUSTMENTS (MANUAL)	
Shutter	1/100,000 to 30 s
Gain	0 to 36 dB
White balance	-2 dB to +6 dB

ADJUSTMENTS (AUTOMATIC)	
Shutter	1/100,000 to 30 s
Gain	0 to 36 dB
White balance	-2 dB to +6 dB

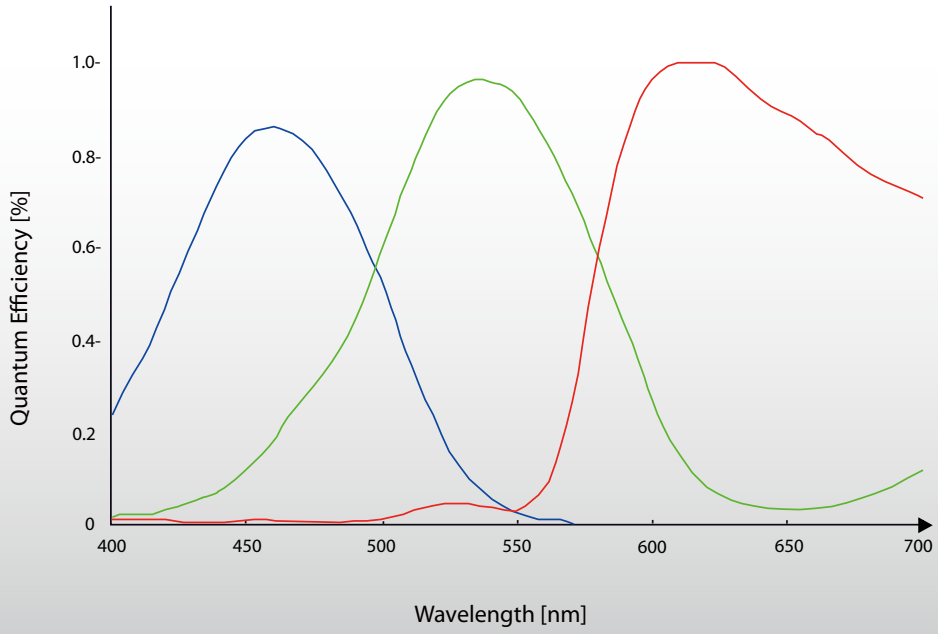
ENVIRONMENTAL	
Max. temperature (operation)	-5 °C to 45 °C
Max. temperature (storage)	-20 °C to 60 °C
Max. humidity (operation)	20 % to 80 % non-condensing
Max. humidity (storage)	20 % to 95 % non-condensing

Monochrome Spectral Response Curve



Sensor: Sony ICX 274AL - courtesy of SONY Deutschland GmbH

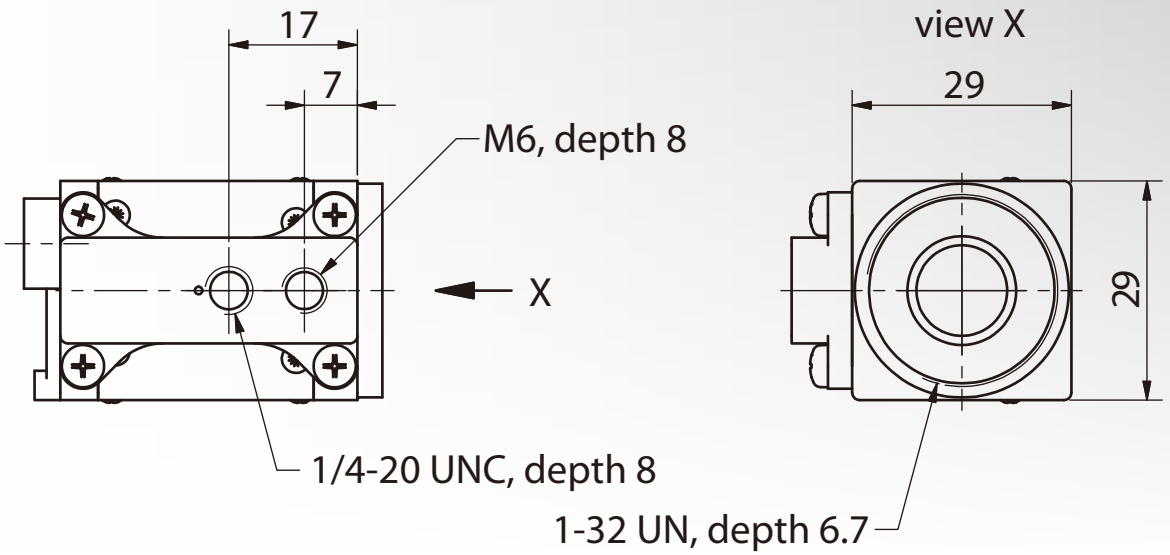
Color Spectral Response Curve

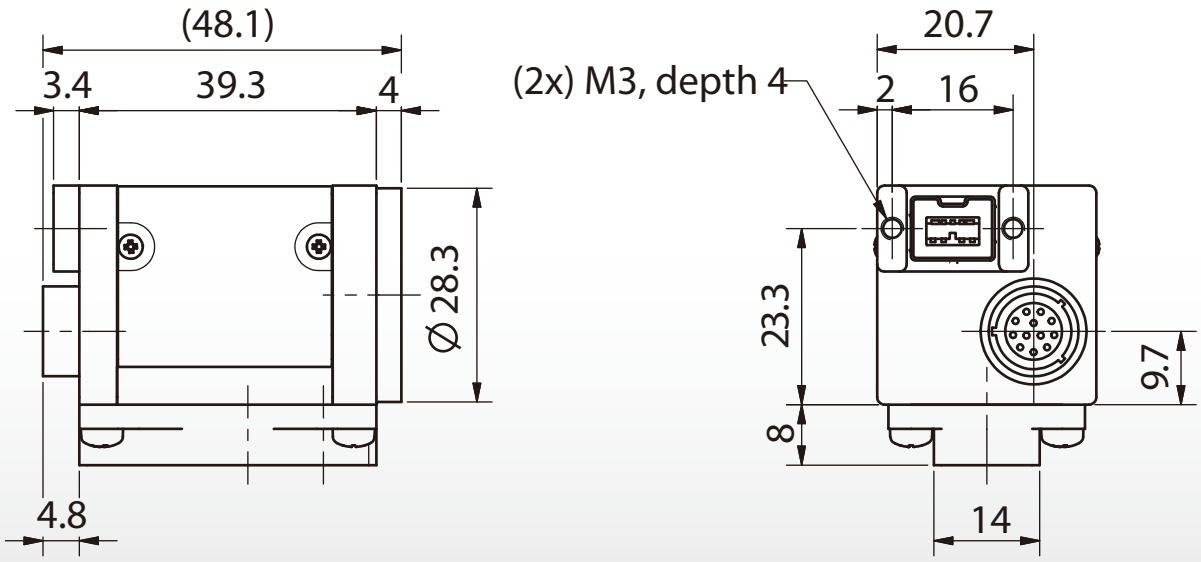


Sensor: Sony ICX 274AQ - courtesy of SONY Deutschland GmbH

DMK 23F274 / DFK 23F274 Dimensional Diagram

(with tripod adapter)

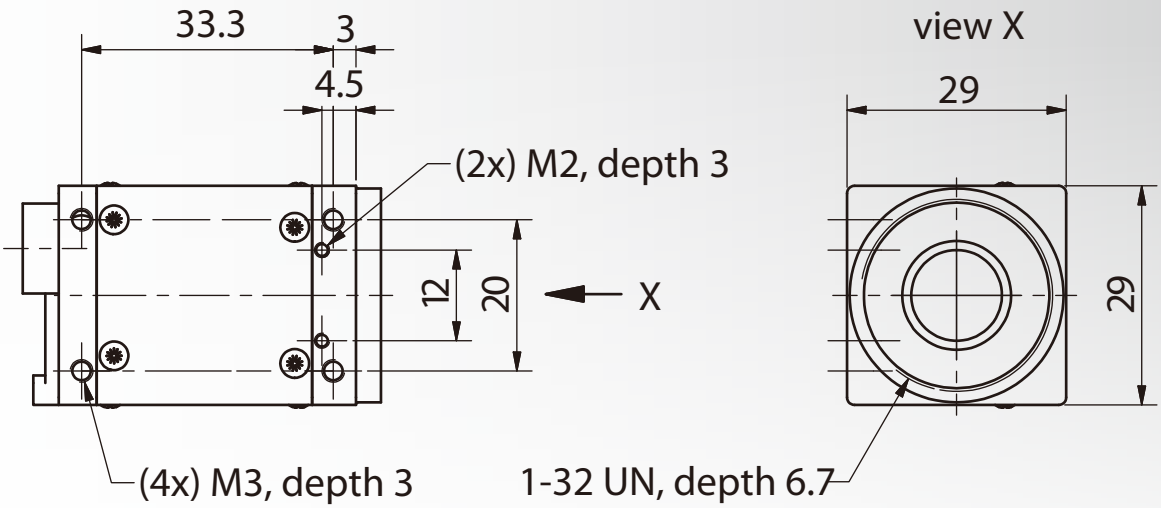


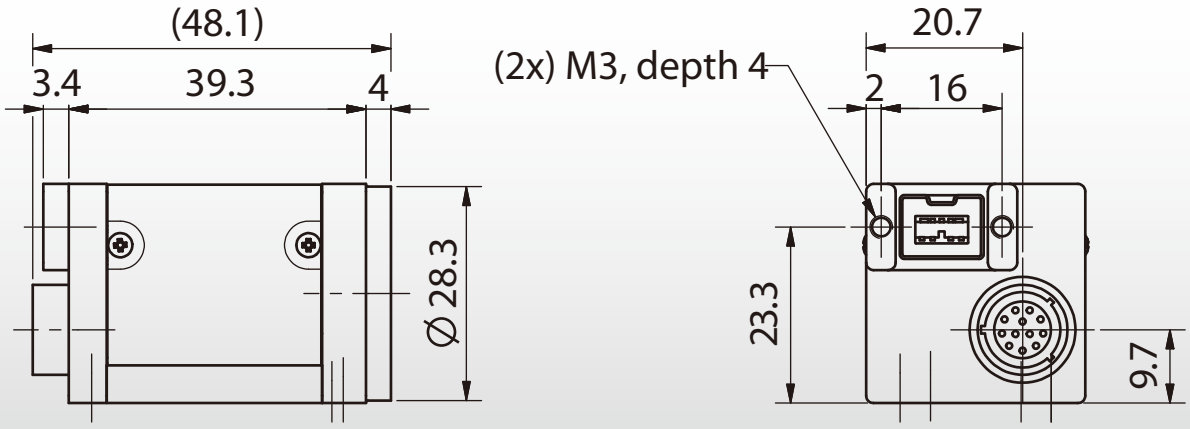


Dimensions: mm
Tolerances: DIN ISO 2768m

DMK 23F274 / DFK 23F274 Dimensional Diagram

(without tripod adapter)





Dimensions: mm
Tolerances: DIN ISO 2768m

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All weights and dimensions are approximate. Unless otherwise specified the lenses shown in the context of cameras are not shipped with these cameras.

The Imaging Source "IEEE 1394b" Series Cameras

DMK 23FP031 / DFK 23FP031

The Imaging Source DMK 23FP031 (monochrome) and DFK 23FP031 (color) IEEE 1394b cameras are the perfect solution for many industrial automation, quality assurance, security, surveillance, and medical applications. Utilizing the very sensitive Aptina 5 Megapixel MT9P031 monochrome and color rolling shutter CMOS sensors, these cameras feature a variety of input, output, strobe, and trigger options via an external 6-pin Hirose port. With up to 15 fps and a trigger delay of less than 5 micro seconds, the DMK 23FP031 and DFK 23FP031 IEEE 1394b cameras from The Imaging Source are a very low cost, yet highly versatile imaging solution.

Included :

- Camera, CS to C mount adapter and tripod mount
- Drivers compatible to WDM, DirectShow, DirectX®, TWAIN, ActivVisionTools, HALCON, VfW and LabVIEW® for Windows 7/8, Windows Vista, and Windows XP
- IC Capture camera control and aquisition software for Windows 7/8, Windows Vista, and Windows XP (32 and 64 bit versions)
- IC Imaging Control Software Development Kit (SDK) including a .NET component, an ActiveX component, and a C++ class library for Windows

Features :

- Variable trigger (4µs to 1s)
- Digital I/O strobe
- CS with C mount adapter
- Binning and ROI (CMOS only)
- Optional external DC driven auto iris controller

Accessories :

- CS to M12 adapters
- C, CS, and M12 lenses
- 6-pin Hirose trigger cable

Specification : DMK 23FP031 (Monochrome)

GENERAL BEHAVIOR	
Video formats @ Frame rate	2592x1944 Y800 @ 15, 7.5, 3.75 fps 2592x1944 Y16 @ 15, 7.5, 3.75 fps
Sensitivity	0.015 lx
Dynamic range	8 / 12 bit

INTERFACE (OPTICAL)	
IR cut filter	no
Sensor specification	MT9P031
Shutter	Rolling
Format	1/2.5 "
Resolution	H: 2592, V: 1944
Pixel size	H: 2.2 µm, V: 2.2 µm
Lens mount	C/CS

INTERFACE (ELECTRICAL)	
Supply voltage	8 to 30 VDC
Current consumption	approx. 200 mA at 12 VDC

INTERFACE (MECHANICAL)	
Dimensions	H: 29 mm, W: 29 mm, L: 47 mm
Mass	65 g

ADJUSTMENTS (MANUAL)	
Shutter	1/100,000 to 30 s
Gain	0 to 36 dB

ADJUSTMENTS (AUTOMATIC)	
Shutter	1/100,000 to 30 s
Gain	0 to 36 dB

ENVIRONMENTAL	
Max. temperature (operation)	-5 °C to 45 °C
Max. temperature (storage)	-20 °C to 60 °C
Max. humidity (operation)	20 % to 80 % non-condensing
Max. humidity (storage)	20 % to 95 % non-condensing

Specification : DFK 23FP031 (Color)

GENERAL BEHAVIOR	
Video formats @ Frame rate	2592x1944 RGB32 @ 15, 7.5, 3.75 fps 2592x1944 Y800 @ 15, 7.5, 3.75 fps 2592x1944 Y16 @ 15, 7.5, 3.75 fps
Sensitivity	0.05 lx
Dynamic range	8 / 12 bit

INTERFACE (OPTICAL)	
IR cut filter	yes
Sensor specification	MT9P031
Shutter	Rolling
Format	1/2.5 "
Resolution	H: 2592, V: 1944
Pixel size	H: 2.2 µm, V: 2.2 µm
Lens mount	C/CS

INTERFACE (ELECTRICAL)	
Supply voltage	8 to 30 VDC
Current consumption	approx. 200 mA at 12 VDC

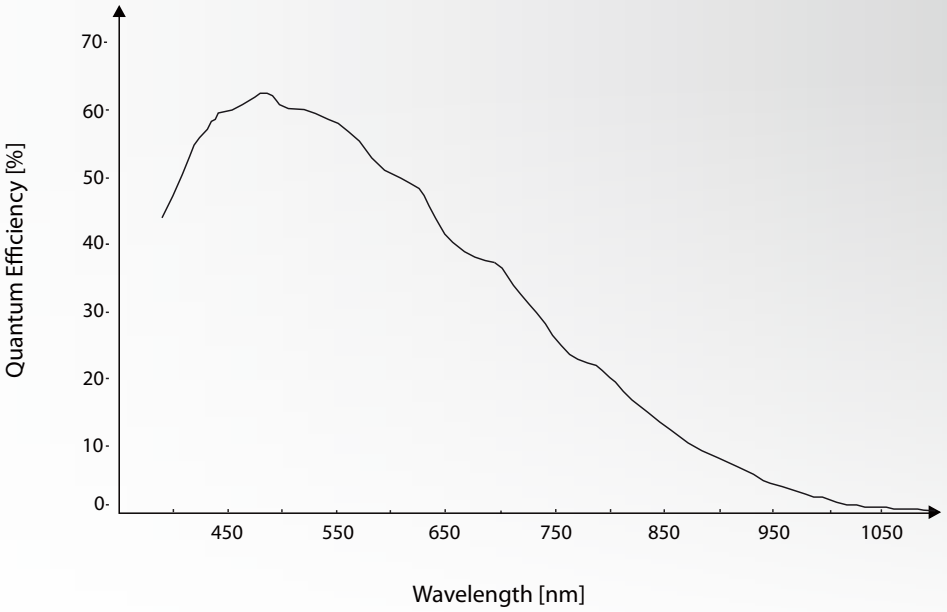
INTERFACE (MECHANICAL)	
Dimensions	H: 29 mm, W: 29 mm, L: 47 mm
Mass	65 g

ADJUSTMENTS (MANUAL)	
Shutter	1/100,000 to 30 s
Gain	0 to 36 dB
White balance	-2 dB to +6 dB

ADJUSTMENTS (AUTOMATIC)	
Shutter	1/100,000 to 30 s
Gain	0 to 36 dB
White balance	-2 dB to +6 dB

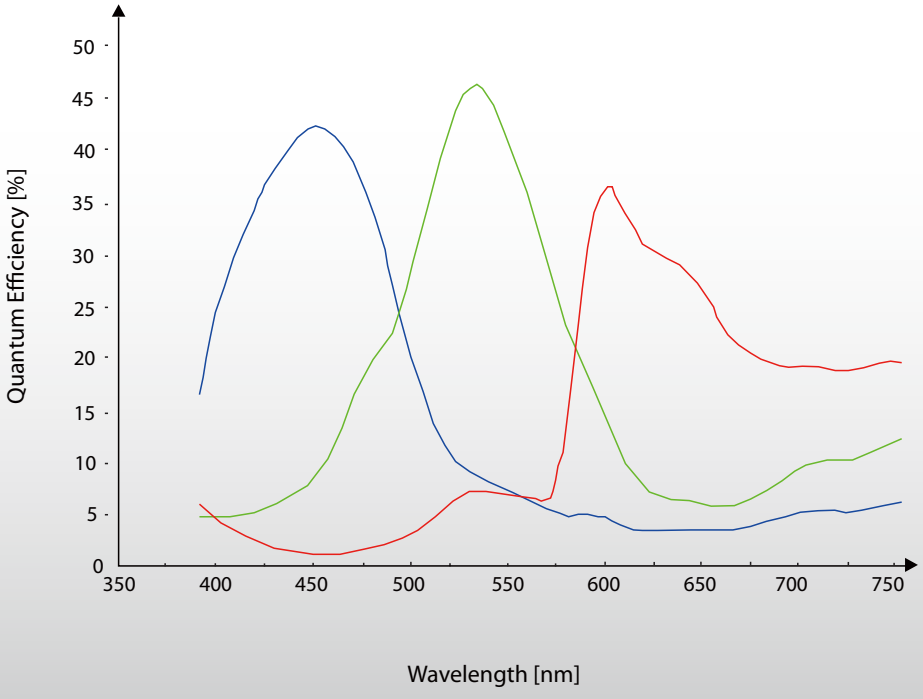
ENVIRONMENTAL	
Max. temperature (operation)	-5 °C to 45 °C
Max. temperature (storage)	-20 °C to 60 °C
Max. humidity (operation)	20 % to 80 % non-condensing
Max. humidity (storage)	20 % to 95 % non-condensing

Monochrome Spectral Response Curve



Sensor: Micron MT9P031 M - courtesy of Aptina Deutschland GmbH

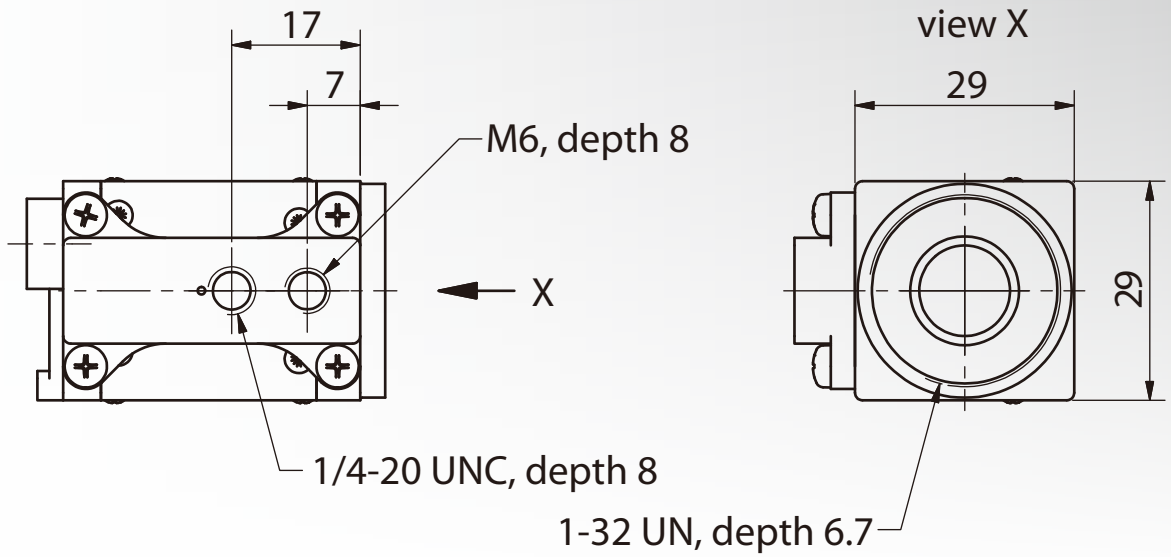
Color Spectral Response Curve

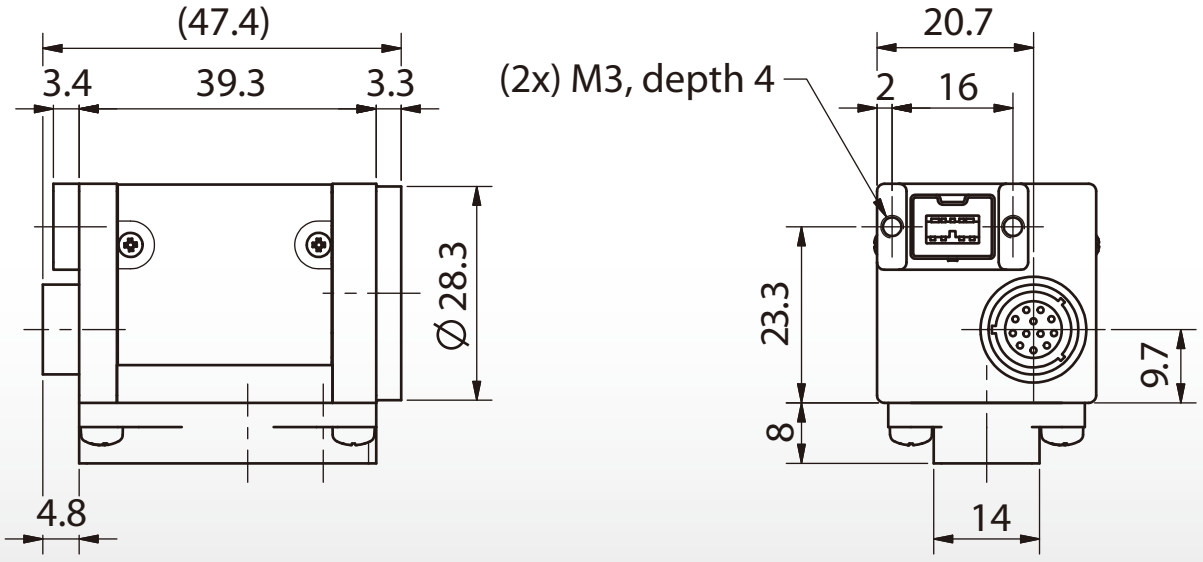


Sensor: Micron MT9P031 C - courtesy of Aptina Deutschland GmbH

DMK 23FP031 / DFK 23FP031 Dimensional Diagram

(with tripod adapter)

