



LANOPTIK

Catalog 2021

Microscope Camera

Rhythm Series

RHYTHM SERIES

MICROSCOPE CAMERAS



ABOUT RHYTHM SERIES

Rhythm Series is a new system for high resolution and high sensitivity imaging, which has been added to the Lanoptik digital microscope camera line up. With 8 models to choose from, you can select the optimum camera from the Rhythm series to suit a wide range of applications for microscopic imaging. The Rhythm series cameras utilize Sony's second-generation CMOS sensors with USB 3.0 interface, providing larger field of view, higher resolution, lower noise and higher sensitivity. The Rhythm series covers a variety of applications, from biological to industrial use, and from high-level research to simple capture of inspection results.

PERFECTION AT ALL LEVELS

The Rhythm series microscope cameras are suitable for different levels of application. You can always get a right one for excellent user-experience from them.

MODELS

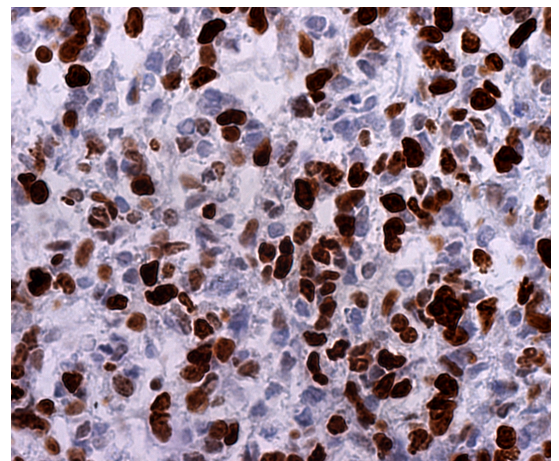
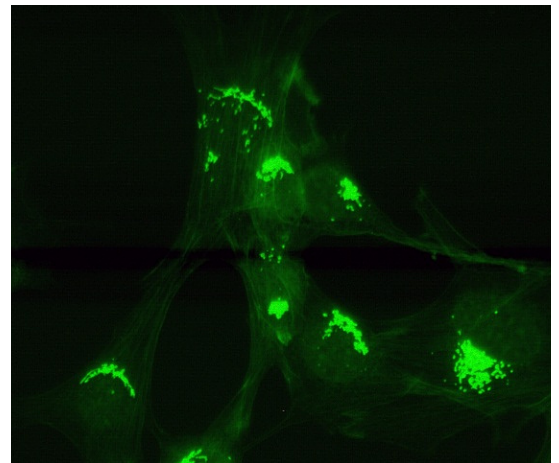
- MDY213 / MDY213M
- MDY513 / MDY513M
- MDY603
- MDY803
- MDY1203 / MDY1203M
- MDY1603
- MDY2003

FEATURES

- High resolution: from 5.4 megapixel to 20 megapixel
- Large sensor: 1/2.3", 1/1.8", 2/3" and 1"
- High speed live imaging
- iWorks EX software

APPLICATIONS

- Life sciences: medicine, pathology, hematology, cytology, biology and chemistry
- Material sciences: grain analysis, cast iron analysis, mineralogy and metallography
- Forensics: securing of evidence, document examination and forensic medicine



2.3 Megapixel Scientific CMOS Microscope Camera

MDY213 / MDY213M

Description

MDY213 is a scientific grade microscope camera equipped with high performance 2.3 megapixel global shutter CMOS sensor Sony IMX249. Thanks to its 1/1.2 inch sensor we can get a larger field of view. The USB 3.0 interface and 64 Mb buffer memory ensure the camera can stably run at a extremely high frame rate (40 fps at 2.3 MP and 1080P resolution). Featuring with low noise, excellent color reproduction, high frame rate and high sensitivity, MDY213 is perfect suitable for applications under low light conditions and in microscopy such as chemiluminescence, gel imaging, fluorescence imaging, DIC, living cells imaging and immunohistochemistry.

