

1. CMOS Digital Eyepiece Cameras

(1) MDE2 Series USB2.0 CMOS Eyepiece Camera



Introduction

MDE2 series are economic version with simple and compact structure CMOS eyepiece cameras(digital eyepiece). USB2.0 is used as the data transfer interface.

The MDE2 series come with high-speed USB2.0 interface and high frame rate video display, which keep the screen smooth without interruption;

Also the MDE2 comes with advanced video & image processing application ImageView;

The MDE2 can be widely used to transfer the monocular or binocular student microscopes to digital microscope.

With 23.2 to 30mm or 23.2 to 30.75 convert ring, the MDE2 camera can also change the stereo microscope to digital stereo microscope.

Feature

1. Microscope eyepiece camera with 23.2 diameter and compact size;
2. Easy to extend to C or CS- Mount camera with high quality lens(optional);
3. High-quality camera with Aptina and Sony CMOS sensor;
4. Auto white balance and auto-exposure; Brightness, contrast, chroma and saturation can be adjusted;
5. High-speed USB2.0 interface and high frame rate video display keep the screen smooth without interruption;
6. With advanced video & image processing application ImageView;
7. Providing Windows/Linux/Mac OS multiple platforms SDK;
8. Native C/C++, C#/VB.NET, DirectShow, Twain Control API.

Specification

Order Code	Sensor & Size(mm)	Pixel(μ m)	G Responsivity Dynamic range SNRmax	FPS/Resolution	Binning	Exposure
MDE2-1200C*	12M/IMX577(C) 1/2.3" (5.95x4.71)	1.55x1.55	250LSB 70dB 43dB	20@3840x3040 20@1920x1520 20@960x760	1x1 1x1 1x1	0.1-2000 ms
MDE2-830C	8.3M/IMX274(C) 1/2.5" (6.22x3.50)	1.62x1.62	236mV 70dB 43dB	30@3840x2160 30@1920x1080 30@1280x720 30@960x540	1x1 1x1 1x1	0.1-2000 ms
MDE2-830BC	8.3M/IMX415(C) 1/2.8" (5.57x3.13)	1.45x1.45	300mV 70dB 44dB	30@3840x2160 30@1920x1080 30@1280x720 30@960x540	1x1 1x1 1x1	0.1-2000 ms
MDE2-510AC	5.1M/AR0521(C) 1/2.5" (5.70x4.28)	2.2x2.2	18.8ke-/lus 73dB 40dB	30@2592x1944 30@1280x960 30@640x480	1x1 1x1 1x1	0.1-1000 ms
MDE2-510BC	5.1M/IMX335(C) 1/2.8" (5.18x3.89)	2.0x2.0	505mV 70dB 43dB	26@2592x1944 26@1280x960 26@640x480	1x1 1x1 1x1	0.1-2000 ms
MDE2-310C	3.1M/Aptina(C) 1/2.5" (5.73x4.3)	2.8x2.8	18.8ke-/lus 73dB 40dB	30@2048x1536 30@1024x768	1x1 1x1	0.1-1000 ms
MDE2-210C	2.1M/IMX307(C) 1/2.8" (5.73x4.3)	2.9x2.9	1300mV 73dB 43dB	38@1920x1080 38@960x540	1x1 1x1	0.1-2000 ms
MDE2-210BC	2.1M/SC2332 (C) 1/3" (5.18x2.92)	2.7x2.7	4510mV/lux-s 74dB 38.5dB	30@1920x1080 30@960x540	1x1 1x1	0.1-2000 ms
MDE2-130C	1.3M/Special (C) 1/3" (5.18x2.92)	3.41x3.41	4510mV/lux-s 74dB 38.5dB	30@1520x856 30@760x428	1x1 1x1	0.1-2000 ms
MDE2-92BC	0.92M/OV9732(C) 1/4" (3.888x2.208)	3x3	2.066V/lux-sec 72dB@8x gain 39dB	30@1280x720 30@640x360	1x1 1x1	0.1ms~650 ms

C: Color; M: Monochrome;