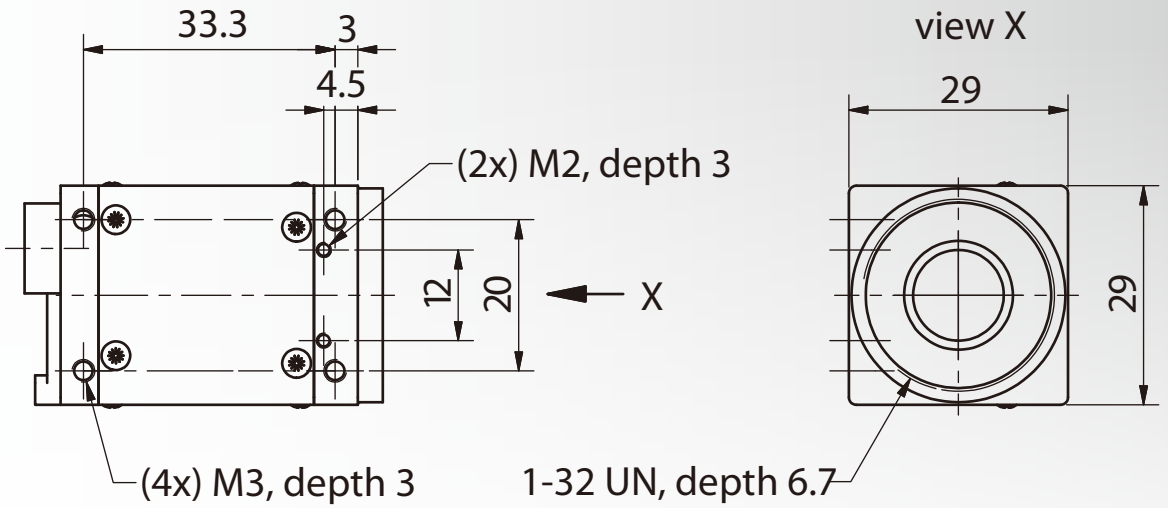


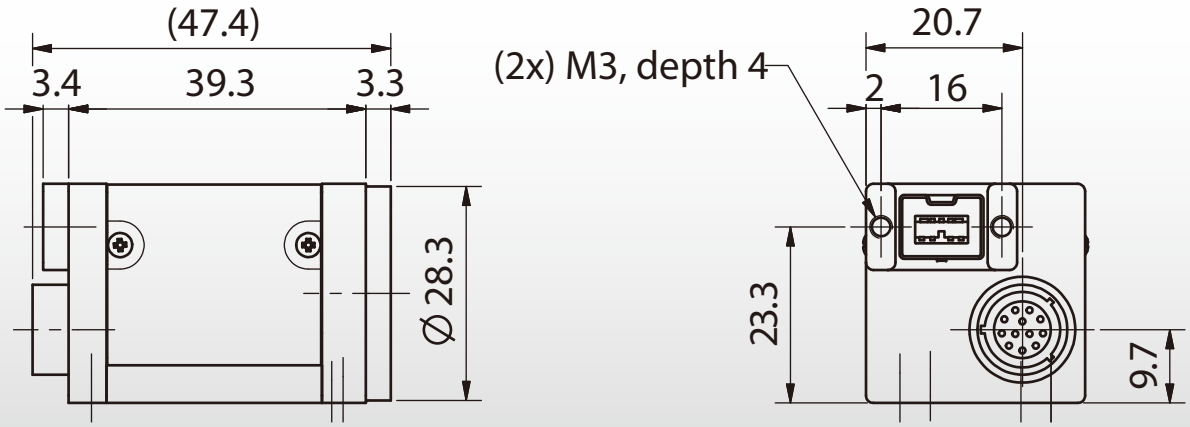


Dimensions: mm
Tolerances: DIN ISO 2768m

DMK 23FP031 / DFK 23FP031 Dimensional Diagram

(without tripod adapter)





Dimensions: mm
Tolerances: DIN ISO 2768m

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All weights and dimensions are approximate. Unless otherwise specified the lenses shown in the context of cameras are not shipped with these cameras.

The Imaging Source "One4all" Series USB CMOS Cameras

- Dimensions 36 x 36 x 25 mm
- CMOS sensors available
- Very attractive pricing

Model	Resolution	Megapixel	Pixel Size	Frame Rate	Sensor	Sensor Size	A/D
DMK 22A(B)UC03	744 x 480	0.3	6 µm	76 fps	Aptina MT9V024 M	1/3" CMOS	8 bit
DFK 22A(B)UC03	744 x 480	0.3	6 µm	76 fps	Aptina MT9V024 C	1/3" CMOS	8 bit
DMK 42A(B)UC03	1280 x 960	1.2	3,75 µm	25 fps	Aptina MT9M021 M	1/3" CMOS	8 bit
DFK 42A(B)UC03	1280 x 960	1.2	3,75 µm	25 fps	Aptina MT9M021 C	1/3" CMOS	8 bit
DMK 72A(B)UC02	2592 x 1944	5	2.2 µm	6 fps	Aptina MT9P031 M	1/2.5" CMOS	8 bit
DFK 72A(B)UC02	2592 x 1944	5	2.2 µm	6 fps	Aptina MT9P031 C	1/2.5" CMOS	8 bit

The Imaging Source "One4all" series of CMOS machine vision cameras is the perfect solution for many industrial automation, quality assurance, security, surveillance, and medical applications. Utilizing the highly sensitive Aptina MT9P031, MT9V024 and MT9M021 CMOS sensors, the housed products are very compact and are ideally suited to cost sensitive applications. Binning, windowing and high-speed readout are but a few of the performance enhancements that when coupled with DigitalClarity technology, dramatically reduces image noise levels. The Imaging Source "One4all" CMOS cameras are characterized by small housings and very competitive prices.

Included :

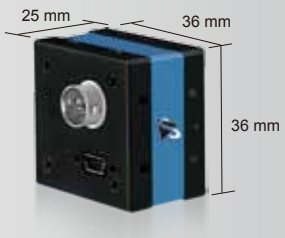
- Camera, CS to C mount adapter and tripod mount
- Drivers compatible to WDM, DirectShow, DirectX®, TWAIN, ActivVisionTools, HALCON, VfW and LabVIEW® for Windows 7/8, Windows Vista, and Windows XP
- IC Capture camera control and aquisition software for Windows 7/8, Windows Vista, and Windows XP (32 and 64 bit versions)
- IC Imaging Control Software Development Kit (SDK) including a .NET component, an ActiveX component, and a C++ class library for Windows

Features :

- Digital I/O strobe
- CS with C mount adapter
- Binning and ROI

Accessories :

- CS to M12 adapters
- C, CS, and M12 lenses
- USB 2.0 cable (1.8m, 3m, 4.5m)
- 4-pin Hirose trigger cable



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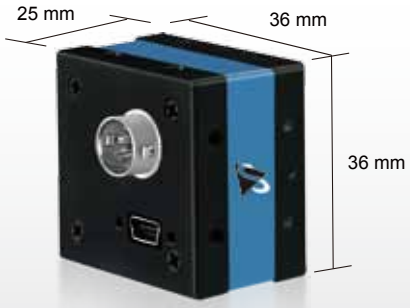
The Imaging Source “One4all” Series USB CMOS Cameras

DMK 22A(B)UC03 / DFK 22A(B)UC03



The Imaging Source DMK 22A(B)UC03 (monochrome) and DFK 22A(B)UC03 (color) wide VGA USB CMOS cameras are the perfect solution for many industrial automation, quality assurance, security, surveillance, and medical applications. Utilizing the Aptina MT9V024 CMOS sensors, the housed products are very compact and extremely cost sensitive. Selectable windows and high-speed readout are but a few of performance enhancements that are coupled with the included comprehensive software package.

The Imaging Source 22 “One4all” series CMOS cameras are characterized by small housing and very competitive prices.

Included :

- Camera, CS to C mount adapter and tripod mount
- Drivers compatible to WDM, DirectShow, DirectX®, TWAIN, ActivVisionTools, HALCON, VfW and LabVIEW® for Windows 7/8, Windows Vista, and Windows XP
- IC Capture camera control and aquisition software for Windows 7/8, Windows Vista, and Windows XP (32 and 64 bit versions)
- IC Imaging Control Software Development Kit (SDK) including a .NET component, an ActiveX component, and a C++ class library for Windows

Features :

- Digital I/O strobe
- CS with C mount adapter
- Binning and ROI

Accessories :

- CS to M12 adapters
- C, CS, and M12 lenses
- USB 2.0 cable (1.8m, 3m, 4.5m)
- 4-pin Hirose trigger cable

Specification: DMK 22A(B)UC03 (Monochrome)

GENERAL BEHAVIOR

Example Configurations

Resolution	Format	FPS	Sensitivity
744x480	1/3 "	76	4.8 V/lux-sec
640x480	1/3.5 "	87	4.8 V/lux-sec
320x240	1/7 "	150	4.8 V/lux-sec

Color format	Y800
Dynamic range	8 bit

INTERFACE (OPTICAL)

IR cut filter	no
Sensor specification	MT9V024
Shutter	Global
Format	1/3 "
Resolution	H: 744, V: 480
Pixel size	H: 6.0 µm, V: 6.0 µm
Lens mount	C/CS

INTERFACE (ELECTRICAL)

Supply voltage	4.5 to 5.5 VDC
Current consumption	approx. 250 mA at 5 VDC

INTERFACE (MECHANICAL)

Dimensions	H: 36 mm, W: 36 mm, L: 25 mm
Mass	70 g

ADJUSTMENTS (MANUAL)

Shutter	1/10,000 to 1/4 s
Gain	0 to 18 dB

ADJUSTMENTS (AUTOMATIC)

Shutter	1/10,000 to 1/4 s
Gain	0 to 18 dB

ENVIRONMENTAL

Max. temperature (operation)	-5 °C to 45 °C
Max. temperature (storage)	-20 °C to 60 °C
Max. humidity (operation)	20 % to 80 % non-condensing
Max. humidity (storage)	20 % to 95 % non-condensing

Specification: DFK 22A(B)UC03 (Color)

GENERAL BEHAVIOR

Example Configurations

Resolution	Format	FPS	Sensitivity
744x480	1/3 "	76	4.8 V/lux-sec
640x480	1/3.5 "	87	4.8 V/lux-sec
320x240	1/7 "	150	4.8 V/lux-sec

Color format	Y800, RGB32
Dynamic range	8 bit

INTERFACE (OPTICAL)

IR cut filter	yes
Sensor specification	MT9V024
Shutter	Global
Format	1/3 "
Resolution	H: 744, V: 480
Pixel size	H: 6.0 µm, V: 6.0 µm
Lens mount	C/CS

INTERFACE (ELECTRICAL)

Supply voltage	4.5 to 5.5 VDC
Current consumption	approx. 250 mA at 5 VDC

INTERFACE (MECHANICAL)

Dimensions	H: 36 mm, W: 36 mm, L: 25 mm
Mass	70 g

ADJUSTMENTS (MANUAL)

Shutter	1/10,000 to 1/4 s
Gain	0 to 18 dB
White balance	-6 dB to +6 dB

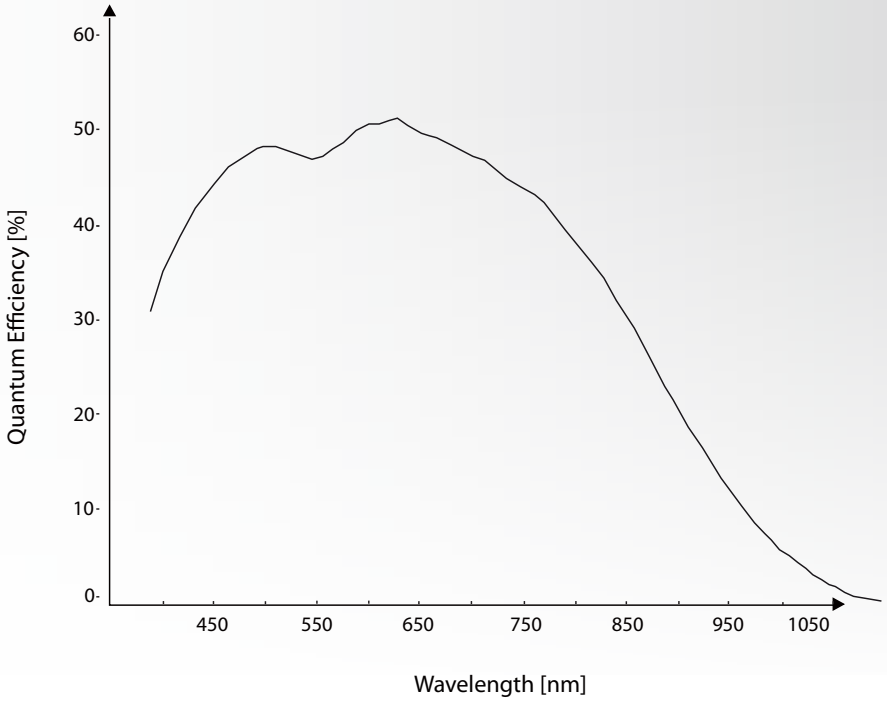
ADJUSTMENTS (AUTOMATIC)

Shutter	1/10,000 to 1/4 s
Gain	0 to 18 dB
White balance	-6 dB to +6 dB

ENVIRONMENTAL

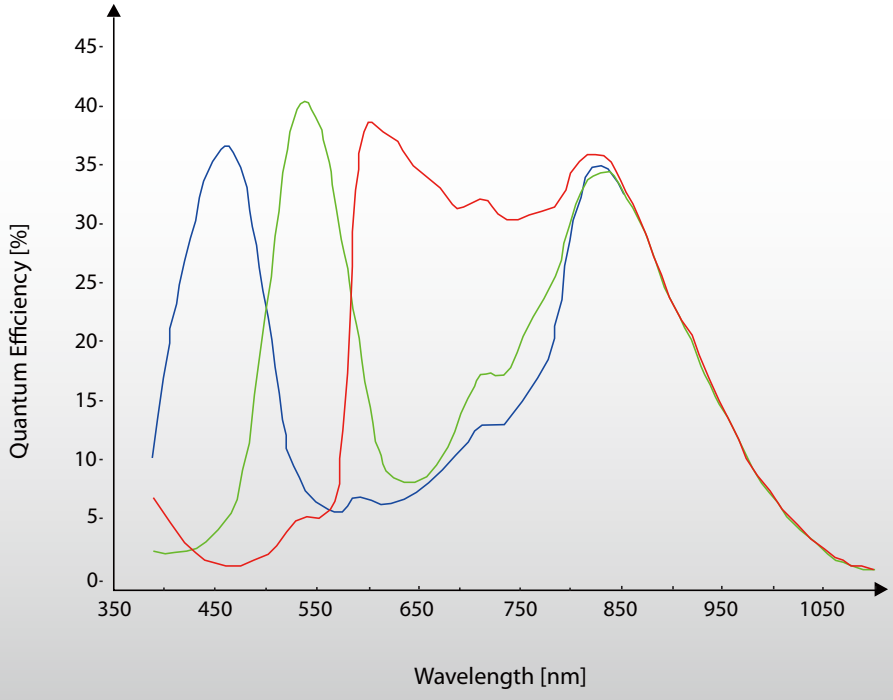
Max. temperature (operation)	-5 °C to 45 °C
Max. temperature (storage)	-20 °C to 60 °C
Max. humidity (operation)	20 % to 80 % non-condensing
Max. humidity (storage)	20 % to 95 % non-condensing

Monochrome Spectral Response Curve



Sensor: Micron MT9V024 M - courtesy of Aptina Deutschland GmbH

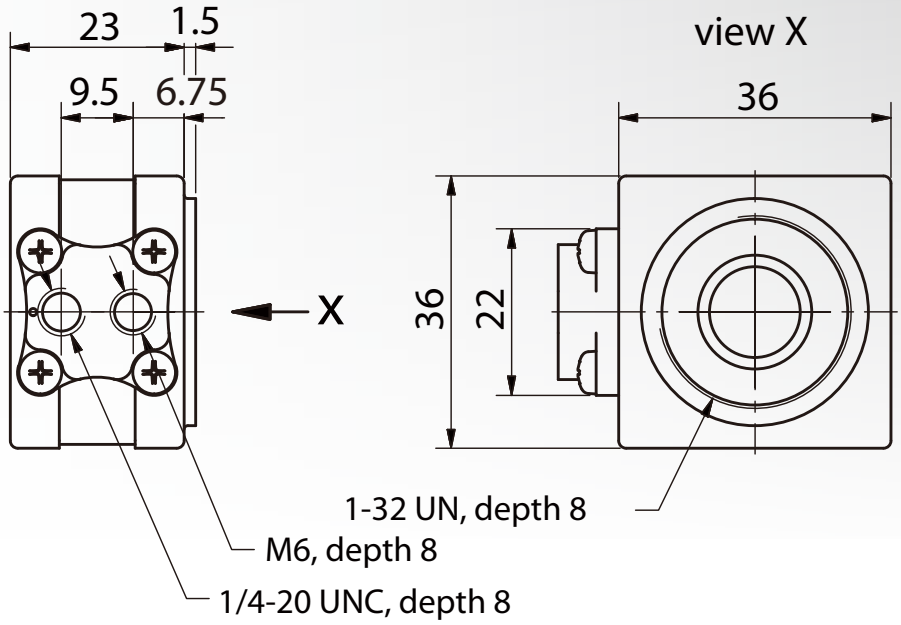
Color Spectral Response Curve

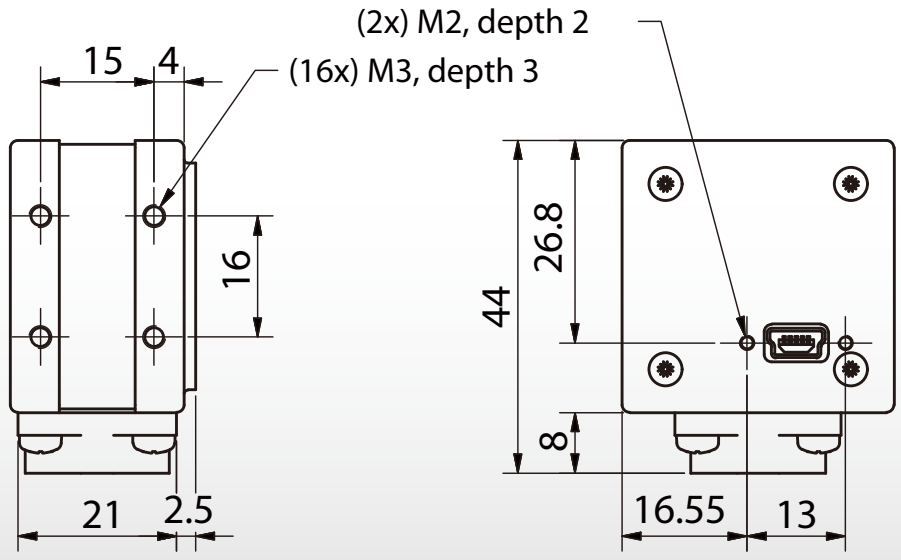


Sensor: Micron MT9V024 C - courtesy of Aptina Deutschland GmbH

DMK 22AUC03 / DFK 22AUC03

Dimensional Diagram (with tripod adapter)

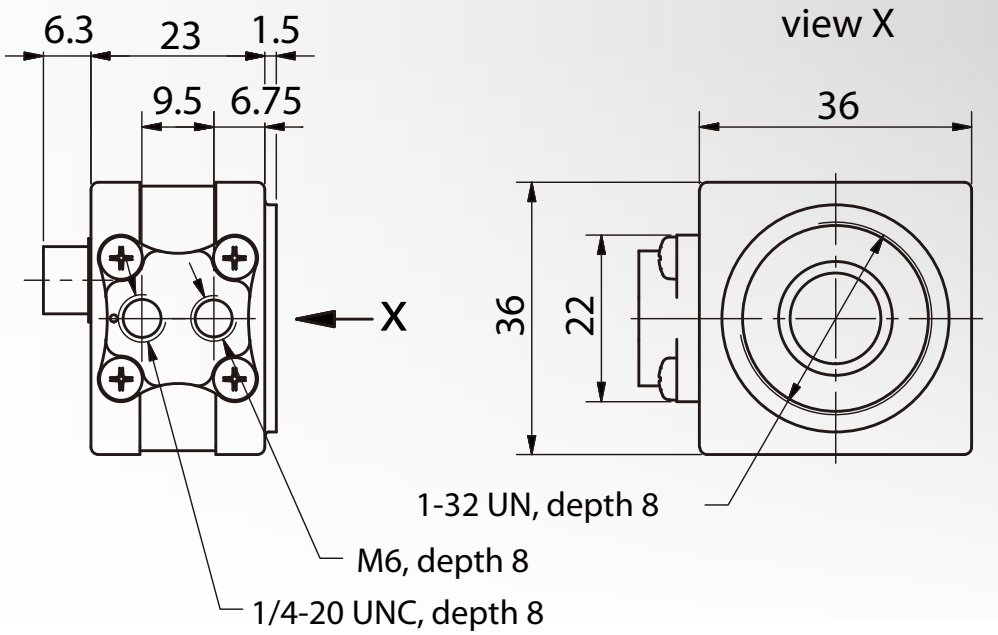


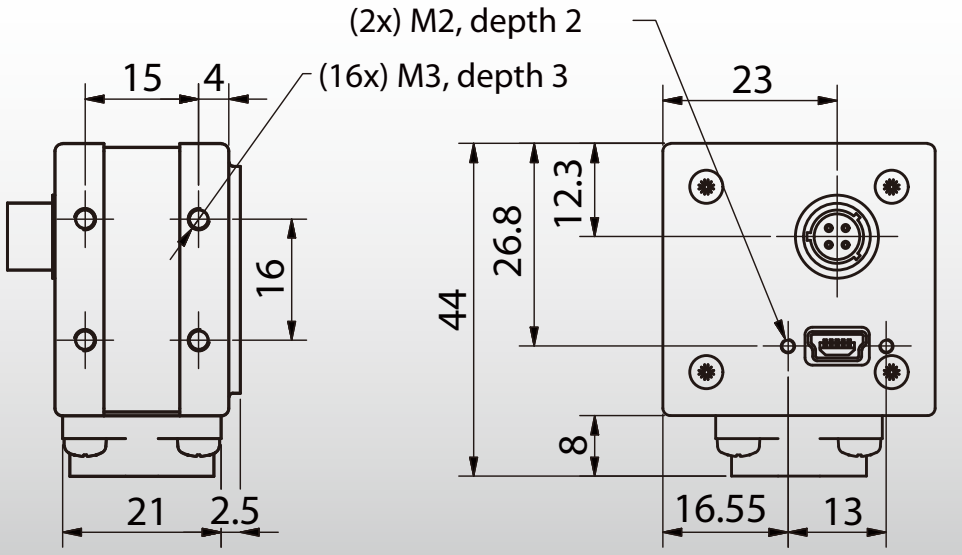


Dimensions : mm
Tolerances : DIN ISO 2768m

DMK 22BUC03 / DFK 22BUC03

Dimensional Diagram (with tripod adapter)





Dimensions : mm
Tolerances : DIN ISO 2768m

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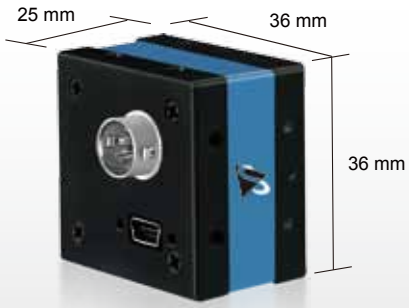
All weights and dimensions are approximate. Unless otherwise specified the lenses shown in the context of cameras are not shipped with these cameras.