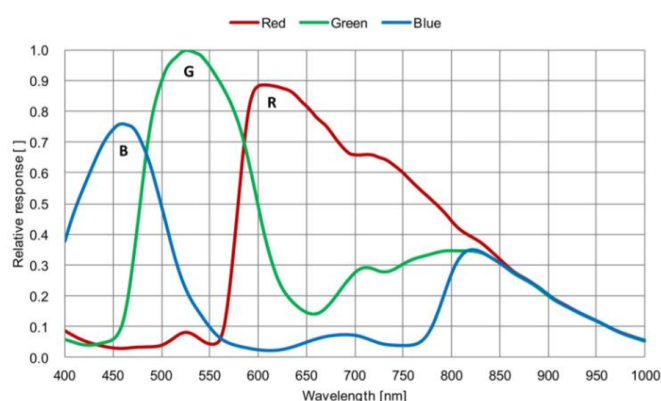
Features

- 1/1.2 inch global shutter CMOS sensor with 5.86 μm pixel size
- Super high speed USB 3.0 for both data and power
- Full resolution with up to 40 fps
- Very high dynamic range and very low dark noise value
- iWorks EX software
- Twain and DirectShow driver compatible
- Dustproof structure and aluminum alloy body design
- Compatible with Windows 7, Windows 8 & Windows 10

Applications

- Bright field / Dark field
- Histology
- Pathology
- Cytology
- GFP, FISH, NIR, FRET
- Metrology
- Life science
- Material science
- Semiconductor Inspection

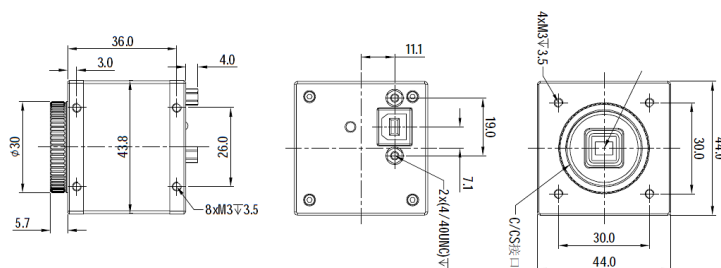
Quantum Efficiency



Specifications

Model	MDY213 / MDY213M
Sensor Type	1/1.2" Sony CMOS
Resolution	1920H×1200V (2.3 MP)
Pixel Size	5.86 μm ×5.86 μm
Frame Rate	40fps (1920×1200)
Filter	650nm IR Cut-off Filter
Optical Mount	C Mount
Shutter Type	Global
Exposure Time	20 μs ~ 40s
Exposure Control	Auto/ Manual/ Regional Exposure
White Balance	Auto/ Manual / Regional
Spectral Response	380~650nm (with IR cut-off filter)
Operation System	Windows XP, 7, 8, 10
Software Interface	TWAIN, DirectShow
Data Interface	USB 3.0
Power Consumption	<2.5W, Standby: 1.5W
Power Supply	USB 5.0V
Working Temp.	0~50°C
Storage Temp.	-20~60°C
Dimension	90.3mm×90.3mm×31mm
Weight	500g

Dimensions (mm)



5 Megapixel Scientific CMOS Microscope Camera

MDY513 / MDY513M

Description

MDY513 is a scientific grade microscope camera equipped with high performance 5 megapixel global shutter CMOS sensor Sony IMX264. Thanks to its 2/3 inch sensor we can get a larger field of view. The USB 3.0 interface and 64 Mb buffer memory ensure the camera can stably run at an extremely high frame rate (39fps at 5 MP and 58 fps at 1080P). Featuring with low noise, excellent color reproduction, high frame rate and high sensitivity, its imaging quality can be comparable to that of digital SLR camera. MDY513 is perfect suitable for applications under low light conditions and in microscopy such as chemiluminescence, gel imaging, fluorescence imaging, DIC, living cells imaging and immunohistochemistry.