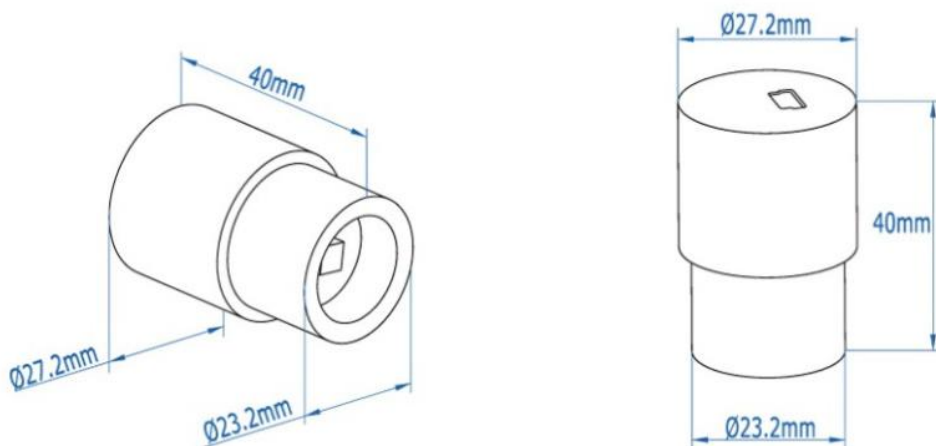
*The models in red color are new models in year 2021.

Other Specification for MDE2 Camera	
Spectral Range	380-650nm (with IR-cut Filter)
White Balance	Auto White Balance
Color Technique	N/A

Capture/Control API	Windows/Linux/macOS/Android Multiple Platform SDK (Native C/C++, C#/VB.NET, Python, Java, DirectShow, Twain, etc)
Recording System	Still Picture and Movie
Cooling System*	Natural
Operating Environment	
Operating Temperature(in Centidegree)	-10~ 50
Storage Temperature(in Centidegree)	-20~ 60
Operating Humidity	30~80%RH
Storage Humidity	10~60%RH
Power Supply	DC 5V over PC USB Port
Software Environment	
Operating System	Microsoft® Windows® XP / Vista / 7 / 8 /10 /11 (32 & 64 bit) OSx(Mac OS X) Linux
PC Requirements	CPU: Equal to Intel Core2 2.8GHz or Higher
	Memory: 2GB or More
	USB Port: USB2.0 High-speed Port
	Display: 17" or Larger
	CD-ROM

Dimension

The MDE2's body is made of aluminum alloy blackening, ocular housing: Dia.27.2 X 40mm ensures a heavy duty, workhorse solution. The camera is designed with a high quality IR-CUT filter to filter the infrared light and protect the camera sensor. No moving parts included. These measures ensure a rugged, robust solution with an increased lifespan when compared to other camera solutions.



Dimension of MDE2

Packing Information for MDE2



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Standard Camera Packing List		
A	Carton L:52cm W:32cm H:33cm (50pcs, 12~17Kg/ carton), not shown in the photo	
B	Gift box L:14.5cm W:9.5cm H:6.0cm (0.15~0.16Kg/ box)	
C	MDE2 series USB2.0 eyepiece camera	
D	High-Speed USB2.0 A male to mini B 5-pin male gold-plated connectors cable /1.5m	
E	CD (Driver & utilities software, Ø8cm)	
Optional Accessory		
F	C-Mount Adapter Housing:108027(HS502)	
G	108015(Dia.23.2mm to 30.0mm Ring)/Adapter rings for 30mm eyepiece tube	
H	108016(Dia.23.2mm to 30.5mm Ring)/ Adapter rings for 30.5mm eyepiece tube	
I	108017(Dia.23.2mm to 31.75mm Ring)/ Adapter rings for 31.75mm eyepiece tube	
J	Calibration kit	106011/TS-M1(X=0.01mm/100Div.); 106012/TS-M2(X,Y=0.01mm/100Div.); 106013/TS-M7(X=0.01mm/100Div., 0.10mm/100Div.)