The Imaging Source “One4all” Series USB CMOS Cameras

DMK 42A(B)UC03 / DFK 42A(B)UC03



The Imaging Source DMK 42A(B)UC03 (monochrome) and DFK 42A(B)UC03 (color) 1.2 Megapixel USB CMOS cameras are the perfect solution for many industrial automation, quality assurance, security, surveillance, and medical applications. Utilizing the Aptina MT9M021 CMOS sensors, the housed products are very compact and extremely cost sensitive. Binning, windowing, and high-speed readout are but a few of performance enhancements that are coupled with the DigitalClarity technology that dramaticlly reduces image noise levels.

The Imaging Source 42 “One4all” series CMOS cameras are characterized by small housing and very competitive prices.

Included :

- Camera, CS to C mount adapter and tripod mount
- Drivers compatible to WDM, DirectShow, DirectX®, TWAIN, ActivVisionTools, HALCON, VfW and LabVIEW® for Windows 7/8, Windows Vista, and Windows XP
- IC Capture camera control and aquisition software for Windows 7/8, Windows Vista, and Windows XP (32 and 64 bit versions)
- IC Imaging Control Software Development Kit (SDK) including a .NET component, an ActiveX component, and a C++ class library for Windows

Features :

- Digital I/O strobe
- CS with C mount adapter
- Binning and ROI

Accessories :

- CS to M12 adapters
- C, CS, and M12 lenses
- USB 2.0 cable (1.8m, 3m, 4.5m)
- 4-pin Hirose trigger cable

Specification: DMK 42A(B)UC03 (Monochrome)

GENERAL BEHAVIOR

Example Configurations

Resolution	Format	FPS	Sensitivity
1280x960	1/3 "	25	2.0 V/lux-sec
1280x720	1/3 "	33	2.0 V/lux-sec
1024x768	1/4 "	31	2.0 V/lux-sec
640x480	1/5.5 "	48	2.0 V/lux-sec

Color format	Y800
Dynamic range	8 bit

INTERFACE (OPTICAL)

IR cut filter	no
Sensor specification	MT9M021
Shutter	Global
Format	1/3 "
Resolution	H: 1280, V: 960
Pixel size	H: 3.75 µm, V: 3.75 µm
Lens mount	C/CS

INTERFACE (ELECTRICAL)

Supply voltage	4.5 to 5.5 VDC
Current consumption	approx. 250 mA at 5 VDC

INTERFACE (MECHANICAL)

Dimensions	H: 36 mm, W: 36 mm, L: 25 mm
Mass	70 g

ADJUSTMENTS (MANUAL)

Shutter	1/10,000 to 30 s
Gain	0 to 18 dB

ADJUSTMENTS (AUTOMATIC)

Shutter	1/10,000 to 30 s
Gain	0 to 18 dB

ENVIRONMENTAL

Max. temperature (operation)	-5 °C to 45 °C
Max. temperature (storage)	-20 °C to 60 °C
Max. humidity (operation)	20 % to 80 % non-condensing
Max. humidity (storage)	20 % to 95 % non-condensing

Specification: DFK 42A(B)UC03 (Color)

GENERAL BEHAVIOR

Example Configurations

Resolution	Format	FPS	Sensitivity
1280x960	1/3 "	25	2.0 V/lux-sec
1280x720	1/3 "	33	2.0 V/lux-sec
1024x768	1/4 "	31	2.0 V/lux-sec
640x480	1/5.5 "	48	2.0 V/lux-sec

Color format	Y800, RGB32
Dynamic range	8 bit

INTERFACE (OPTICAL)

IR cut filter	yes
Sensor specification	MT9M021
Shutter	Global
Format	1/3 "
Resolution	H: 1280, V: 960
Pixel size	H: 3.75 µm, V: 3.75 µm
Lens mount	C/CS

INTERFACE (ELECTRICAL)

Supply voltage	4.5 to 5.5 VDC
Current consumption	approx. 250 mA at 5 VDC

INTERFACE (MECHANICAL)

Dimensions	H: 36 mm, W: 36 mm, L: 25 mm
Mass	70 g

ADJUSTMENTS (MANUAL)

Shutter	1/10,000 to 30 s
Gain	0 to 18 dB

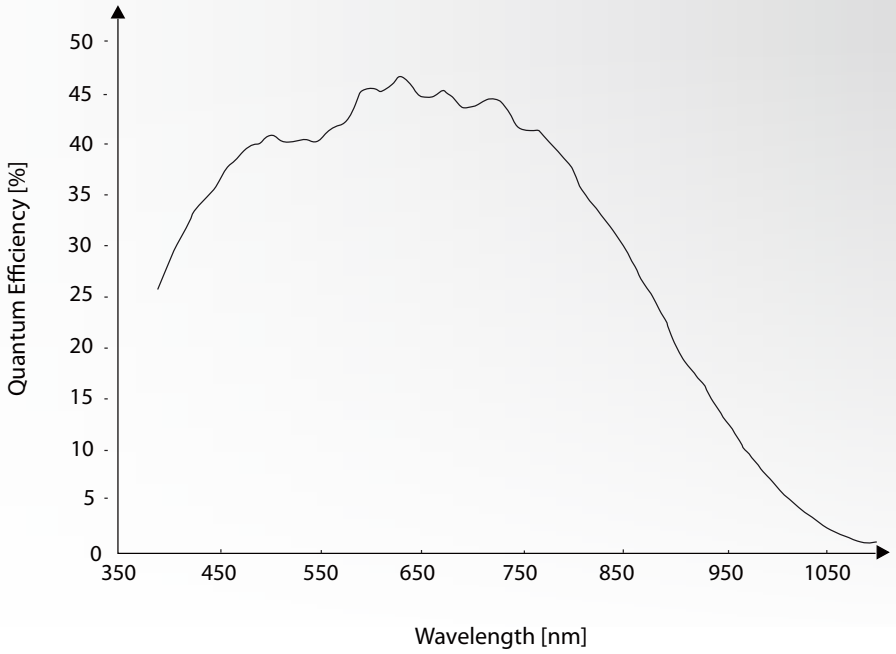
ADJUSTMENTS (AUTOMATIC)

Shutter	1/10,000 to 30 s
Gain	0 to 18 dB

ENVIRONMENTAL

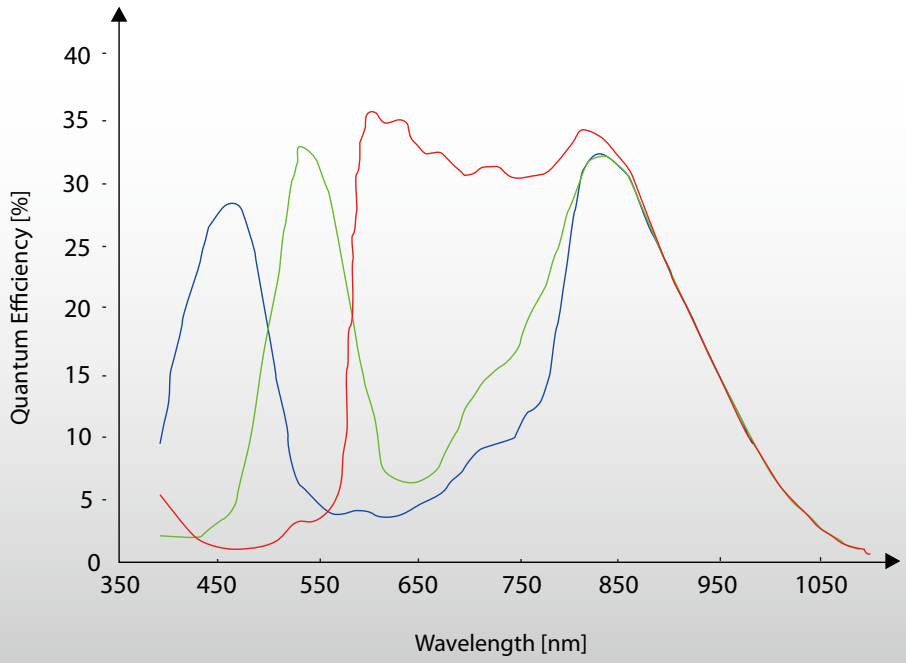
Max. temperature (operation)	-5 °C to 45 °C
Max. temperature (storage)	-20 °C to 60 °C
Max. humidity (operation)	20 % to 80 % non-condensing
Max. humidity (storage)	20 % to 95 % non-condensing

Monochrome Spectral Response Curve



Sensor: Micron MT9M021 M - courtesy of Aptina Deutschland GmbH

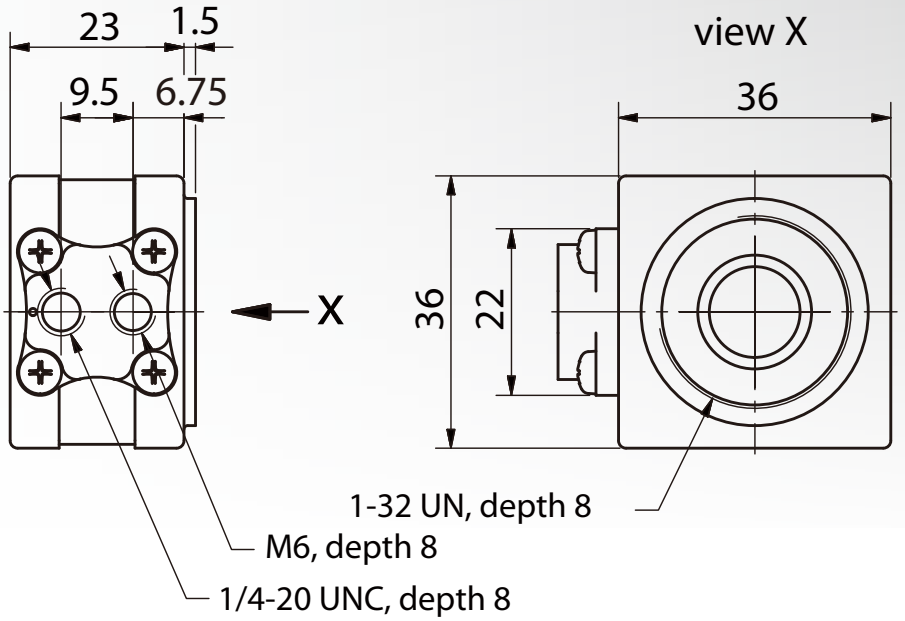
Color Spectral Response Curve

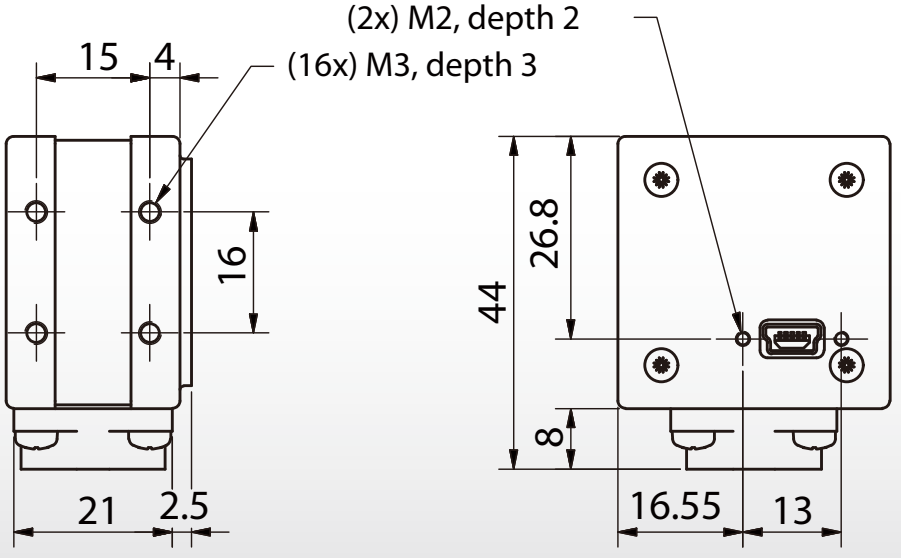


Sensor: Micron MT9M021 C - courtesy of Aptina Deutschland GmbH

DMK 42AUC03 / DFK 42AUC03

Dimensional Diagram (with tripod adapter)

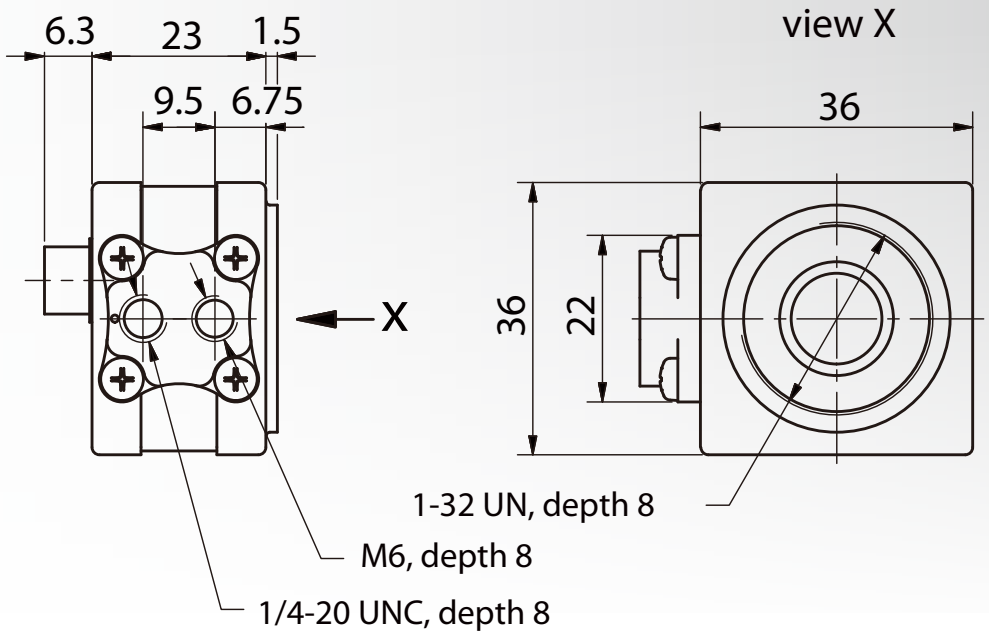


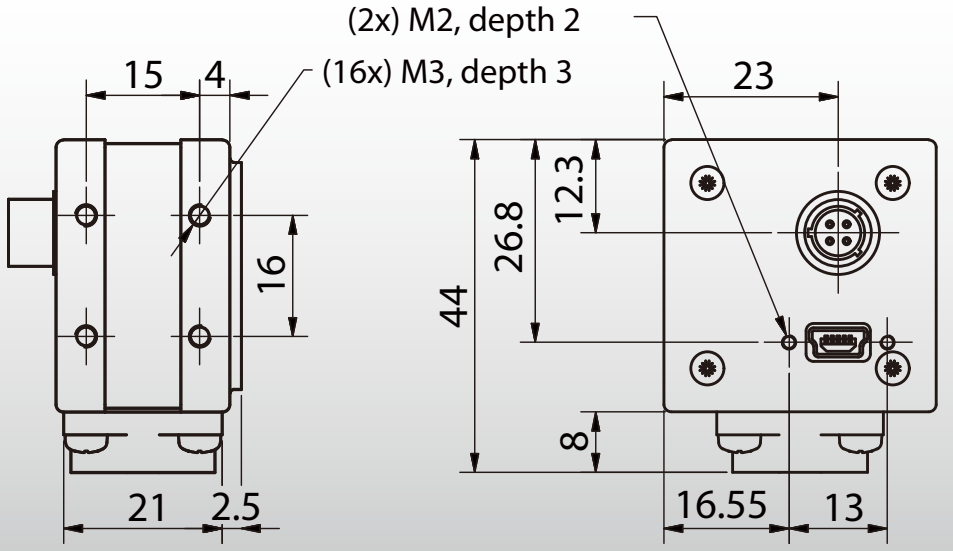


Dimensions : mm
Tolerances : DIN ISO 2768m

DMK 42BUC03 / DFK 42BUC03

Dimensional Diagram (with tripod adapter)





Dimensions : mm
Tolerances : DIN ISO 2768m

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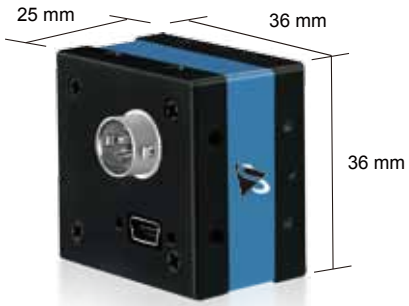
All weights and dimensions are approximate. Unless otherwise specified the lenses shown in the context of cameras are not shipped with these cameras.

The Imaging Source “One4all” Series USB CMOS Cameras

DMK 72A(B)UC02 / DFK 72A(B)UC02



The Imaging Source DMK 72A(B)UC02 (monochrome) and DFK 72A(B)UC02 (color) 5 Megapixel USB CMOS cameras are the perfect solution for many industrial automation, quality assurance, security, surveillance, and medical applications. Utilizing the Aptina MT9P031 CMOS sensors, the housed products are very compact and extremely cost sensitive. Binning, windowing, and high-speed readout are but a few of performance enhancements that are coupled with the DigitalClarity technology that dramaticlly reduces image noise levels.

The Imaging Source 72 ”One4all” series CMOS cameras are characterized by small housing and very competitive prices.

Included :

- Camera, CS to C mount adapter and tripod mount
- Drivers compatible to WDM, DirectShow, DirectX®, TWAIN, ActivVisionTools, HALCON, VfW and LabVIEW® for Windows 7/8, Windows Vista, and Windows XP
- IC Capture camera control and aquisition software for Windows 7/8, Windows Vista, and Windows XP (32 and 64 bit versions)
- IC Imaging Control Software Development Kit (SDK) including a .NET component, an ActiveX component, and a C++ class library for Windows

Features :

- Digital I/O strobe
- CS with C mount adapter
- Binning and ROI

Accessories :

- CS to M12 adapters
- C, CS, and M12 lenses
- USB 2.0 cable (1.8m, 3m, 4.5m)
- 4-pin Hirose trigger cable

Specification: DMK 72A(B)UC02 (Monochrome)

GENERAL BEHAVIOR

Example Configurations

Resolution	Format	FPS	Sensitivity
2592x1944	1/2.5 "	6	1.4 V/lux-sec
2048x1536	1/3 "	9	1.4 V/lux-sec
1600x1200	1/4 "	13	1.4 V/lux-sec
1280x960	1/4.5 "	19	1.4 V/lux-sec
1280x960	1/2.5 "	15	5.6 V/lux-sec
1024x768	1/5.5 "	27	1.4 V/lux-sec
640x480	1/9 "	52	1.4 V/lux-sec
640x480	1/2.5 "	23	22.4 V/lux-sec

Color format	Y800
Dynamic range	8 bit

INTERFACE (OPTICAL)

IR cut filter	no
Sensor specification	MT9P031
Shutter	Rolling
Format	1/2.5 "
Resolution	H: 2592, V: 1944
Pixel size	H: 2.2 µm, V: 2.2 µm
Lens mount	C/CS

INTERFACE (ELECTRICAL)

Supply voltage	4.5 to 5.5 VDC
Current consumption	approx. 250 mA at 5 VDC

INTERFACE (MECHANICAL)

Dimensions	H: 36 mm, W: 36 mm, L: 25 mm
Mass	70 g

ADJUSTMENTS (MANUAL)

Shutter	1/10,000 to 30 s
Gain	0 to 18 dB

ADJUSTMENTS (AUTOMATIC)

Shutter	1/10,000 to 30 s
Gain	0 to 18 dB

ENVIRONMENTAL

Max. temperature (operation)	-5 °C to 45 °C
Max. temperature (storage)	-20 °C to 60 °C
Max. humidity (operation)	20 % to 80 % non-condensing
Max. humidity (storage)	20 % to 95 % non-condensing

Specification: DFK 72A(B)UC02 (Color)

GENERAL BEHAVIOR

Example Configurations

Resolution	Format	FPS	Sensitivity
2592x1944	1/2.5 "	6	1.4 V/lux-sec
2048x1536	1/3 "	9	1.4 V/lux-sec
1600x1200	1/4 "	13	1.4 V/lux-sec
1280x960	1/4.5 "	19	1.4 V/lux-sec
1280x960	1/2.5 "	15	5.6 V/lux-sec
1024x768	1/5.5 "	27	1.4 V/lux-sec
640x480	1/9 "	52	1.4 V/lux-sec
640x480	1/2.5 "	23	22.4 V/lux-sec

Color format	Y800, RGB32
Dynamic range	8 bit

INTERFACE (OPTICAL)

IR cut filter	yes
Sensor specification	MT9P031
Shutter	Rolling
Format	1/2.5 "
Resolution	H: 2592, V: 1944
Pixel size	H: 2.2 µm, V: 2.2 µm
Lens mount	C/CS

INTERFACE (ELECTRICAL)