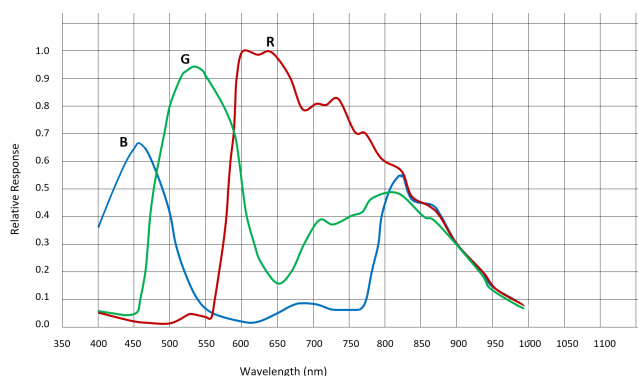
Features

- 2/3" global shutter CMOS sensor with 3.45 μm pixel size
- Super high speed USB 3.0 for both data and power
- Full resolution with up to 39 fps
- Very high dynamic range and very low dark noise value
- iWorks EX software
- Twain and DirectShow driver compatible
- Dust-proof structure and aluminum alloy body design
- Compatible with Windows 7, Windows 8, & Windows 10

Applications

- Bright field / Dark field
- Histology
- Pathology
- Cytology
- GFP, FISH, NIR, FRET
- Metrology
- Life science
- Material science
- Semiconductor Inspection

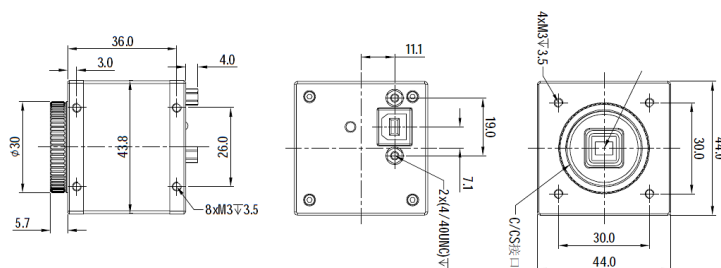
Quantum Efficiency



Specifications

Model	MDY513 / MDY513M
Sensor Type	2/3" Sony CMOS
Resolution	2448H×2048V (5MP)
Pixel Size	3.45 μm ×3.45 μm
Frame Rate	39fps (2448×2048)
Filter	650nm IR Cut-off Filter
Optical Mount	C Mount
Shutter Type	Global
Exposure Time	46 μs ~ 10s
Exposure Control	Auto/ Manual/ Regional Exposure
White Balance	Auto/ Manual / Regional
Spectral Response	380~650nm (with IR cut-off filter)
Operation System	Windows XP, 7, 8, 10
Software Interface	TWAIN, DirectShow
Data Interface	USB 3.0
Power Consumption	<2.5W, Standby: 1.5W
Power Supply	USB 5.0V
Working Temp.	0~50°C
Storage Temp.	-20~60°C
Dimension	90.3mm×90.3mm×31mm
Weight	500g

Dimensions (mm)



6.3 Megapixel Scientific CMOS Microscope Camera

MDY603

Description

The 6.3 megapixel camera MDY603 is designed as a replacement of MCX501 which is discontinued. Equipped with 1/1.8 inch Sony CMOS sensor, MDY603 utilizes USB 3.0 interface. Thanks to 64 Mb built-in buffer memory, the camera can stably run at 30 frame per second at full resolution. Featuring with low noise, excellent color reproduction, high frame rate, its excellent performance makes it perfect for the applications such as microscopy, medical engineering, quality assurance and material analysis.

Features

- 1/1.8" rolling shutter sensor with 2.4 μm pixel size
- Super high speed USB 3.0 for both data and power
- Full resolution (6.3 MP) with up to 30 fps
- iWorks EX software
- Twain and DirectShow driver compatible
- Dust-proof structure and aluminum alloy body design
- Compatible with Windows 7, Windows 8, & Windows 10