Supply voltage	4.5 to 5.5 VDC
Current consumption	approx. 250 mA at 5 VDC

INTERFACE (MECHANICAL)

Dimensions	H: 36 mm, W: 36 mm, L: 25 mm
Mass	70 g

ADJUSTMENTS (MANUAL)

Shutter	1/10,000 to 30 s
Gain	0 to 18 dB
White balance	-6 dB to +6 dB

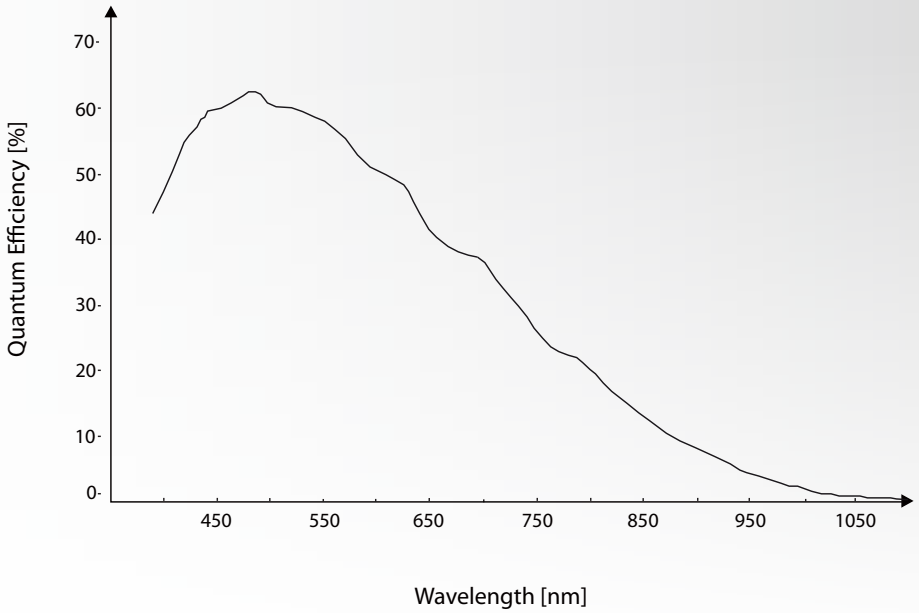
ADJUSTMENTS (AUTOMATIC)

Shutter	1/10,000 to 30 s
Gain	0 to 18 dB
White balance	-6 dB to +6 dB

ENVIRONMENTAL

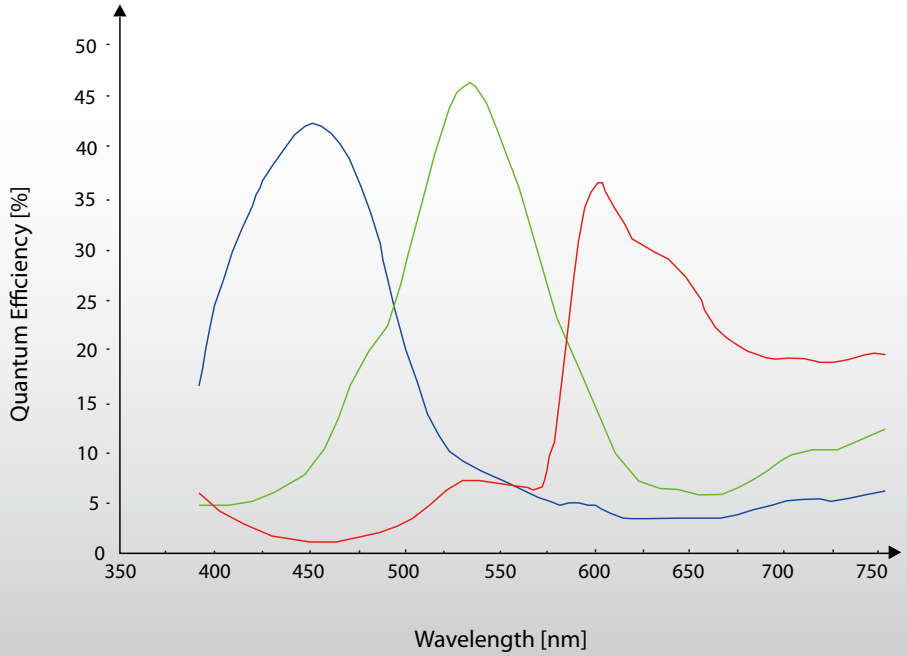
Max. temperature (operation)	-5 °C to 45 °C
Max. temperature (storage)	-20 °C to 60 °C
Max. humidity (operation)	20 % to 80 % non-condensing
Max. humidity (storage)	20 % to 95 % non-condensing

Monochrome Spectral Response Curve



Sensor: Micron MT9P031 M - courtesy of Aptina Deutschland GmbH

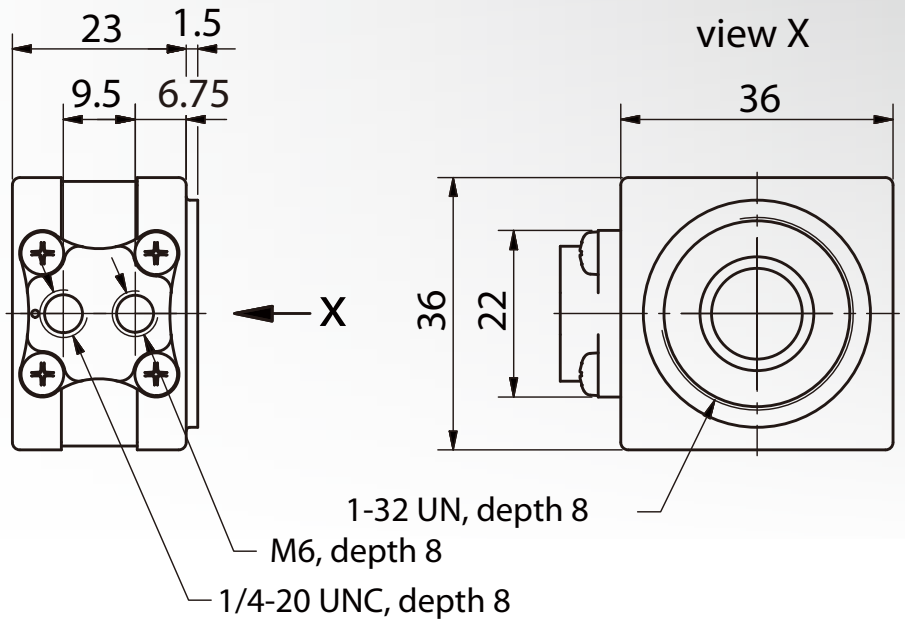
Color Spectral Response Curve

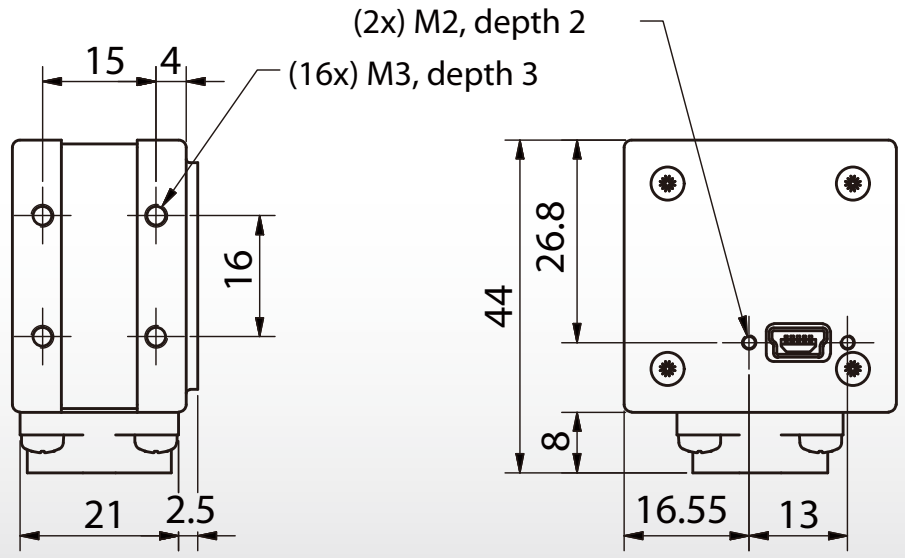


Sensor: Micron MT9P031 C - courtesy of Aptina Deutschland GmbH

DMK 72AUC02 / DFK 72AUC02

Dimensional Diagram (with tripod adapter)

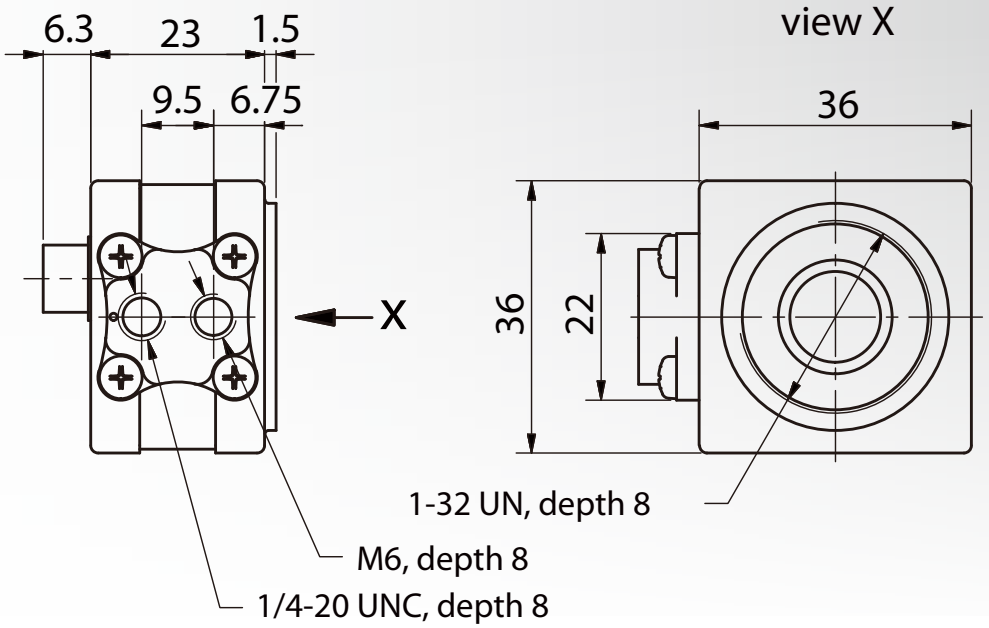


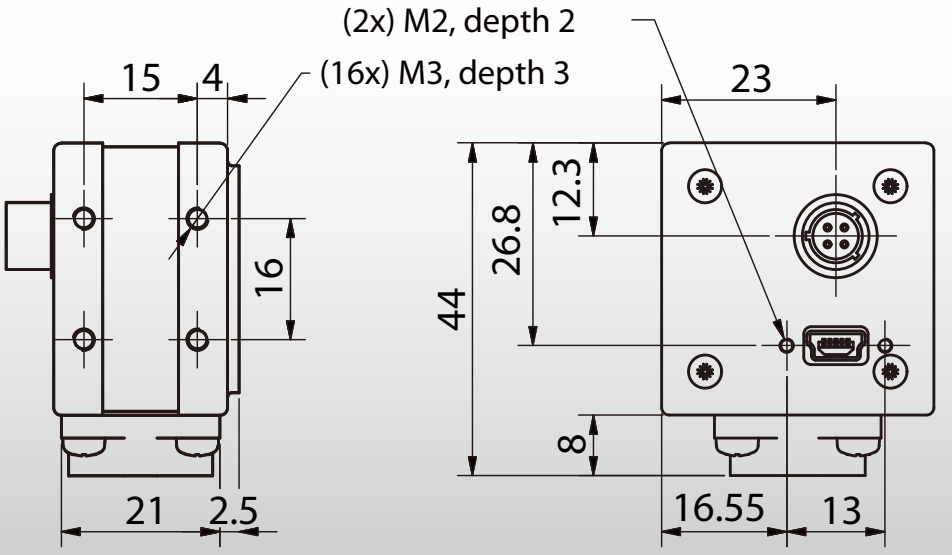


Dimensions : mm
Tolerances : DIN ISO 2768m

DMK 72BUC02 / DFK 72BUC02

Dimensional Diagram (with tripod adapter)





Dimensions : mm
Tolerances : DIN ISO 2768m

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All weights and dimensions are approximate. Unless otherwise specified the lenses shown in the context of cameras are not shipped with these cameras.

The Imaging Source "One4all" Series USB CMOS Board Cameras

- Dimensions 30 x 30 x 25 mm
- CMOS sensors available
- Very attractive pricing

Model	Resolution	Megapixel	Pixel Size	Frame Rate	Sensor	Sensor Size	A/D
DMK 22BUC03	744 x 480	0.3	6 µm	76 fps	Aptina MT9V024 M	1/3" CMOS	8 bit
DFK 22BUC03	744 x 480	0.3	6 µm	76 fps	Aptina MT9V024 C	1/3" CMOS	8 bit
DMK 42BUC03	1280 x 960	1.2	3,75 µm	25 fps	Aptina MT9M021 M	1/3" CMOS	8 bit
DFK 42BUC03	1280 x 960	1.2	3,75 µm	25 fps	Aptina MT9M021 C	1/3" CMOS	8 bit
DMK 72BUC02	2592 x 1944	5	2.2 µm	6 fps	Aptina MT9P031 M	1/2.5" CMOS	8 bit
DFK 72BUC02	2592 x 1944	5	2.2 µm	6 fps	Aptina MT9P031 C	1/2.5" CMOS	8 bit

The Imaging Source "One4all" series of CMOS machine vision cameras is the perfect solution for many industrial automation, quality assurance, security, surveillance, and medical applications. Utilizing the highly sensitive Aptina MT9P031, MT9V024 and MT9M021 CMOS sensors, the board version products are very compact and are ideally suited to cost sensitive applications. Binning, windowing and high-speed readout are but a few of the performance enhancements that when coupled with DigitalClarity technology, dramatically reduces image noise levels. The Imaging Source "One4all" CMOS board cameras are characterized by small PCB dimensions and very competitive prices.

Included :

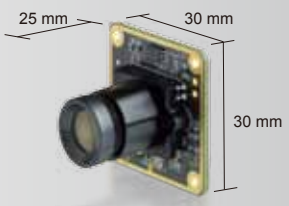
- Camera, CS to C mount adapter and tripod mount
- Drivers compatible to WDM, DirectShow, DirectX®, TWAIN, ActivVisionTools, HALCON, VfW and LabVIEW® for Windows 7/8, Windows Vista, and Windows XP
- IC Capture camera control and aquisition software for Windows 7/8, Windows Vista, and Windows XP (32 and 64 bit versions)
- IC Imaging Control Software Development Kit (SDK) including a .NET component, an ActiveX component, and a C++ class library for Windows

Features :

- Digital I/O strobe
- Binning and ROI

Accessories :

- M12 adapters
- M12 lenses
- USB 2.0 cable (1.8m, 3m, 4.5m)
- JST trigger connector cable included



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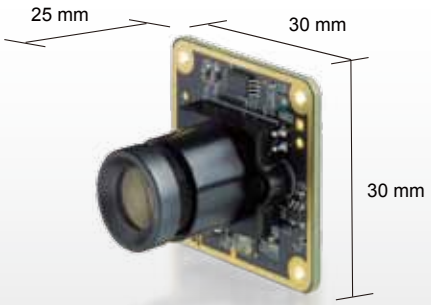
The Imaging Source “One4all” Series USB CMOS Board Cameras

DMK 22BUC03 / DFK 22BUC03



The Imaging Source DMK 22BUC03 (monochrome) and DFK 22BUC03 (color) wide VGA USB CMOS cameras are the perfect solution for many industrial automation, quality assurance, security, surveillance, and medical applications. Utilizing the Aptina MT9V024 CMOS sensors, the board version products are very compact and extremely cost sensitive. Selectable windows and high-speed readout are but a few of performance enhancements that are coupled with the included comprehensive software package.

The Imaging Source 22 “One4all” series CMOS cameras are characterized by small PCB dimensions and very competitive prices.

Included :

- Camera, CS to C mount adapter and tripod mount
- Drivers compatible to WDM, DirectShow, DirectX®, TWAIN, ActivVisionTools, HALCON, VfW and LabVIEW® for Windows 7/8, Windows Vista, and Windows XP
- IC Capture camera control and aquisition software for Windows 7/8, Windows Vista, and Windows XP (32 and 64 bit versions)
- IC Imaging Control Software Development Kit (SDK) including a .NET component, an ActiveX component, and a C++ class library for Windows

Features :

- Digital I/O strobe
- Binning and ROI

Accessories :

- M12 adapters
- M12 lenses
- USB 2.0 cable (1.8m, 3m, 4.5m)
- JST trigger connector cable included

Specification: DMK 22BUC03 (Monochrome)

GENERAL BEHAVIOR

Example Configurations

Resolution	Format	FPS	Sensitivity
744x480	1/3 "	76	4.8 V/lux-sec
640x480	1/3.5 "	87	4.8 V/lux-sec
320x240	1/7 "	150	4.8 V/lux-sec

Color format	Y800
Dynamic range	8 bit

INTERFACE (OPTICAL)

IR cut filter	no
Sensor specification	MT9V024
Shutter	Global
Format	1/3 "
Resolution	H: 744, V: 480
Pixel size	H: 6.0 µm, V: 6.0 µm
Lens mount	C/CS

INTERFACE (ELECTRICAL)

Supply voltage	4.5 to 5.5 VDC
Current consumption	approx. 250 mA at 5 VDC

INTERFACE (MECHANICAL)

Dimensions	H: 36 mm, W: 36 mm, L: 25 mm
Mass	70 g

ADJUSTMENTS (MANUAL)

Shutter	1/10,000 to 1/4 s
Gain	0 to 18 dB

ADJUSTMENTS (AUTOMATIC)

Shutter	1/10,000 to 1/4 s
Gain	0 to 18 dB

ENVIRONMENTAL

Max. temperature (operation)	-5 °C to 45 °C
Max. temperature (storage)	-20 °C to 60 °C
Max. humidity (operation)	20 % to 80 % non-condensing
Max. humidity (storage)	20 % to 95 % non-condensing

Specification: DFK 22BUC03 (Color)

GENERAL BEHAVIOR

Example Configurations

Resolution	Format	FPS	Sensitivity
744x480	1/3 "	76	4.8 V/lux-sec
640x480	1/3.5 "	87	4.8 V/lux-sec
320x240	1/7 "	150	4.8 V/lux-sec

Color format	Y800, RGB32
Dynamic range	8 bit

INTERFACE (OPTICAL)

IR cut filter	yes
Sensor specification	MT9V024
Shutter	Global
Format	1/3 "
Resolution	H: 744, V: 480
Pixel size	H: 6.0 µm, V: 6.0 µm
Lens mount	C/CS

INTERFACE (ELECTRICAL)

Supply voltage	4.5 to 5.5 VDC
Current consumption	approx. 250 mA at 5 VDC

INTERFACE (MECHANICAL)

Dimensions	H: 36 mm, W: 36 mm, L: 25 mm
Mass	70 g

ADJUSTMENTS (MANUAL)

Shutter	1/10,000 to 1/4 s
Gain	0 to 18 dB
White balance	-6 dB to +6 dB

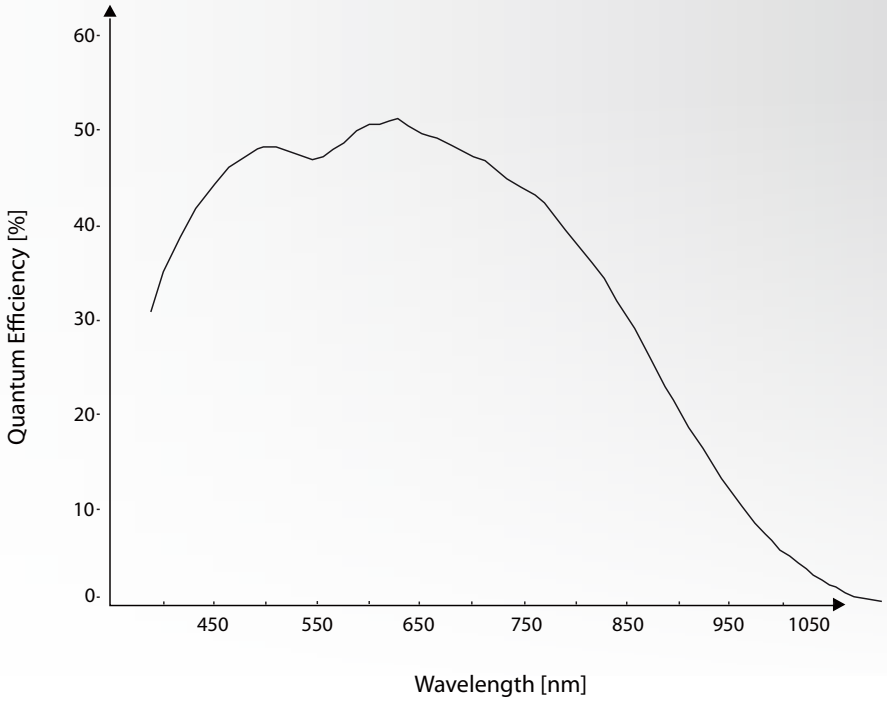
ADJUSTMENTS (AUTOMATIC)

Shutter	1/10,000 to 1/4 s
Gain	0 to 18 dB
White balance	-6 dB to +6 dB

ENVIRONMENTAL

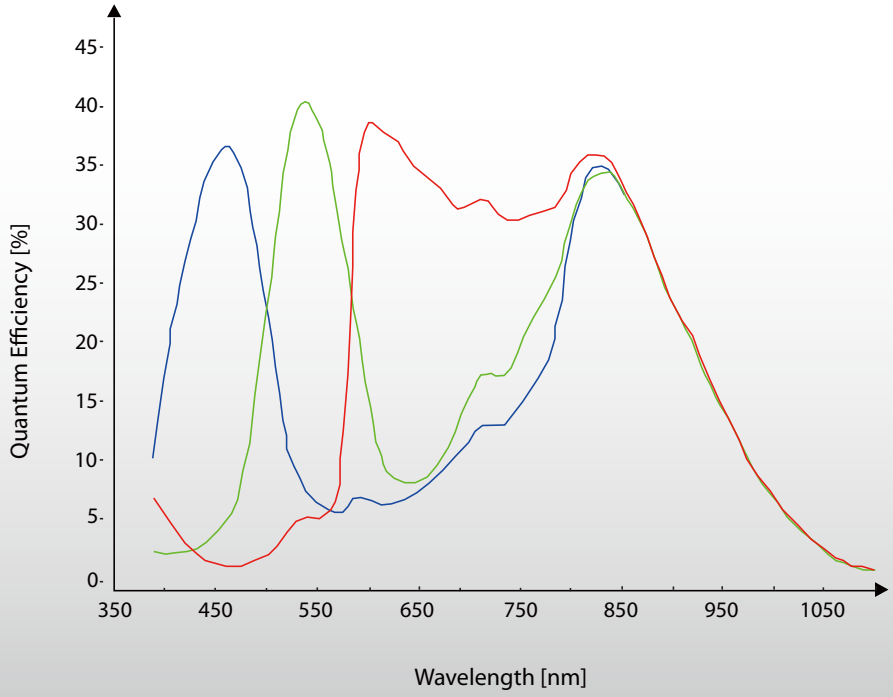
Max. temperature (operation)	-5 °C to 45 °C
Max. temperature (storage)	-20 °C to 60 °C
Max. humidity (operation)	20 % to 80 % non-condensing
Max. humidity (storage)	20 % to 95 % non-condensing

Monochrome Spectral Response Curve



Sensor: Micron MT9V024 M - courtesy of Aptina Deutschland GmbH

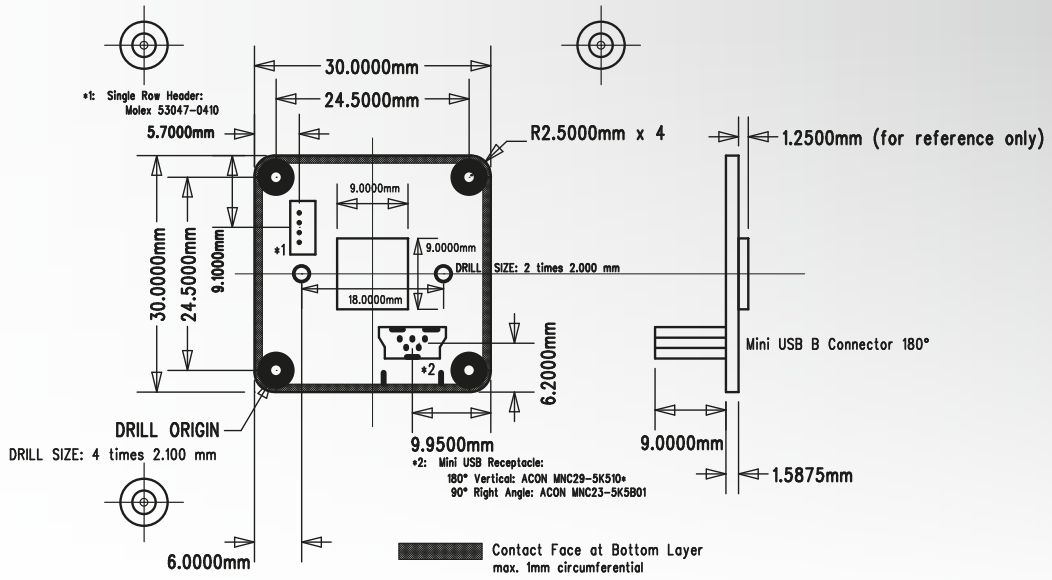
Color Spectral Response Curve

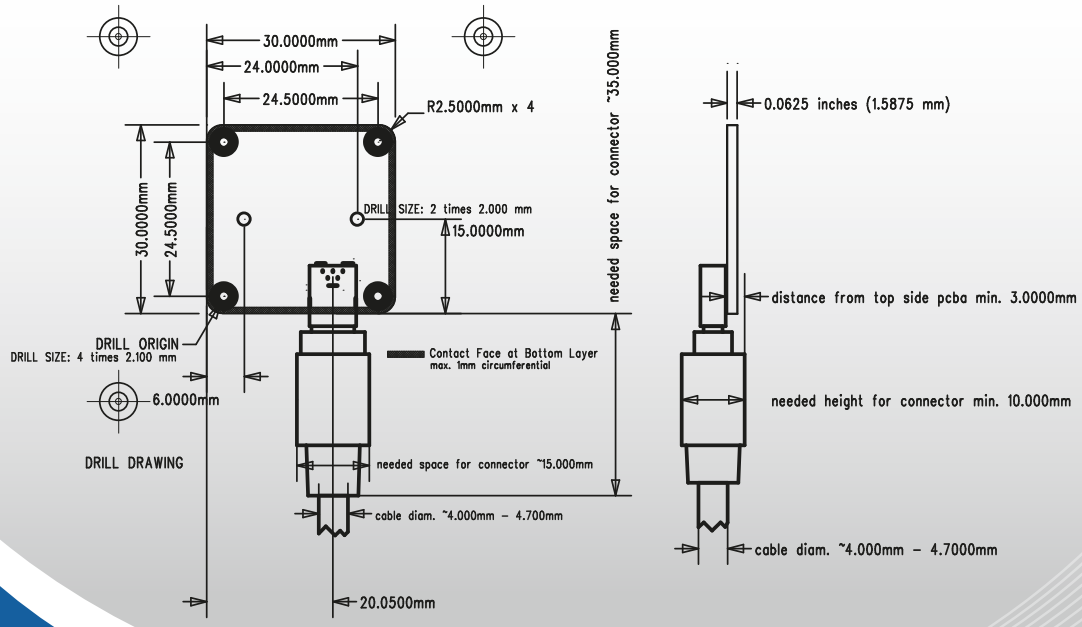


Sensor: Micron MT9V024 C - courtesy of Aptina Deutschland GmbH

DMK 22BUC03 / DFK 22BUC03

Dimensional Diagram





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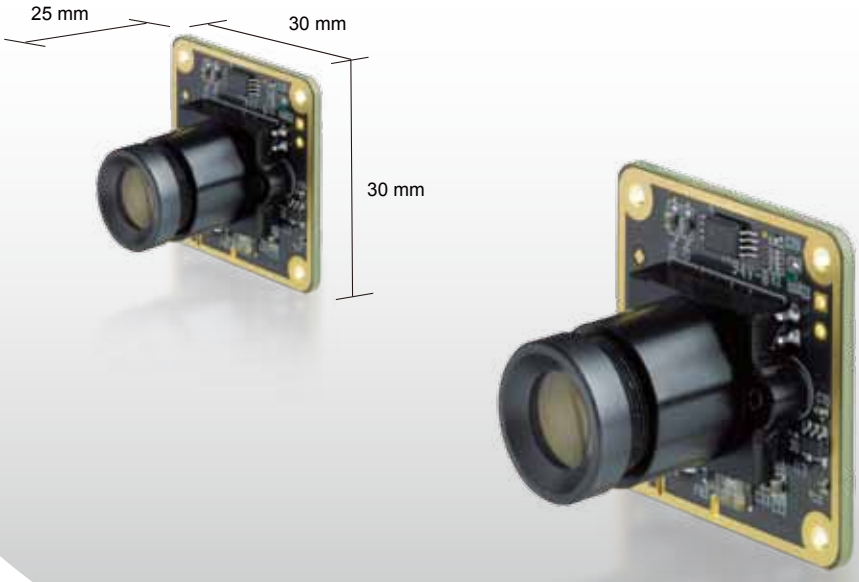
The Imaging Source “One4all” Series USB CMOS Board Cameras

DMK 42BUC03 / DFK 42BUC03



The Imaging Source DMK 42BUC03 (monochrome) and DFK 42BUC03 (color) 1.2 Megapixel USB CMOS cameras are the perfect solution for many industrial automation, quality assurance, security, surveillance, and medical applications. Utilizing the Aptina MT9M021 CMOS sensors, the board version products are very compact and extremely cost sensitive. Binning, windowing, and high-speed readout are but a few of performance enhancements that are coupled with the DigitalClarity technology that dramaticlly reduces image noise levels.

The Imaging Source 42 “One4all” series CMOS cameras are characterized by small PCB dimensions and very competitive prices.

Included :

- Camera, CS to C mount adapter and tripod mount
- Drivers compatible to WDM, DirectShow, DirectX®, TWAIN, ActivVisionTools, HALCON, VfW and LabVIEW® for Windows 7/8, Windows Vista, and Windows XP
- IC Capture camera control and aquisition software for Windows 7/8, Windows Vista, and Windows XP (32 and 64 bit versions)
- IC Imaging Control Software Development Kit (SDK) including a .NET component, an ActiveX component, and a C++ class library for Windows

Features :

- Digital I/O strobe
- Binning and ROI

Accessories :

- M12 adapters
- M12 lenses
- USB 2.0 cable (1.8m, 3m, 4.5m)
- JST trigger connector cable included

Specification: DMK 42BUC03 (Monochrome)

GENERAL BEHAVIOR

Example Configurations

Resolution	Format	FPS	Sensitivity
1280x960	1/3 "	25	2.0 V/lux-sec
1280x720	1/3 "	33	2.0 V/lux-sec
1024x768	1/4 "	31	2.0 V/lux-sec
640x480	1/5.5 "	48	2.0 V/lux-sec

Color format	Y800
Dynamic range	8 bit

INTERFACE (OPTICAL)

IR cut filter	no
Sensor specification	MT9M021
Shutter	Global
Format	1/3 "
Resolution	H: 1280, V: 960
Pixel size	H: 3.75 µm, V: 3.75 µm
Lens mount	C/CS

INTERFACE (ELECTRICAL)

Supply voltage	4.5 to 5.5 VDC
Current consumption	approx. 250 mA at 5 VDC

INTERFACE (MECHANICAL)

Dimensions	H: 36 mm, W: 36 mm, L: 25 mm
Mass	70 g

ADJUSTMENTS (MANUAL)

Shutter	1/10,000 to 30 s
Gain	0 to 18 dB

ADJUSTMENTS (AUTOMATIC)

Shutter	1/10,000 to 30 s
Gain	0 to 18 dB

ENVIRONMENTAL

Max. temperature (operation)	-5 °C to 45 °C
Max. temperature (storage)	-20 °C to 60 °C
Max. humidity (operation)	20 % to 80 % non-condensing
Max. humidity (storage)	20 % to 95 % non-condensing

Specification: DFK 42BUC03 (Color)

GENERAL BEHAVIOR

Example Configurations

Resolution	Format	FPS	Sensitivity
1280x960	1/3 "	25	2.0 V/lux-sec
1280x720	1/3 "	33	2.0 V/lux-sec
1024x768	1/4 "	31	2.0 V/lux-sec
640x480	1/5.5 "	48	2.0 V/lux-sec

Color format	Y800, RGB32
Dynamic range	8 bit

INTERFACE (OPTICAL)

IR cut filter	yes
Sensor specification	MT9M021
Shutter	Global
Format	1/3 "
Resolution	H: 1280, V: 960
Pixel size	H: 3.75 µm, V: 3.75 µm
Lens mount	C/CS

INTERFACE (ELECTRICAL)

Supply voltage	4.5 to 5.5 VDC
Current consumption	approx. 250 mA at 5 VDC

INTERFACE (MECHANICAL)

Dimensions	H: 36 mm, W: 36 mm, L: 25 mm
Mass	70 g

ADJUSTMENTS (MANUAL)

Shutter	1/10,000 to 30 s
Gain	0 to 18 dB

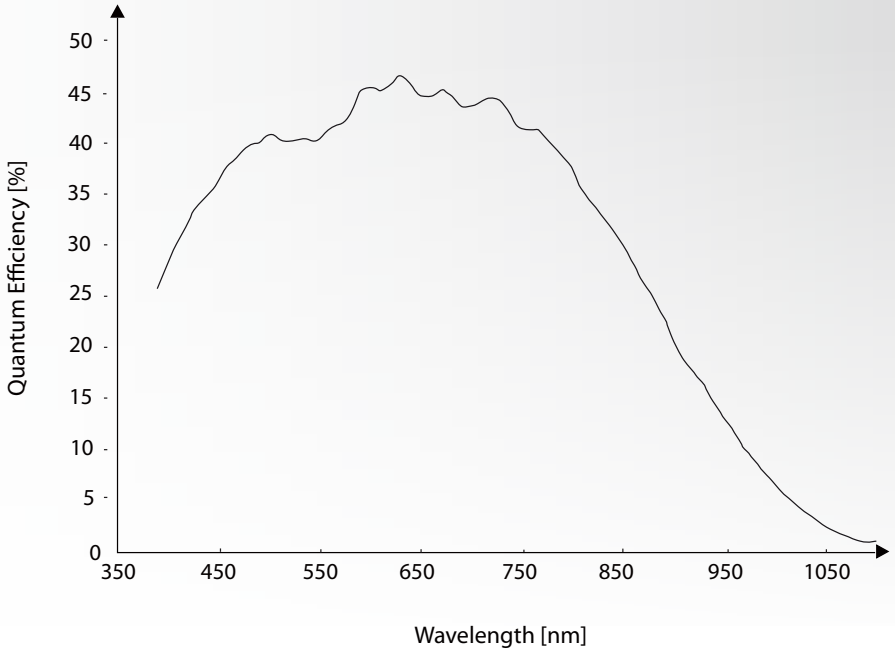
ADJUSTMENTS (AUTOMATIC)

Shutter	1/10,000 to 30 s
Gain	0 to 18 dB

ENVIRONMENTAL

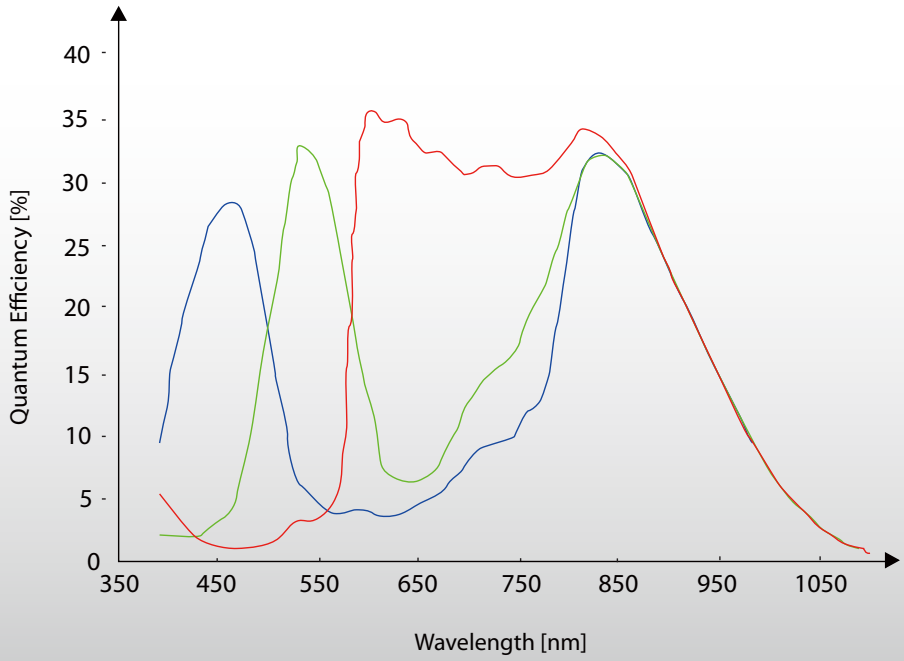
Max. temperature (operation)	-5 °C to 45 °C
Max. temperature (storage)	-20 °C to 60 °C
Max. humidity (operation)	20 % to 80 % non-condensing
Max. humidity (storage)	20 % to 95 % non-condensing

Monochrome Spectral Response Curve



Sensor: Micron MT9M021 M - courtesy of Aptina Deutschland GmbH

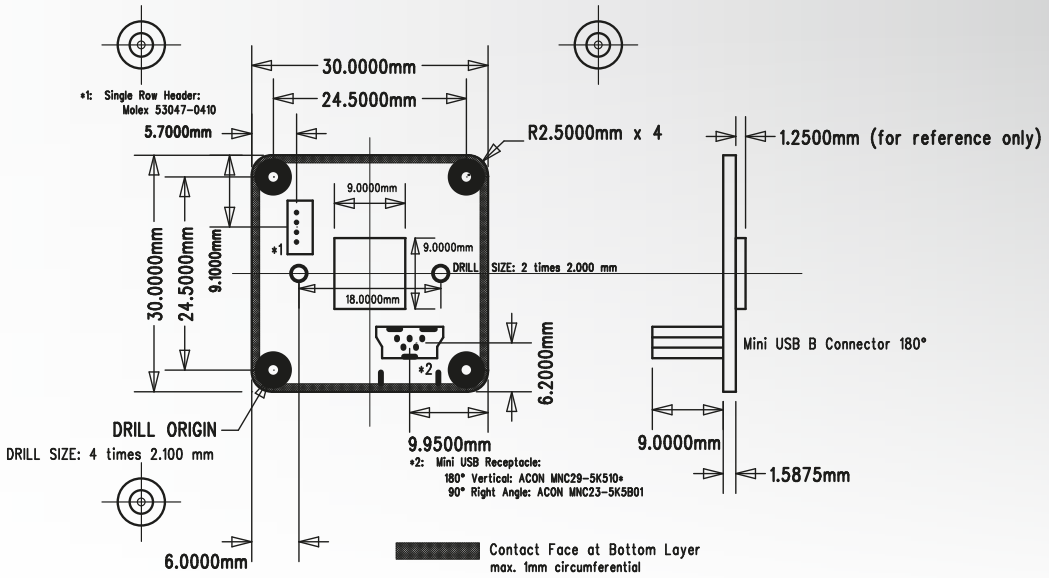
Color Spectral Response Curve

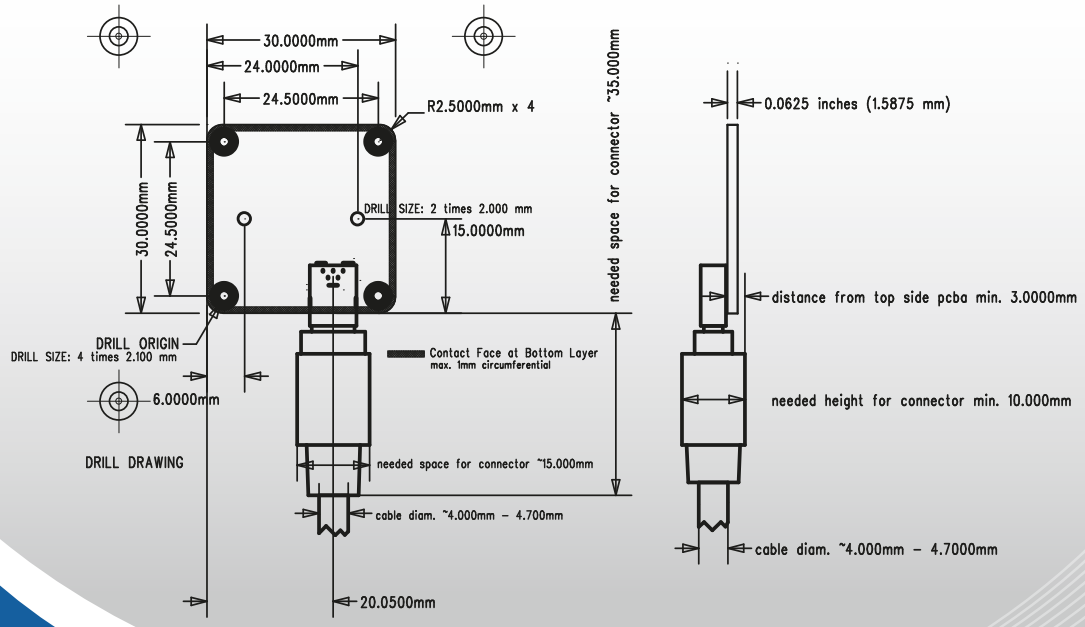


Sensor: Micron MT9M021 C - courtesy of Aptina Deutschland GmbH

DMK 42BUC03 / DFK 42BUC03

Dimensional Diagram





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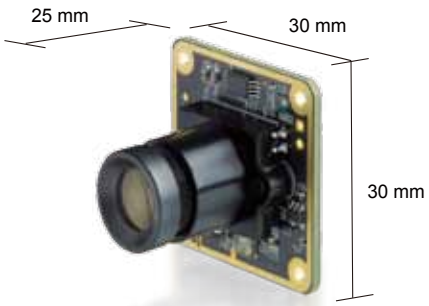
All weights and dimensions are approximate. Unless otherwise specified the lenses shown in the context of cameras are not shipped with these cameras.

The Imaging Source “One4all” Series USB CMOS Board Cameras

DMK 72BUC02 / DFK 72BUC02



The Imaging Source DMK 72BUC02 (monochrome) and DFK 72BUC02 (color) 5 Megapixel USB CMOS cameras are the perfect solution for many industrial automation, quality assurance, security, surveillance, and medical applications. Utilizing the Aptina MT9P031 CMOS sensors, the board version products are very compact and extremely cost sensitive. Binning, windowing, and high-speed readout are but a few of performance enhancements that are coupled with the DigitalClarity technology that dramaticlly reduces image noise levels.

The Imaging Source 72 ”One4all” series CMOS cameras are characterized by small PCB dimensions and very competitive prices.