Applications

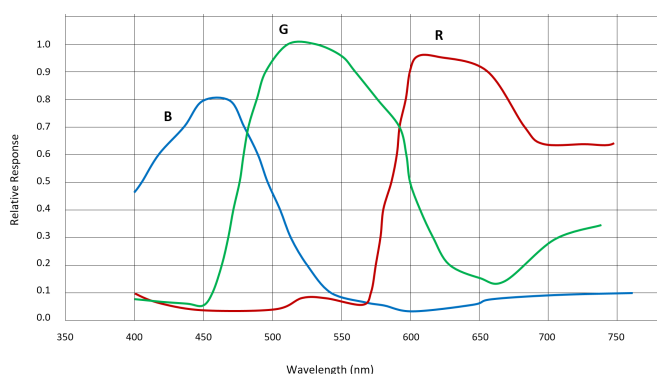
- Bright field
- Histology
- Pathology
- Cytology
- Defect Analysis
- Metrology
- Life science
- Material science
- Semiconductor Inspection



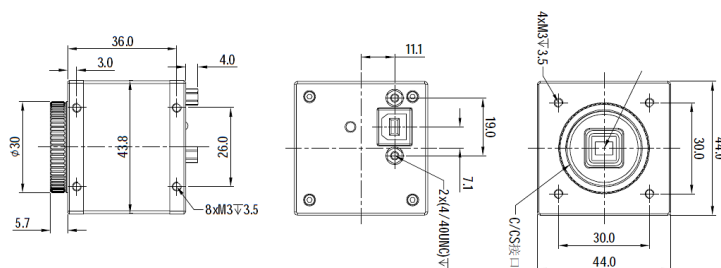
Specifications

Model	MDY603
Sensor Type	1/1.8" Sony CMOS
Resolution	3072H×2048V (6.3MP)
Pixe Size	2.4 μm ×2.4 μm
Frame Rate	30fps (3072×2048)
Filter	650nm IR Cut-off Filter
Optical Mount	C Mount
Shutter Type	Rolling
Exposure Time	41 μs ~ 16s
Exposure Control	Auto/ Manual/ Regional Exposure
White Balance	Auto/ Manual / Regional
Spectral Response	380~650nm (with IR cut-off filter)
Operation System	Windows XP, 7, 8, 10
Software Interface	TWAIN, DirectShow
Data Interface	USB 3.0
Power Consumption	<1.8W, Standby: 1.5W
Power Supply	USB 5.0V
Working Temp.	0~50°C
Storage Temp.	-20~60°C
Dimension	90.3mm×90.3mm×31mm
Weight	500g

Quantum Efficiency



Dimensions (mm)



8.8 Megapixel Scientific CMOS Microscope Camera

MDY803

Description

MDY803 is a scientific grade microscope camera equipped with high performance 8.8 megapixel CMOS sensor. Thanks to its 2/3 inch sensor we can get a larger field of view. The USB 3.0 interface and 64 Mb buffer memory ensure the camera can stably run at a extremely high frame rate (21 fps at 8.8 MP and 58 fps at 1080P). Featuring with low noise, excellent color reproduction, high frame rate and high sensitivity, its imaging quality can be comparable to that of digital SLR camera. The anodizing aluminum housing is effective for anti-static. MDY803 is a good choice for low light applications such as chemiluminescence, gel imaging, fluorescence imaging, DIC, living cells imaging and immunohistochemistry.

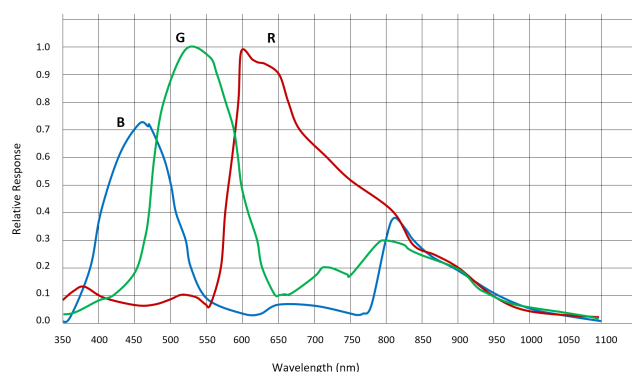
Features

- 2/3" rolling shutter sensor with 2.5 μm pixel size
- Super high speed USB 3.0 for both data and power
- Full resolution (8.8 MP) with up to 12 fps
- iWorks EX software
- Twain and DirectShow driver compatible
- Dust-proof structure and aluminum alloy body design
- Compatible with Windows 7, Windows 8, & Windows 10