Included :

- Camera, CS to C mount adapter and tripod mount
- Drivers compatible to WDM, DirectShow, DirectX®, TWAIN, ActivVisionTools, HALCON, VfW and LabVIEW® for Windows 7/8, Windows Vista, and Windows XP
- IC Capture camera control and aquisition software for Windows 7/8, Windows Vista, and Windows XP (32 and 64 bit versions)
- IC Imaging Control Software Development Kit (SDK) including a .NET component, an ActiveX component, and a C++ class library for Windows

Features :

- Digital I/O strobe
- Binning and ROI

Accessories :

- M12 adapters
- M12 lenses
- USB 2.0 cable (1.8m, 3m, 4.5m)
- JST trigger connector cable included

Specification: DMK 72BUC02 (Monochrome)

GENERAL BEHAVIOR

Example Configurations

Resolution	Format	FPS	Sensitivity
2592x1944	1/2.5 "	6	1.4 V/lux-sec
2048x1536	1/3 "	9	1.4 V/lux-sec
1600x1200	1/4 "	13	1.4 V/lux-sec
1280x960	1/4.5 "	19	1.4 V/lux-sec
1280x960	1/2.5 "	15	5.6 V/lux-sec
1024x768	1/5.5 "	27	1.4 V/lux-sec
640x480	1/9 "	52	1.4 V/lux-sec
640x480	1/2.5 "	23	22.4 V/lux-sec

Color format	Y800
Dynamic range	8 bit

INTERFACE (OPTICAL)

IR cut filter	no
Sensor specification	MT9P031
Shutter	Rolling
Format	1/2.5 "
Resolution	H: 2592, V: 1944
Pixel size	H: 2.2 µm, V: 2.2 µm
Lens mount	C/CS

INTERFACE (ELECTRICAL)

Supply voltage	4.5 to 5.5 VDC
Current consumption	approx. 250 mA at 5 VDC

INTERFACE (MECHANICAL)

Dimensions	H: 36 mm, W: 36 mm, L: 25 mm
Mass	70 g

ADJUSTMENTS (MANUAL)

Shutter	1/10,000 to 30 s
Gain	0 to 18 dB

ADJUSTMENTS (AUTOMATIC)

Shutter	1/10,000 to 30 s
Gain	0 to 18 dB

ENVIRONMENTAL

Max. temperature (operation)	-5 °C to 45 °C
Max. temperature (storage)	-20 °C to 60 °C
Max. humidity (operation)	20 % to 80 % non-condensing
Max. humidity (storage)	20 % to 95 % non-condensing

Specification: DFK 72BUC02 (Color)

GENERAL BEHAVIOR

Example Configurations

Resolution	Format	FPS	Sensitivity
2592x1944	1/2.5 "	6	1.4 V/lux-sec
2048x1536	1/3 "	9	1.4 V/lux-sec
1600x1200	1/4 "	13	1.4 V/lux-sec
1280x960	1/4.5 "	19	1.4 V/lux-sec
1280x960	1/2.5 "	15	5.6 V/lux-sec
1024x768	1/5.5 "	27	1.4 V/lux-sec
640x480	1/9 "	52	1.4 V/lux-sec
640x480	1/2.5 "	23	22.4 V/lux-sec

Color format	Y800, RGB32
Dynamic range	8 bit

INTERFACE (OPTICAL)

IR cut filter	yes
Sensor specification	MT9P031
Shutter	Rolling
Format	1/2.5 "
Resolution	H: 2592, V: 1944
Pixel size	H: 2.2 µm, V: 2.2 µm
Lens mount	C/CS

INTERFACE (ELECTRICAL)

Supply voltage	4.5 to 5.5 VDC
Current consumption	approx. 250 mA at 5 VDC

INTERFACE (MECHANICAL)

Dimensions	H: 36 mm, W: 36 mm, L: 25 mm
Mass	70 g

ADJUSTMENTS (MANUAL)

Shutter	1/10,000 to 30 s
Gain	0 to 18 dB
White balance	-6 dB to +6 dB

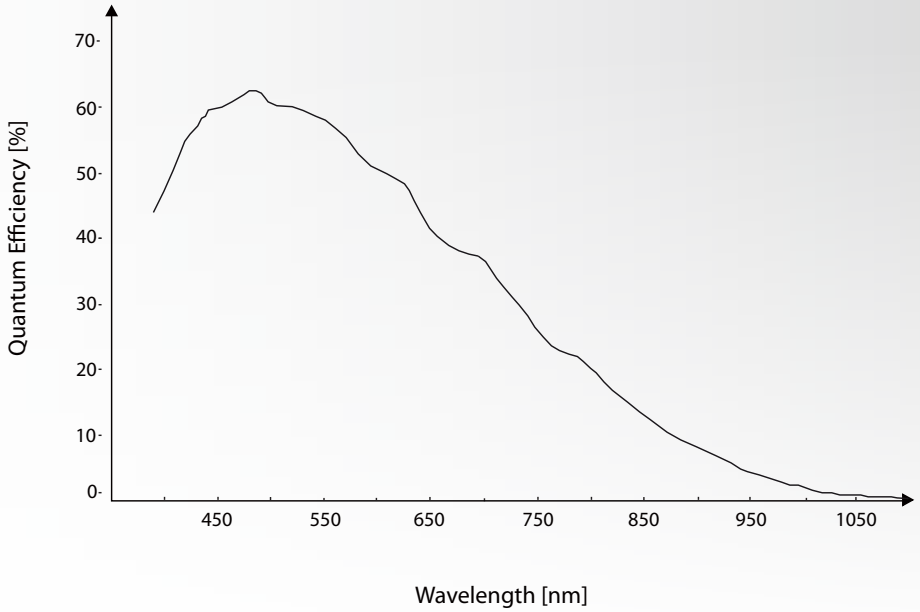
ADJUSTMENTS (AUTOMATIC)

Shutter	1/10,000 to 30 s
Gain	0 to 18 dB
White balance	-6 dB to +6 dB

ENVIRONMENTAL

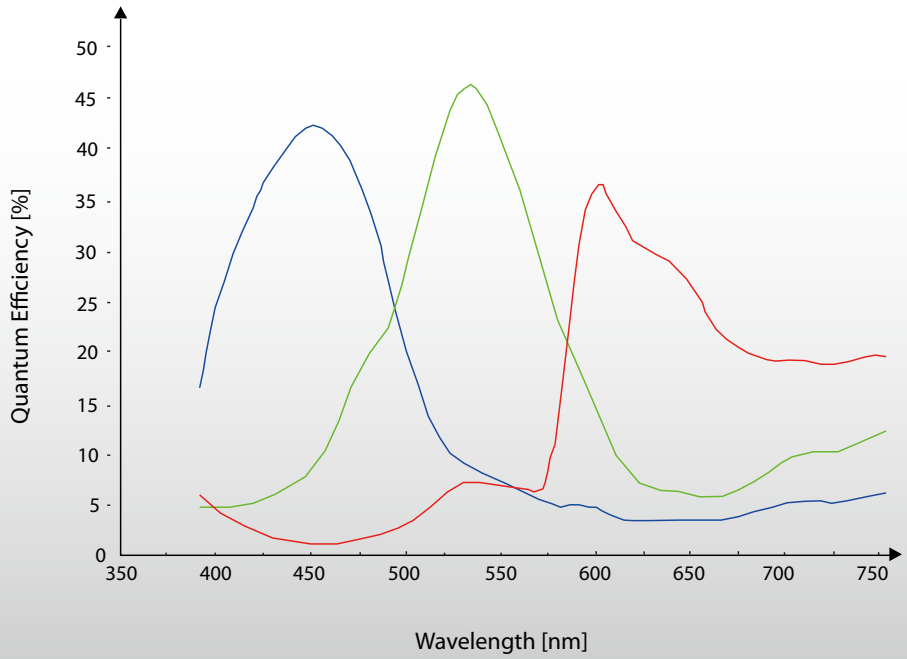
Max. temperature (operation)	-5 °C to 45 °C
Max. temperature (storage)	-20 °C to 60 °C
Max. humidity (operation)	20 % to 80 % non-condensing
Max. humidity (storage)	20 % to 95 % non-condensing

Monochrome Spectral Response Curve



Sensor: Micron MT9P031 M - courtesy of Aptina Deutschland GmbH

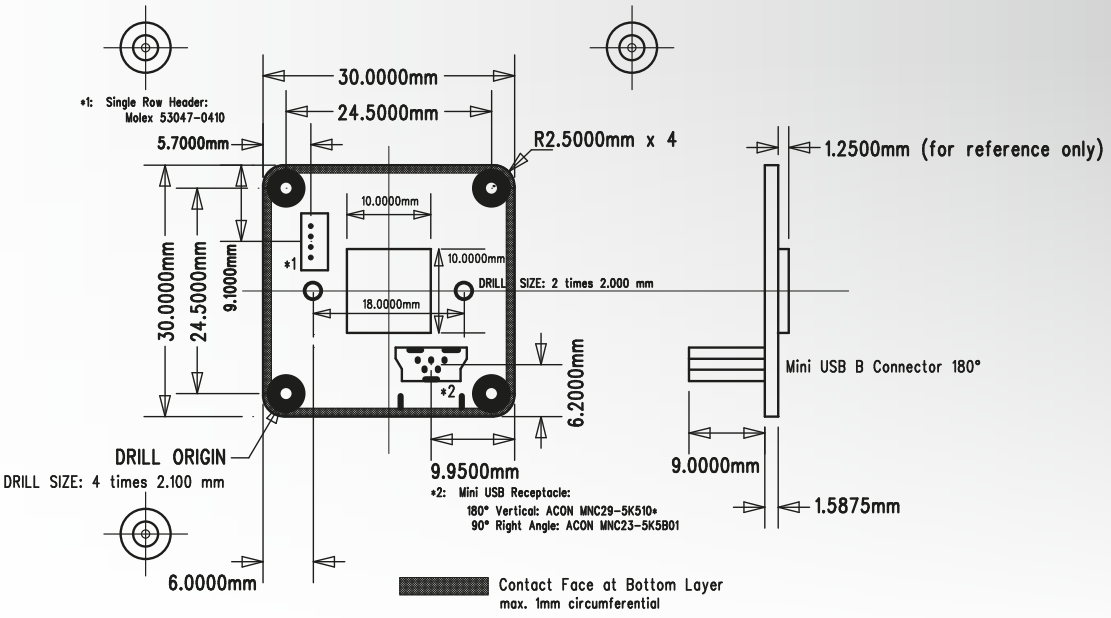
Color Spectral Response Curve

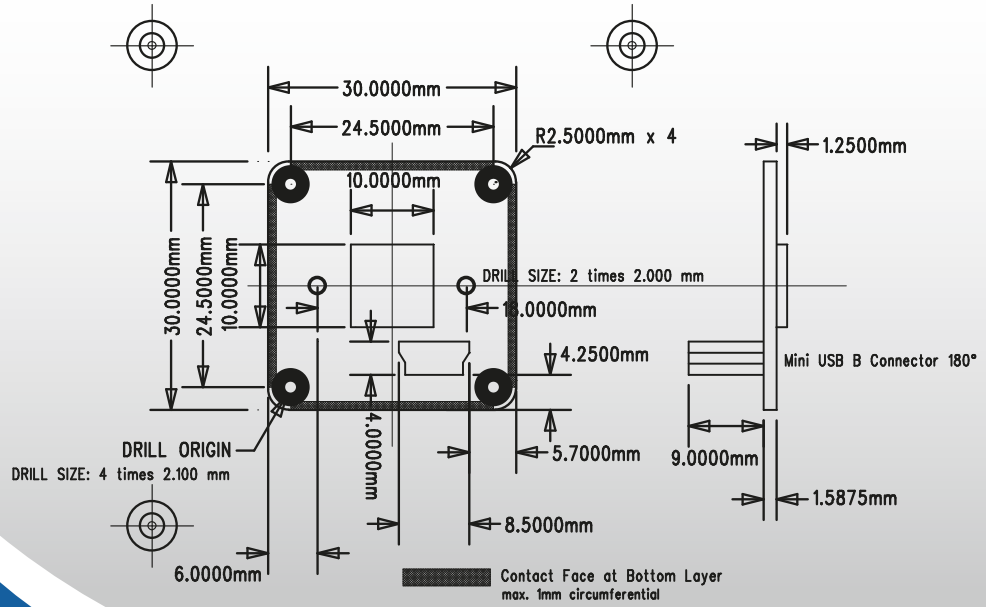


Sensor: Micron MT9P031 C - courtesy of Aptina Deutschland GmbH

DMK 72BUC02 / DFK 72BUC02

Dimensional Diagram





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All weights and dimensions are approximate. Unless otherwise specified the lenses shown in the context of cameras are not shipped with these cameras.

The Imaging Source "AutoFocus" Series USB CMOS Cameras

- Dimensions 36 x 36 x 25 mm
- Motorized focus control (via software)
- CMOS sensors available
- Very attractive pricing

Model	Resolution	Megapixel	Pixel Size	Frame Rate	Sensor	Sensor Size	A/D
DMK 22AUC03-F	744 x 480	0.3	6 µm	76 fps	Aptina MT9V024 M	1/3" CMOS	8 bit
DFK 22AUC03-F	744 x 480	0.3	6 µm	76 fps	Aptina MT9V024 C	1/3" CMOS	8 bit
DMK 42AUC03-F	1280 x 960	1.2	3,75 µm	25 fps	Aptina MT9M021 M	1/3" CMOS	8 bit
DFK 42AUC03-F	1280 x 960	1.2	3,75 µm	25 fps	Aptina MT9M021 C	1/3" CMOS	8 bit
DMK 72AUC02-F	2592 x 1944	5	2.2 µm	6 fps	Aptina MT9P031 M	1/2.5" CMOS	8 bit
DFK 72AUC02-F	2592 x 1944	5	2.2 µm	6 fps	Aptina MT9P031 C	1/2.5" CMOS	8 bit

The Imaging Source "AutoFocus" series cameras are the perfect solution for many industrial automation, quality assurance, security, and surveillance applications. Utilizing the highly sensitive Aptina CMOS sensors with selectable windows and pixel binning capabilities, the accurate 125 micron stepper motor accepts a wide range of M12 lenses for a broad range of uses. With wide VGA and 1.2 Megapixel global shutter models, as well as, 5 Megapixel rolling shutter versions, the application possibilities are endless. The easy to use USB 2.0 protocol, the software driven automatic 'One Push' focus, and the small housing makes this camera both elegant and versatile.

Included :

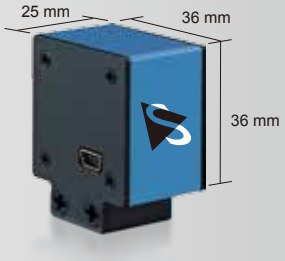
- Camera, CS to C mount adapter and tripod mount
- Drivers compatible to WDM, DirectShow, DirectX®, TWAIN, ActivVisionTools, HALCON, VfW and LabVIEW® for Windows 7/8, Windows Vista, and Windows XP
- IC Capture camera control and aquisition software for Windows 7/8, Windows Vista, and Windows XP (32 and 64 bit versions)
- IC Imaging Control Software Development Kit (SDK) including a .NET component, an ActiveX component, and a C++ class library for Windows

Features :

- Motorized focus control (via software)
- Manual and automatic control
- For M12 lenses optimized
- Binning and ROI

Accessories :

- M12 lenses
- USB 2.0 cable (1.8m, 3m, 4.5m)



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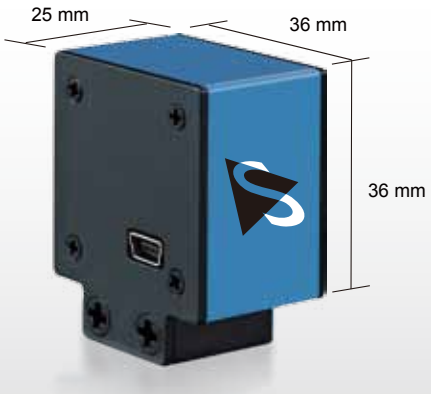
The Imaging Source “AutoFocus” Series USB CMOS Cameras

DMK 22AUC03-F / DFK 22AUC03-F



The Imaging Source DMK 22AUC03-F (monochrome) and DFK 22AUC03-F (color) wide VGA “AutoFocus” Series cameras are the perfect solution for many industrial automation, quality assurance, security, surveillance, and medical applications. Utilizing the Aptina MT9V024 CMOS sensor with selectable windows and high-speed readout capabilities, the accurate 125 micron stepper motor accepts a wide range of M12 lenses for a broad range of uses. The USB 2.0 protocol, the software driven automatic ‘One Push’ focus, and the small housing makes this camera both elegant and versatile.

The Imaging Source 22 series “AutoFocus” cameras are characterized by small housings, ‘One Push’ focus and very competitive prices.

Included :

- Camera, CS to C mount adapter and tripod mount
- Drivers compatible to WDM, DirectShow, DirectX®, TWAIN, ActivVisionTools, HALCON, VfW and LabVIEW® for Windows 7/8, Windows Vista, and Windows XP
- IC Capture camera control and aquisition software for Windows 7/8, Windows Vista, and Windows XP (32 and 64 bit versions)
- IC Imaging Control Software Development Kit (SDK) including a .NET component, an ActiveX component, and a C++ class library for Windows

Features :

- Motorized focus control (via software)
- Manual and automatic control
- For M12 lenses optimized
- Binning and ROI

Accessories :

- M12 lenses
- USB 2.0 cable (1.8m, 3m, 4.5m)

Specification: DMK 22AUC03-F (Monochrome)

GENERAL BEHAVIOR

Example Configurations

Resolution	Format	FPS	Sensitivity
744x480	1/3 "	76	4.8 V/lux-sec
640x480	1/3.5 "	87	4.8 V/lux-sec
320x240	1/7 "	150	4.8 V/lux-sec

Color format	Y800
Dynamic range	8 bit

INTERFACE (OPTICAL)

IR cut filter	no
Sensor specification	MT9V024
Shutter	Global
Format	1/3 "
Resolution	H: 744, V: 480
Pixel size	H: 6.0 µm, V: 6.0 µm
Lens mount	M12x0.5

INTERFACE (ELECTRICAL)

Supply voltage	4.5 to 5.5 VDC
Current consumption	approx. 250 mA at 5 VDC

INTERFACE (MECHANICAL)

Dimensions	H: 36 mm, W: 36 mm, L: 25 mm
Mass	50 g

ADJUSTMENTS (MANUAL)

Shutter	1/10,000 to 1/4 s
Gain	0 to 18 dB

ADJUSTMENTS (AUTOMATIC)

Shutter	1/10,000 to 1/4 s
Gain	0 to 18 dB

ENVIRONMENTAL

Max. temperature (operation)	-5 °C to 45 °C
Max. temperature (storage)	-20 °C to 60 °C
Max. humidity (operation)	20 % to 80 % non-condensing
Max. humidity (storage)	20 % to 95 % non-condensing

Specification: DFK 22AUC03-F (Color)

GENERAL BEHAVIOR

Example Configurations

Resolution	Format	FPS	Sensitivity
744x480	1/3 "	76	4.8 V/lux-sec
640x480	1/3.5 "	87	4.8 V/lux-sec
320x240	1/7 "	150	4.8 V/lux-sec

Color format	Y800
Dynamic range	8 bit

INTERFACE (OPTICAL)

IR cut filter	no
Sensor specification	MT9V024
Shutter	Global
Format	1/3 "
Resolution	H: 744, V: 480
Pixel size	H: 6.0 µm, V: 6.0 µm
Lens mount	M12x0.5

INTERFACE (ELECTRICAL)

Supply voltage	4.5 to 5.5 VDC
Current consumption	approx. 250 mA at 5 VDC

INTERFACE (MECHANICAL)

Dimensions	H: 36 mm, W: 36 mm, L: 25 mm
Mass	50 g

ADJUSTMENTS (MANUAL)

Shutter	1/10,000 to 1/4 s
Gain	0 to 18 dB

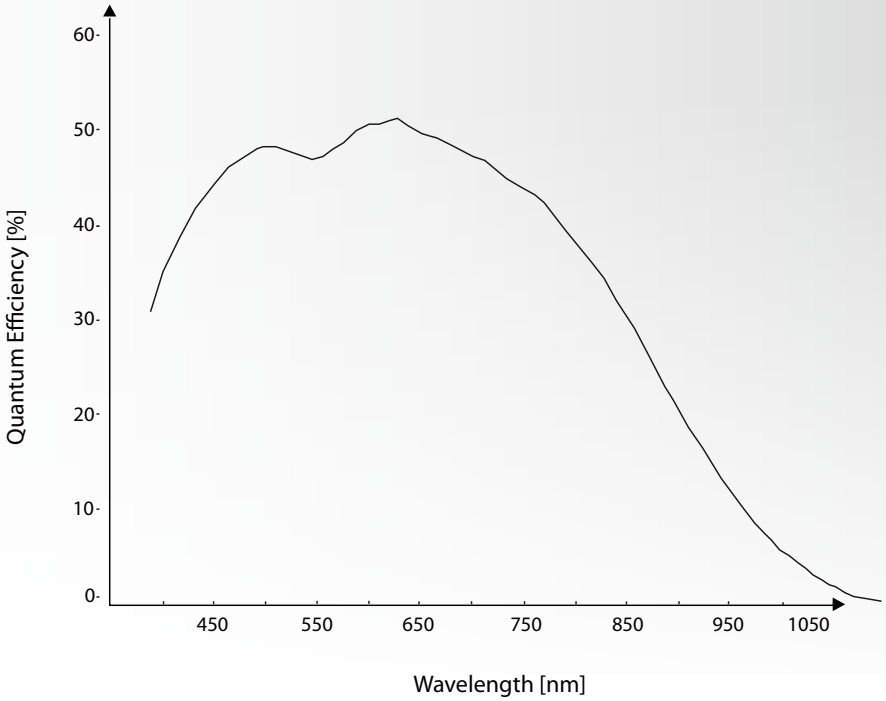
ADJUSTMENTS (AUTOMATIC)

Shutter	1/10,000 to 1/4 s
Gain	0 to 18 dB

ENVIRONMENTAL

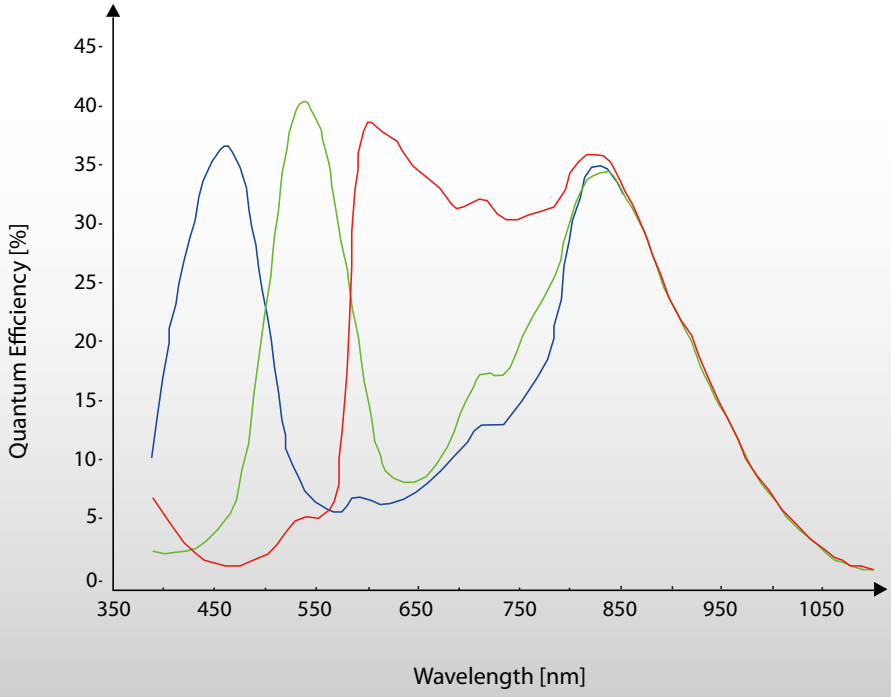
Max. temperature (operation)	-5 °C to 45 °C
Max. temperature (storage)	-20 °C to 60 °C
Max. humidity (operation)	20 % to 80 % non-condensing
Max. humidity (storage)	20 % to 95 % non-condensing

Monochrome Spectral Response Curve



Sensor: Micron MT9V024 M - courtesy of Aptina Deutschland GmbH

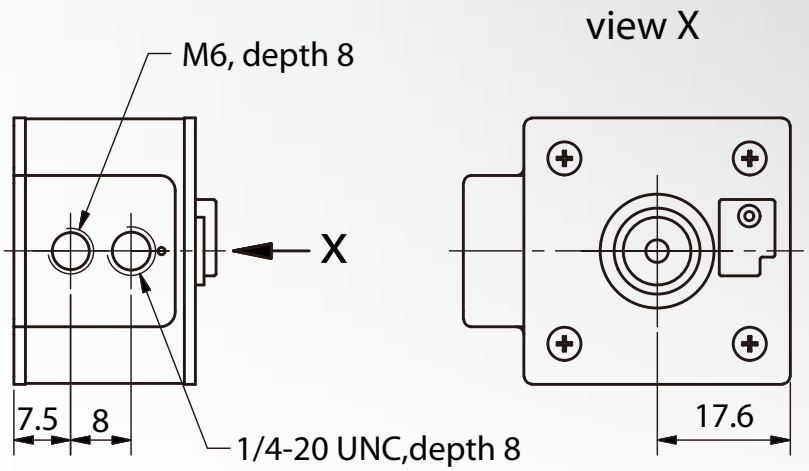
Color Spectral Response Curve

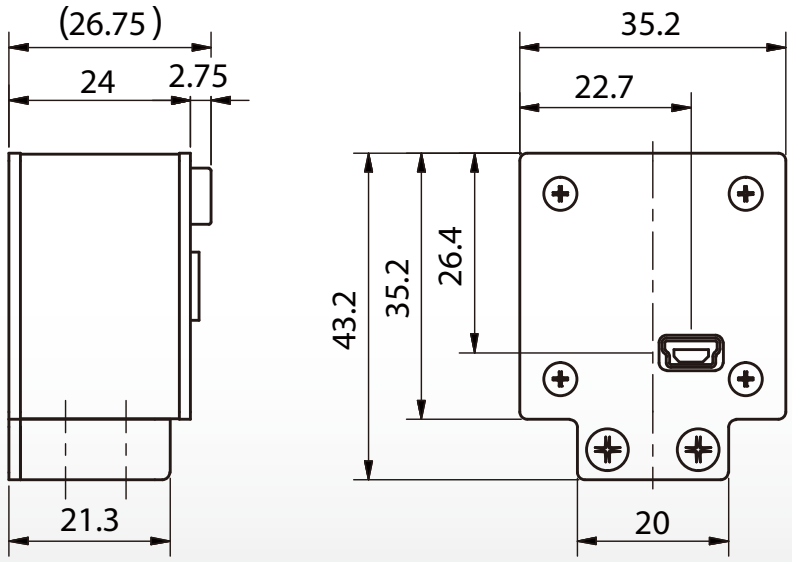


Sensor: Micron MT9V024 C - courtesy of Aptina Deutschland GmbH

DMK 22AUC03-F / DFK 22AUC03-F

Dimensional Diagram (USB port at the back)

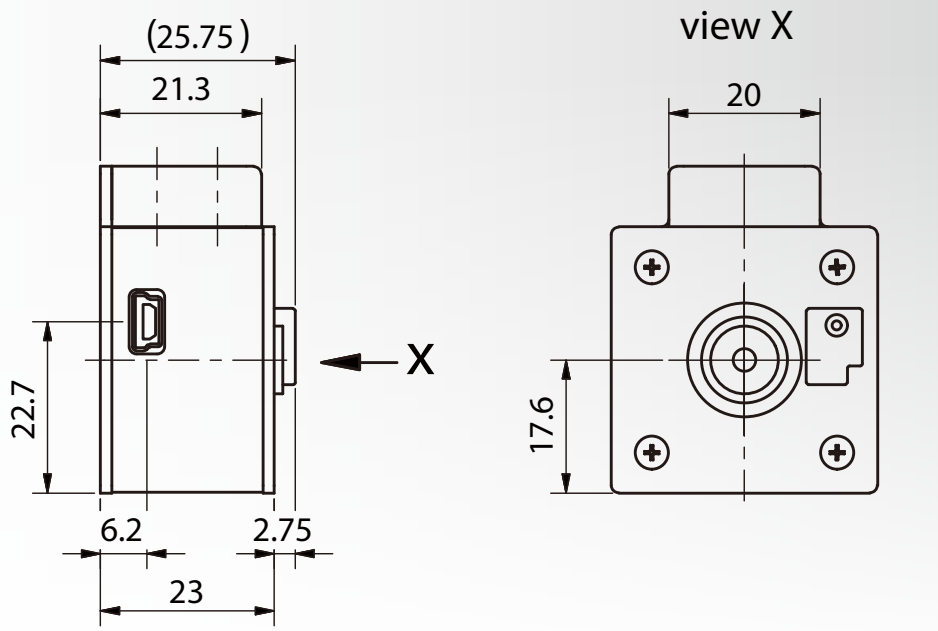


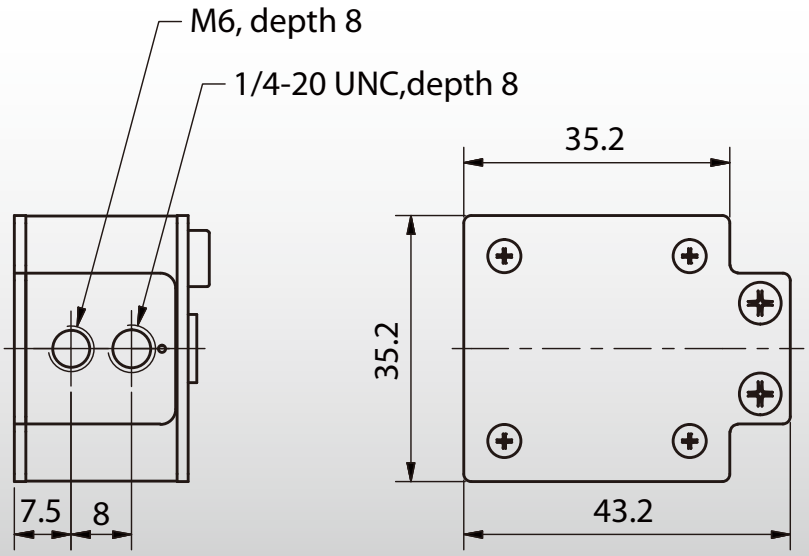


Dimensions : mm
Tolerances : DIN ISO 2768m

DMK 22AUC03-F / DFK 22AUC03-F

Dimensional Diagram (USB port at the side)





Dimensions : mm
Tolerances : DIN ISO 2768m

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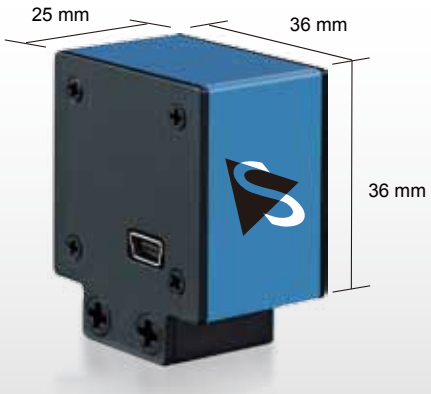
The Imaging Source “AutoFocus” Series USB CMOS Cameras

DMK 42AUC03-F / DFK 42AUC03-F



The Imaging Source DMK 42AUC03-F (monochrome) and DFK 42AUC03-F (color) “AutoFocus” series cameras are the perfect solution for many industrial automation, quality assurance, security, surveillance, and medical applications. Utilizing the Aptina MT9M021 CMOS sensor with selectable windows and high-speed readout capabilities, the accurate 125 micron stepper motor accepts a wide range of M12 lenses for a broad range of uses. The USB 2.0 protocol, the software driven automatic ‘One Push’ focus, and the small housing makes this camera both elegant and versatile.

The Imaging Source 42 series “AutoFocus” cameras are characterized by small housings, ‘One Push’ focus, and very competitive prices.

Included :

- Camera, CS to C mount adapter and tripod mount
- Drivers compatible to WDM, DirectShow, DirectX®, TWAIN, ActivVisionTools, HALCON, VfW and LabVIEW® for Windows 7/8, Windows Vista, and Windows XP
- IC Capture camera control and aquisition software for Windows 7/8, Windows Vista, and Windows XP (32 and 64 bit versions)
- IC Imaging Control Software Development Kit (SDK) including a .NET component, an ActiveX component, and a C++ class library for Windows

Features :

- Motorized focus control (via software)
- Manual and automatic control
- For M12 lenses optimized
- Binning and ROI

Accessories :

- M12 lenses
- USB 2.0 cable (1.8m, 3m, 4.5m)

Specification: DMK 42AUC03-F (Monochrome)

GENERAL BEHAVIOR

Example Configurations

Resolution	Format	FPS	Sensitivity
1280x960	1/3 "	25	2.0 V/lux-sec
1280x720	1/3 "	33	2.0 V/lux-sec
1024x768	1/4 "	31	2.0 V/lux-sec
640x480	1/5.5 "	48	2.0 V/lux-sec

Color format	Y800
Dynamic range	8 bit

INTERFACE (OPTICAL)

IR cut filter	no
Sensor specification	MT9M021
Shutter	Global
Format	1/3 "
Resolution	H: 1280, V: 960
Pixel size	H: 3.75 µm, V: 3.75 µm
Lens mount	M12x0.5

INTERFACE (ELECTRICAL)

Supply voltage	4.5 to 5.5 VDC
Current consumption	approx. 250 mA at 5 VDC

INTERFACE (MECHANICAL)

Dimensions	H: 36 mm, W: 36 mm, L: 25 mm
Mass	50 g

ADJUSTMENTS (MANUAL)

Shutter	1/10,000 to 30 s
Gain	0 to 18 dB

ADJUSTMENTS (AUTOMATIC)

Shutter	1/10,000 to 30 s
Gain	0 to 18 dB

ENVIRONMENTAL

Max. temperature (operation)	-5 °C to 45 °C
Max. temperature (storage)	-20 °C to 60 °C
Max. humidity (operation)	20 % to 80 % non-condensing
Max. humidity (storage)	20 % to 95 % non-condensing

Specification: DFK 42AUC03-F (Color)

GENERAL BEHAVIOR

Example Configurations

Resolution	Format	FPS	Sensitivity
1280x960	1/3 "	25	2.0 V/lux-sec
1280x720	1/3 "	33	2.0 V/lux-sec
1024x768	1/4 "	31	2.0 V/lux-sec
640x480	1/5.5 "	48	2.0 V/lux-sec

Color format	Y800, RGB32
Dynamic range	8 bit

INTERFACE (OPTICAL)

IR cut filter	yes
Sensor specification	MT9M021
Shutter	Global
Format	1/3 "
Resolution	H: 1280, V: 960
Pixel size	H: 3.75 µm, V: 3.75 µm
Lens mount	M12x0.5

INTERFACE (ELECTRICAL)

Supply voltage	4.5 to 5.5 VDC
Current consumption	approx. 250 mA at 5 VDC

INTERFACE (MECHANICAL)

Dimensions	H: 43.2 mm, W: 35.2 mm, L: 27 mm
Mass	50 g

ADJUSTMENTS (MANUAL)

Shutter	1/10,000 to 30 s
Gain	0 to 18 dB

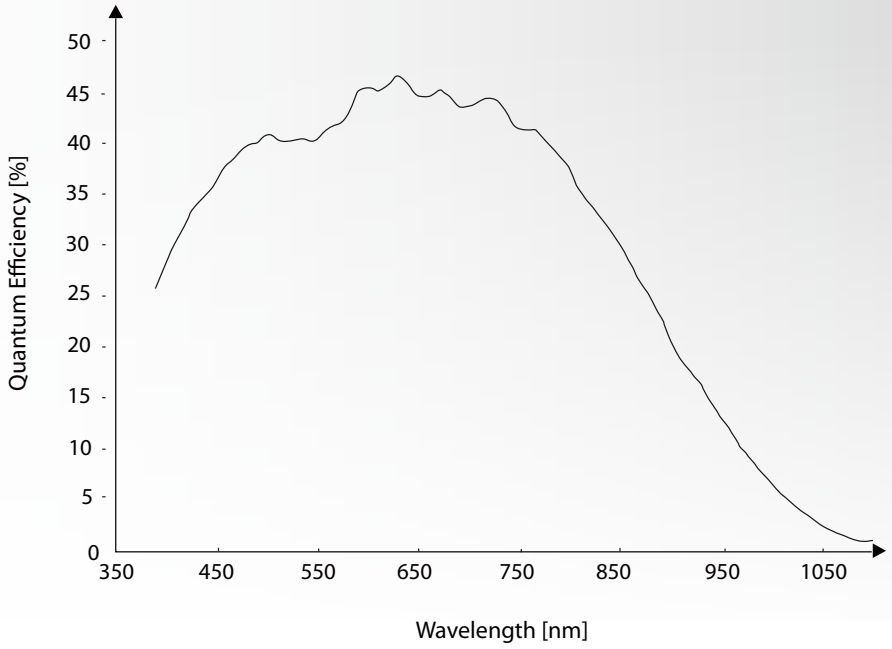
ADJUSTMENTS (AUTOMATIC)

Shutter	1/10,000 to 30 s
Gain	0 to 18 dB

ENVIRONMENTAL

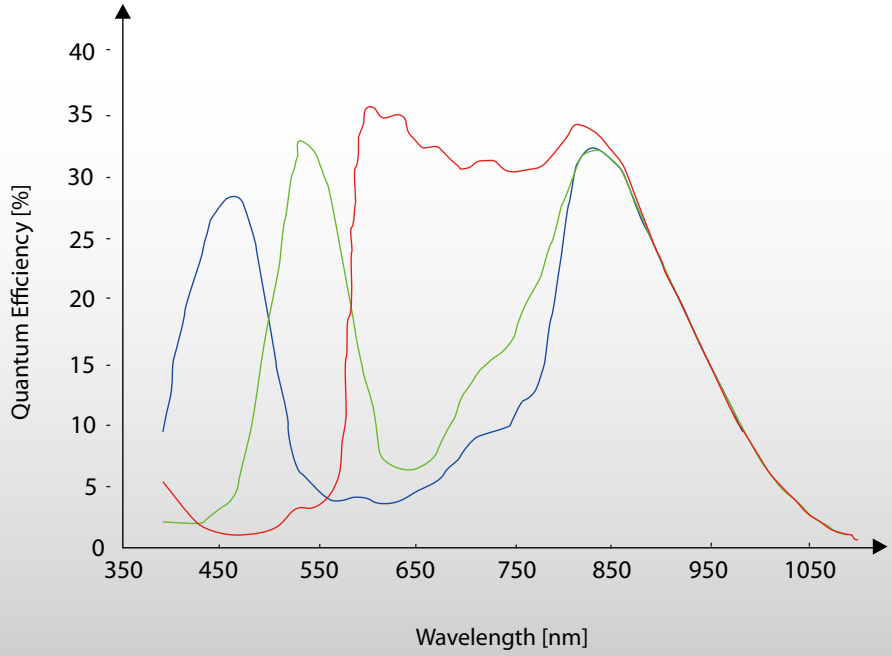
Max. temperature (operation)	-5 °C to 45 °C
Max. temperature (storage)	-20 °C to 60 °C
Max. humidity (operation)	20 % to 80 % non-condensing
Max. humidity (storage)	20 % to 95 % non-condensing

Monochrome Spectral Response Curve



Sensor: Micron MT9M021 M - courtesy of Aptina Deutschland GmbH

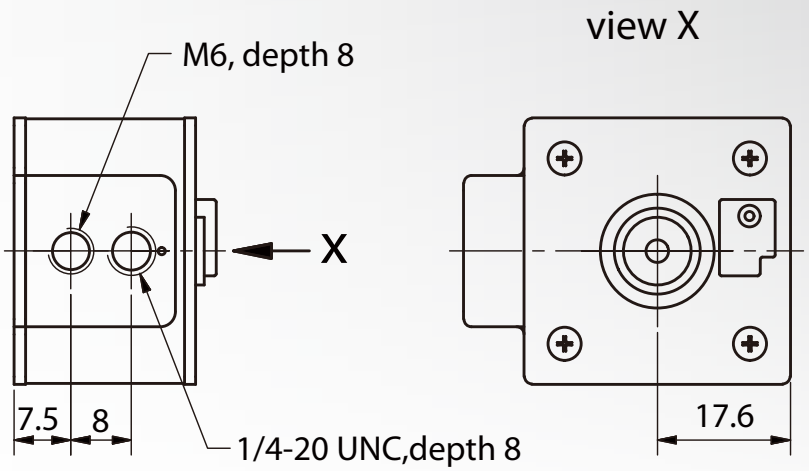
Color Spectral Response Curve

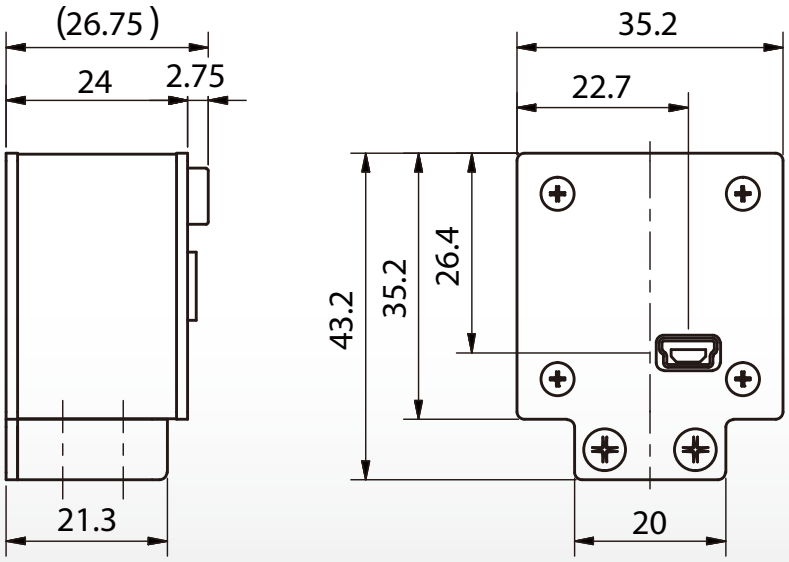


Sensor: Micron MT9M021 C - courtesy of Aptina Deutschland GmbH

DMK 42AUC03-F / DFK 42AUC03-F

Dimensional Diagram (USB port at the back)

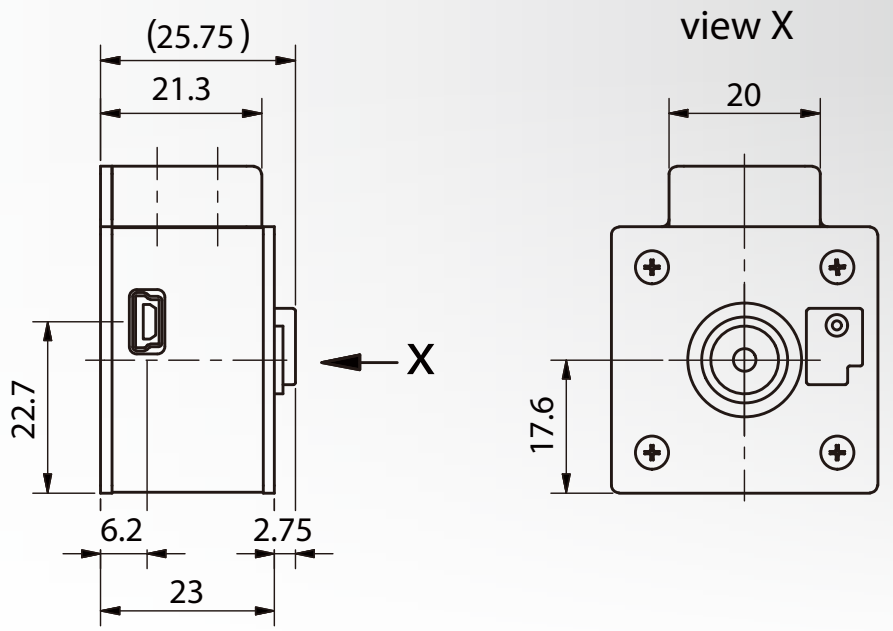


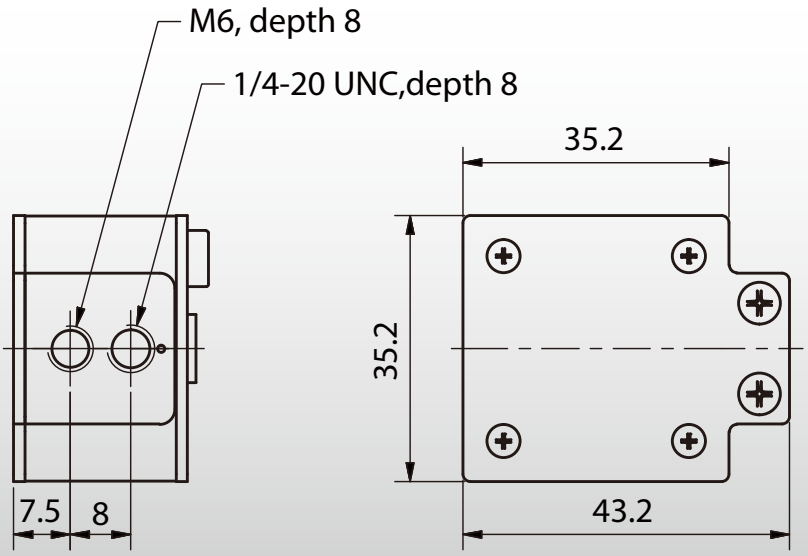


Dimensions : mm
Tolerances : DIN ISO 2768m

DMK 42AUC03-F / DFK 42AUC03-F

Dimensional Diagram (USB port at the side)





Dimensions : mm
Tolerances : DIN ISO 2768m

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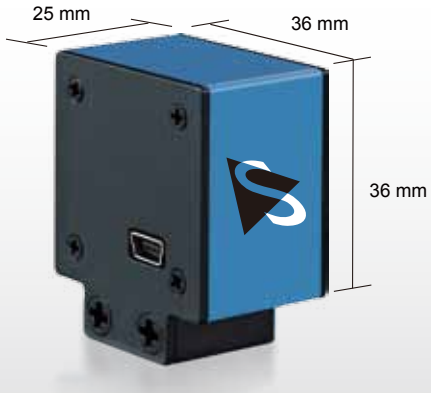
The Imaging Source “AutoFocus” Series USB CMOS Cameras

DMK 72AUC02-F / DFK 72AUC02-F



The Imaging Source DMK 72AUC02-F (monochrome) and DFK 72AUC02-F (color) 5 Megapixel “AutoFocus” cameras are the perfect solution for many industrial automation, quality assurance, security, and surveillance applications. Utilizing the Aptina MT9P031 CMOS sensor with selectable windows and pixel binning capabilities, the accurate 125 micron stepper motor accepts a wide range of M12 lenses for a broad range of uses. The USB 2.0 protocol, the software driven automatic ‘One Push’ focus, and the small housing makes this camera both elegant and versatile.

The Imaging Source 72 series “AutoFocus” cameras are characterized by small housings, ‘One Push’ focus, and very competitive prices.