Applications

- Bright field
- Histology
- Pathology
- Cytology
- Defect Analysis
- Metrology
- Life science
- Material science
- Semiconductor Inspection

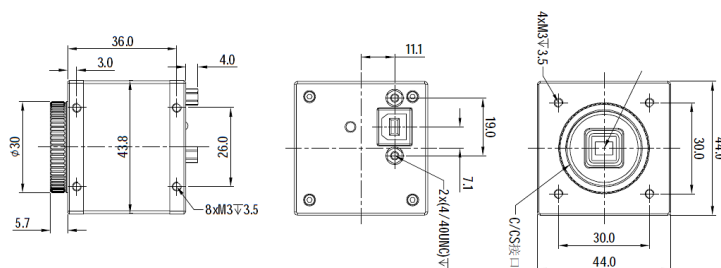
Quantum Efficiency



Specifications

Model	MDY803
Sensor Type	2/3" Sony CMOS
Resolution	3968H×2232 (8.8MP)
Pixe Size	2.5 μm ×25 μm
Frame Rate	12fp (3968×2232)
Filter	650nm IR Cut-off Filter
Optical Mount	C Mount
Shutter Type	Rolling
Exposure Time	38 μs ~ 10s
Exposure Control	Auto/ Manual/ Regional Exposure
White Balance	Auto/ Manual / Regional
Spectral Response	380~650nm (with IR cut-off filter)
Operation System	Windows XP, 7, 8, 10
Software Interface	TWAIN, DirectShow
Data Interface	USB 3.0
Power Consumption	<2W, Standby: 1.5W
Power Supply	USB 5.0V
Working Temp.	0~50°C
Storage Temp.	-20~60°C
Dimension	90.3mm×90.3mm×31mm
Weight	500g

Dimensions (mm)



12 Megapixel Scientific CMOS Microscope Camera

MDY1203 / MDY1203M

Description

MDY1203 is a scientific grade USB 3.0 microscope camera equipped with 12 megapixel high sensitivity CMOS and a 64 Mb built-in buffer memory. It provides higher frame rate (15 fps at 12 MP) and more stable running. Featuring with low noise, high dynamic range, and great color reproduction, it is recommended to the applications such as HE, IHC, pathology etc. MDY1203 is perfect suitable for applications under low light conditions and in microscopy such as chemiluminescence, gel imaging, fluorescence imaging, DIC, living cells imaging and immunohistochemistry.



Features

- 1 inch rolling shutter sensor with 3.1 μm pixel size
- Super high speed USB 3.0 for both data and power
- Full resolution (12 MP) with up to 15 fps
- Super large field of view
- iWorks EX software
- Twain and DirectShow driver compatible
- Dust-proof structure and aluminum alloy body design
- Compatible with Windows 7, Windows 8, & Windows 10

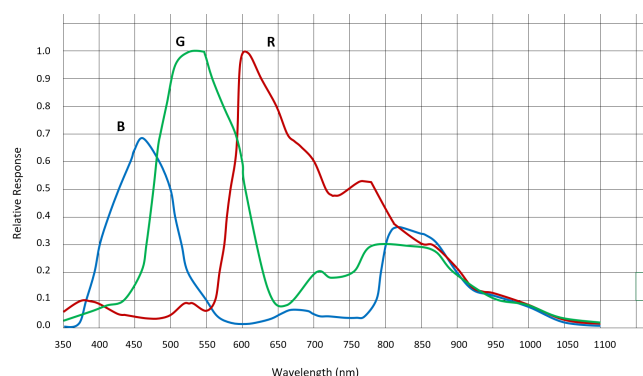
Applications

- Bright field / Dark field
- Histology
- Pathology
- Cytology
- GFP, FISH, NIR, FRET
- Metrology
- Life science
- Material science
- Semiconductor Inspection