Included :

- Camera, CS to C mount adapter and tripod mount
- Drivers compatible to WDM, DirectShow, DirectX®, TWAIN, ActivVisionTools, HALCON, VfW and LabVIEW® for Windows 7/8, Windows Vista, and Windows XP
- IC Capture camera control and aquisition software for Windows 7/8, Windows Vista, and Windows XP (32 and 64 bit versions)
- IC Imaging Control Software Development Kit (SDK) including a .NET component, an ActiveX component, and a C++ class library for Windows

Features :

- Motorized focus control (via software)
- Manual and automatic control
- For M12 lenses optimized
- Binning and ROI

Accessories :

- M12 lenses
- USB 2.0 cable (1.8m, 3m, 4.5m)

Specification: DMK 72AUC02-F (Monochrome)

GENERAL BEHAVIOR

Example Configurations

Resolution	Format	FPS	Sensitivity
2592x1944	1/2.5 "	6	1.4 V/lux-sec
2048x1536	1/3 "	9	1.4 V/lux-sec
1600x1200	1/4 "	13	1.4 V/lux-sec
1280x960	1/4.5 "	19	1.4 V/lux-sec
1280x960	1/2.5 "	15	5.6 V/lux-sec
1024x768	1/5.5 "	27	1.4 V/lux-sec
640x480	1/9 "	52	1.4 V/lux-sec
640x480	1/2.5 "	23	22.4 V/lux-sec

Color format	Y800
Dynamic range	8 bit

INTERFACE (OPTICAL)

IR cut filter	no
Sensor specification	MT9P031
Shutter	Rolling
Format	1/2.5 "
Resolution	H: 2592, V: 1944
Pixel size	H: 2.2 µm, V: 2.2 µm
Lens mount	M12x0.5

INTERFACE (ELECTRICAL)

Supply voltage	4.5 to 5.5 VDC
Current consumption	approx. 250 mA at 5 VDC

INTERFACE (MECHANICAL)

Dimensions	H: 36 mm, W: 36 mm, L: 25 mm
Mass	50 g

ADJUSTMENTS (MANUAL)

Shutter	1/10,000 to 30 s
Gain	0 to 18 dB

ADJUSTMENTS (AUTOMATIC)

Shutter	1/10,000 to 30 s
Gain	0 to 18 dB

ENVIRONMENTAL

Max. temperature (operation)	-5 °C to 45 °C
Max. temperature (storage)	-20 °C to 60 °C
Max. humidity (operation)	20 % to 80 % non-condensing
Max. humidity (storage)	20 % to 95 % non-condensing

Specification: DFK 72AUC02-F (Color)

GENERAL BEHAVIOR

Example Configurations

Resolution	Format	FPS	Sensitivity
2592x1944	1/2.5 "	6	1.4 V/lux-sec
2048x1536	1/3 "	9	1.4 V/lux-sec
1600x1200	1/4 "	13	1.4 V/lux-sec
1280x960	1/4.5 "	19	1.4 V/lux-sec
1280x960	1/2.5 "	15	5.6 V/lux-sec
1024x768	1/5.5 "	27	1.4 V/lux-sec
640x480	1/9 "	52	1.4 V/lux-sec
640x480	1/2.5 "	23	22.4 V/lux-sec

Color format	Y800, RGB32
Dynamic range	8 bit

INTERFACE (OPTICAL)

IR cut filter	no
Sensor specification	MT9P031
Shutter	Rolling
Format	1/2.5 "
Resolution	H: 2592, V: 1944
Pixel size	H: 2.2 µm, V: 2.2 µm
Lens mount	M12x0.5

INTERFACE (ELECTRICAL)

Supply voltage	4.5 to 5.5 VDC
Current consumption	approx. 250 mA at 5 VDC

INTERFACE (MECHANICAL)

Dimensions	H: 36 mm, W: 36 mm, L: 25 mm
Mass	50 g

ADJUSTMENTS (MANUAL)

Shutter	1/10,000 to 30 s
Gain	0 to 18 dB
White balance	-6 dB to +6 dB

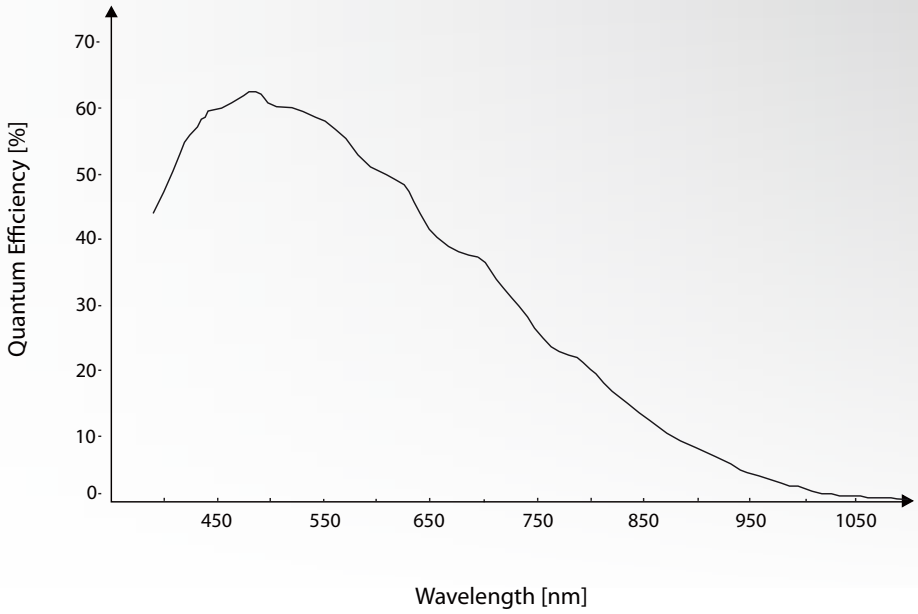
ADJUSTMENTS (AUTOMATIC)

Shutter	1/10,000 to 30 s
Gain	0 to 18 dB
White balance	-6 dB to +6 dB

ENVIRONMENTAL

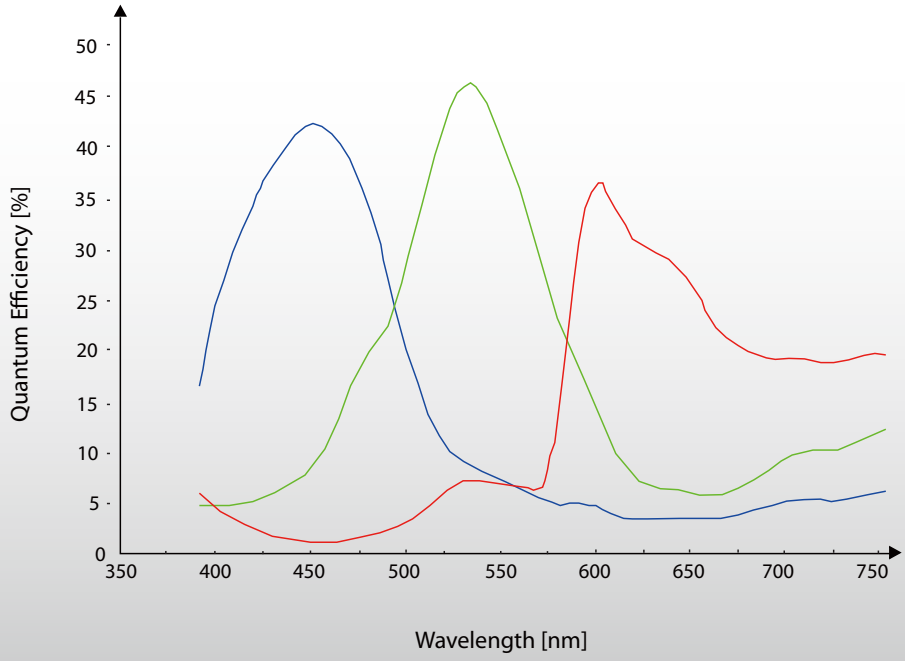
Max. temperature (operation)	-5 °C to 45 °C
Max. temperature (storage)	-20 °C to 60 °C
Max. humidity (operation)	20 % to 80 % non-condensing
Max. humidity (storage)	20 % to 95 % non-condensing

Monochrome Spectral Response Curve



Sensor: Micron MT9P031 M - courtesy of Aptina Deutschland GmbH

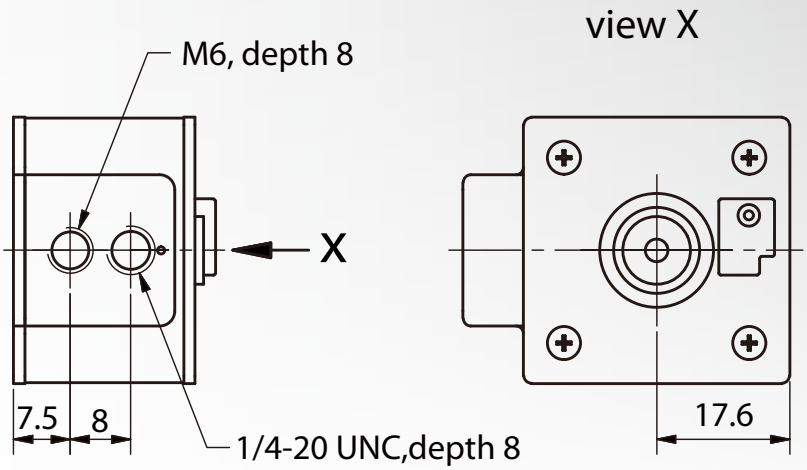
Color Spectral Response Curve

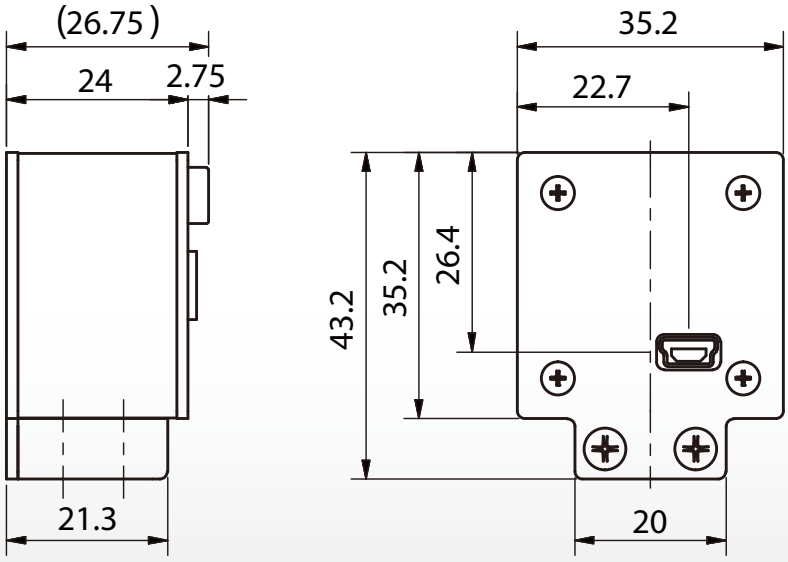


Sensor: Micron MT9P031 C - courtesy of Aptina Deutschland GmbH

DMK 72AUC02-F / DFK 72AUC02-F

Dimensional Diagram (USB port at the back)

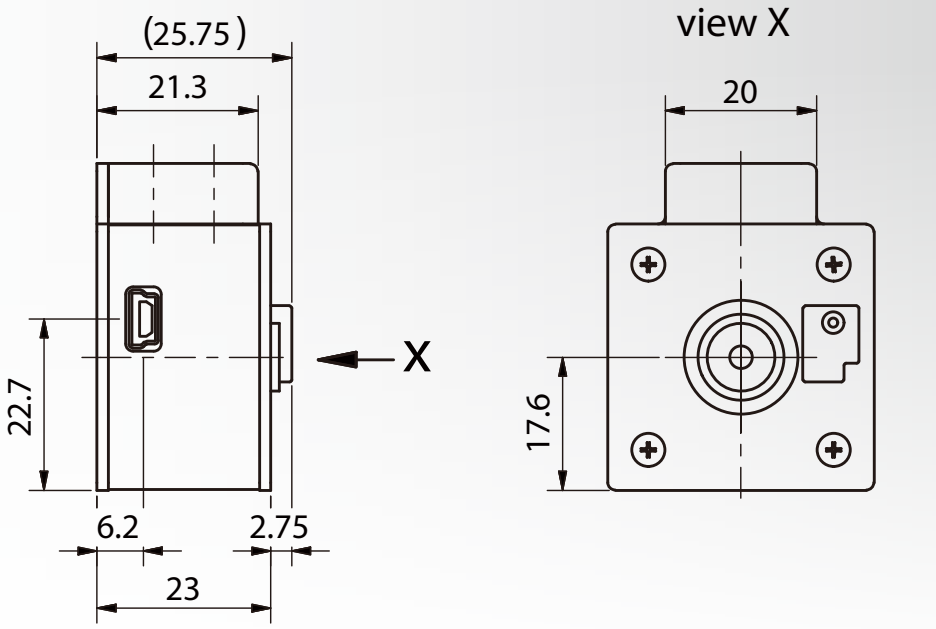


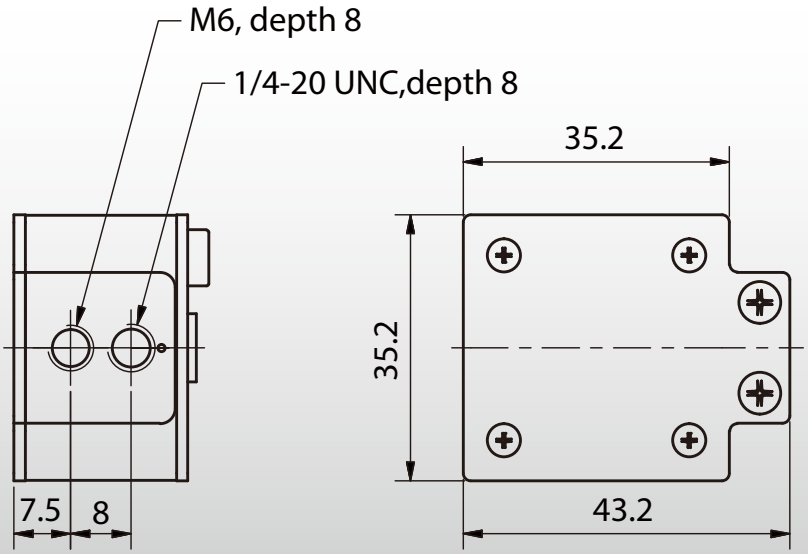


Dimensions : mm
Tolerances : DIN ISO 2768m

DMK 72AUC02-F / DFK 72AUC02-F

Dimensional Diagram (USB port at the side)





Dimensions : mm
Tolerances : DIN ISO 2768m

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The Imaging Source USB Converter

- Dimensions 32 x 58 x 95 mm
- Video / Audio to USB
- Very attractive pricing

Despite the fast growing world of digital cameras, there are still an enormous number of analog video sources. Using a Video-to-USB converter, such as the DFG/USB2pro and the DFG/USB2aud, analog video sources are also usable in a digital environment.

The DFG/USB2pro converts analog video signals (PAL, NTSC, CCIR, EIA) into uncompressed image data streams. The DFG/USB2aud additionally converts analog audio signals.

Included :

- Converter
- Drivers compatible to WDM, DirectShow, DirectX®, TWAIN, ActivVisionTools, HALCON, VfW and LabVIEW® for Windows 7/8, Windows Vista, and Windows XP
- IC Capture camera control and aquisition software for Windows 7/8, Windows Vista, and Windows XP (32 and 64 bit versions)
- IC Imaging Control Software Development Kit (SDK) including a .NET component, an ActiveX component, and a C++ class library for Windows

Features :

- Inputs: composite and Y/C
- Output DFG/USB2pro: USB 2.0, uncompressed image data stream without audio
- Output DFG/USB2aud: USB2.0, uncompressed image and audio data stream
- Video formats: PAL/CCIR, NTSC/RS-170
- Max resolution (NTSC/RS-170): 640x480 @ 30 Hz
- Max resolution (PAL/CCIR): 768x576 @ 25 Hz

Additional Features Audio Version:

- Inputs: Audio
- Output: USB 2.0, uncompressed image stream with audio

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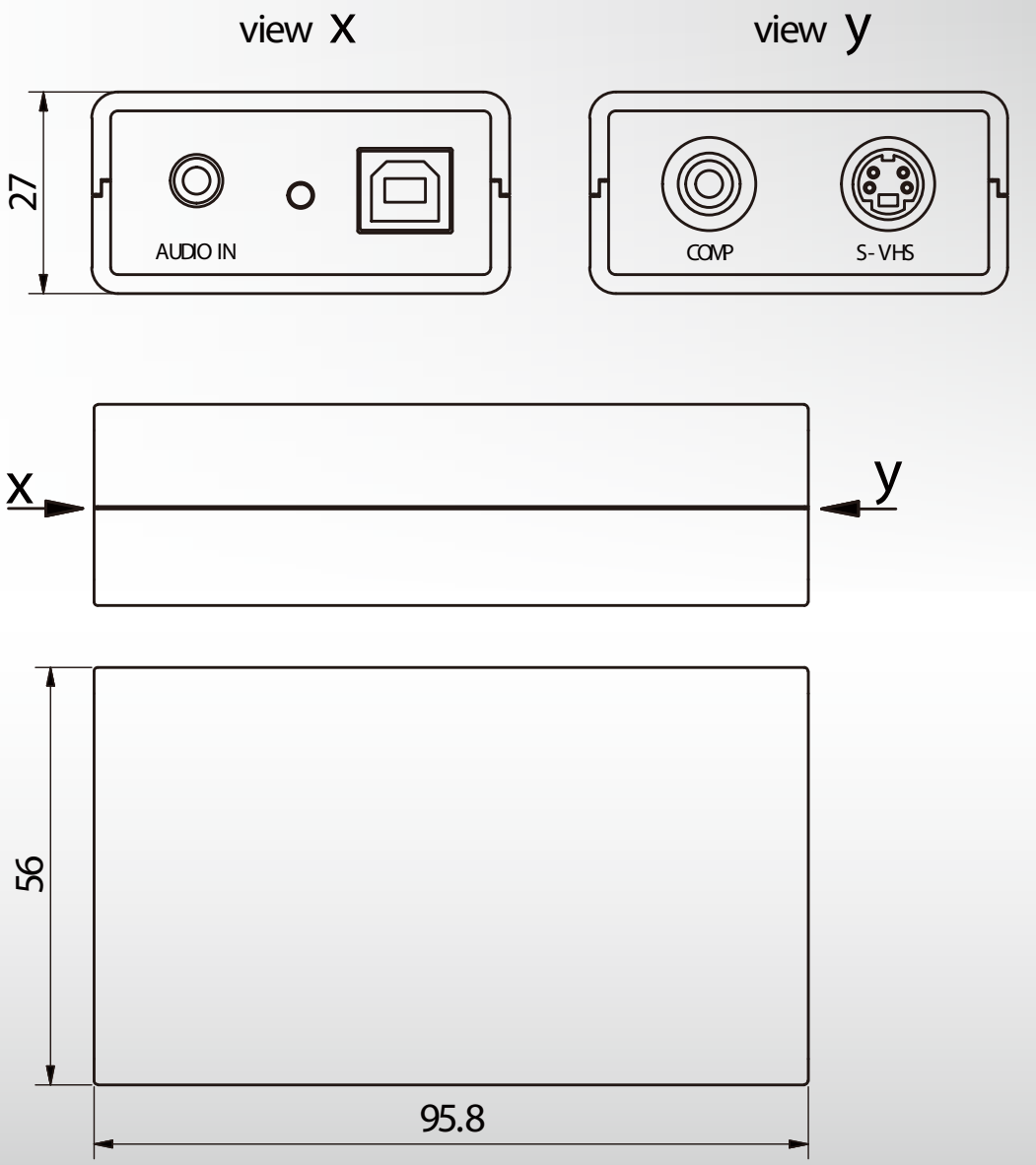
DFG/USB2pro and DFG/USB2aud

Dimensional Diagram



Dimensions: mm
Tolerances: DIN ISO 2768m

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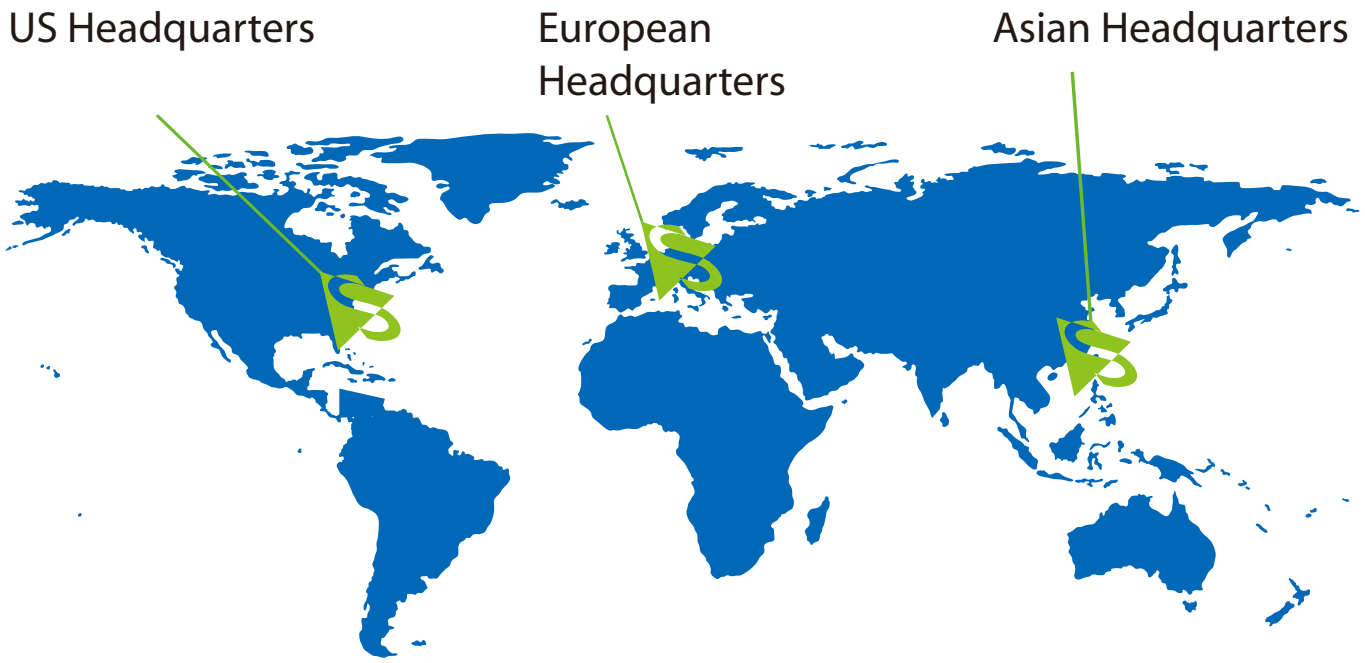

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