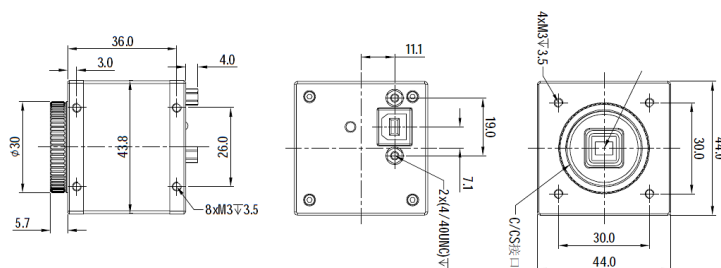
Specifications

Model	MDY1203 / MDY1203M
Sensor Type	1" Sony CMOS
Resolution	4088H×3072V (12MP)
Pixe Size	3.1 μm ×3.1 μm
Frame Rate	15fps (4088×3072)
Filter	650nm IR Cut-off Filter
Optical Mount	C Mount
Shutter Type	Rolling
Exposure Time	100 μs ~10s
Exposure Control	Auto/ Manual/ Regional Exposure
White Balance	Auto/ Manual / Regional
Spectral Response	400~650nm (with IR cut-off filter)
Operation System	Windows XP, 7, 8, 10
Software Interface	TWAIN, DirectShow
Data Interface	USB 3.0
Power Consumption	<3W, Standby: 1.5W
Power Supply	USB 5.0V
Working Temp.	0~50°C
Storage Temp.	-20~60°C
Dimension	90.3mm×90.3mm×31mm
Weight	500g

Quantum Efficiency



Dimensions (mm)



16 Megapixel Scientific CMOS Microscope Camera

MDY1603

Description

MDY1603 is a 16 megapixel USB 3.0 microscope camera equipped with 1/2.3 inch Sony CMOS sensor IMX206. Thanks to 64 Mb built-in buffer memory, the camera can stably run at 12 frames per second at full resolution. Featuring with low noise, excellent color reproduction, high frame rate, its excellent performance makes it perfect for the applications such as microscopy, medical engineering, quality assurance and material analysis which require high resolution and high speed imaging..

It is recommended for 4K (Ultra High Definition) applications.

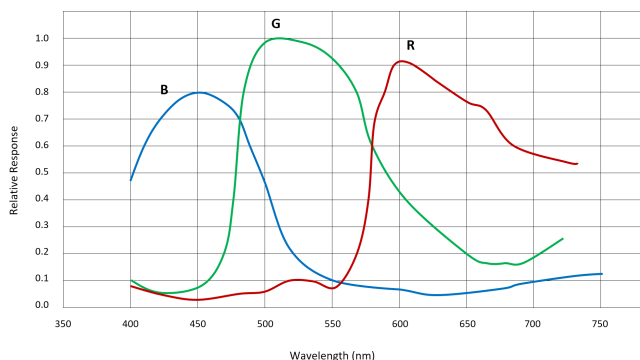
Features

- 1/2.3 inch rolling shutter sensor with 1.34 μm pixel size
- Super high speed USB 3.0 for both data and power
- Full resolution (16 MP) with up to 12 fps
- iWorks EX software
- Support 4K (ultra high definition) output
- Twain and DirectShow driver compatible
- Dust-proof structure and aluminum alloy body design
- Compatible with Windows 7, Windows 8, & Windows 10

Applications

- Bright field
- Histology
- Pathology
- Cytology
- Defect Analysis
- Metrology
- Life science
- Material science
- Semiconductor Inspection
- 4K output

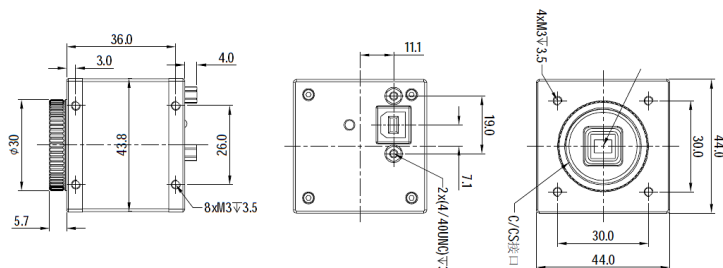
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Specifications

Model	MDY1603
Sensor Type	1/2.3" Sony CMOS
Resolution	4608H×3456V (16MP)
Pixe Size	1.34 μm ×1.34 μm
Frame Rate	12fps (4608×3456)
Filter	650nm IR Cut-off Filter
Optical Mount	C Mount
Shutter Type	Rolling
Exposure Time	23 μs ~10s
Exposure Control	Auto/ Manual/ Regional Exposure
White Balance	Auto/ Manual / Regional
Spectral Response	400~650nm (with IR cut-off filter)
Operation System	Windows XP, 7, 8, 10
Software Interface	TWAIN, DirectShow
Data Interface	USB 3.0
Power Consumption	<3W, Standby: 1.5W
Power Supply	USB 5.0V
Working Temp.	0~50°C
Storage Temp.	-20~60°C
Dimension	90.3mm×90.3mm×31mm
Weight	500g

Dimensions (mm)



20 Megapixel Scientific CMOS Microscope Camera

MDY2003

Description

MDY2003 is a scientific grade microscope camera equipped with high performance and super high resolution 20 megapixel CMOS sensor. Thanks to its 1 inch sensor we can get the largest field of view. The USB 3.0 interface and 64 Mb buffer memory ensure the camera can stably run at a high frame rate (10fps at 20MP). Featuring with low noise, excellent color reproduction, high frame rate and high sensitivity, its imaging quality can be comparable to that of digital SLR camera. The anodizing aluminum housing is effective for anti-static. MDY2003 is a good choice for various applications in life science and industrial inspections especially for high resolution and high definition.

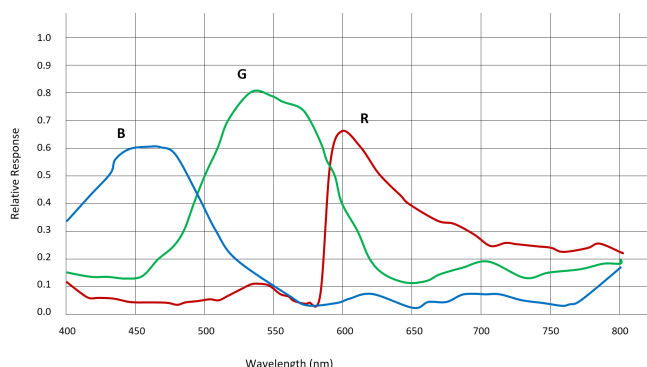
Features

- 1 inch rolling shutter sensor with 2.4 μm pixel size
- Super high speed USB 3.0 for both data and power
- Full resolution (20 MP) with up to 10 fps
- iWorks EX software
- Twain and DirectShow driver compatible
- Dust-proof structure and aluminum alloy body design
- Compatible with Windows 7, Windows 8, & Windows 10

Applications

- Bright field
- Histology
- Pathology
- Cytology
- Defect Analysis
- Metrology
- Life science
- Material science
- Semiconductor Inspection

Quantum Efficiency



Specifications

Model	MDY2003
Sensor Type	1" Sony CMOS
Resolution	5472H×3678V (20MP)
Pixe Size	2.4 μm ×2.4 μm
Frame Rate	10fps (5472×3678)
Filter	650nm IR Cut-off Filter
Optical Mount	C Mount
Shutter Type	Rolling
Exposure Time	38 μs ~60s
Exposure Control	Auto/ Manual/ Regional Exposure
White Balance	Auto/ Manual / Regional
Spectral Response	380~650nm (with IR cut-off filter)
Operation System	Windows XP, 7, 8, 10
Software Interface	TWAIN, DirectShow
Data Interface	USB 3.0
Power Consumption	<3W, Standby: 1.5W
Power Supply	USB 5.0V
Working Temp.	0~50°C
Storage Temp.	-20~60°C
Dimension	90.3mm×90.3mm×31mm
Weight	500g

Dimensions (mm)

