

## 9.11 S3CMOS Series USB3.0 Eyepiece Camera

### 9.11.1 S3CMOS Characteristic

S3CMOS is an economic version with simple and compact structure USB3.0 CMOS eyepiece camera. So here, the S means simple and compact. USB3.0 is used as the data transfer interface.

Microscope eyepiece camera with 23.2 diameter and compact size;

The S3CMOS comes with high-speed USB3.0 interface and high frame rate video display keep the screen smooth without interruption;

Also the S3CMOS comes with advanced video & image processing application ToupView;

The S3CMOS can be widely used to transfer the mono or binocular student microscopes to digital microscope.

With 23.2 to 30mm or 23.2 to 30.75 convert ring, the S3CMOS camera can also change the stereo microscope to digital stereo microscope.

The basic characteristic of S3CMOS cameras are as follows:

- Microscope eyepiece camera with 23.2 diameter and compact size;
- Easy to extend to C or CS- Mount camera with high quality lens(optional);
- High-quality camera with Aptina CMOS sensor;
- Auto white balance and auto-exposure; Brightness, contrast, chroma, and saturation can be adjusted;
- High-speed USB3.0 interface and high frame rate video display keep the screen smooth without interruption;
- With advanced video & image processing application ToupView;
- Providing Windows/Linux/Mac OS multiple platforms SDK;
- Native C/C++, C#/VB.NET, DirectShow, Twain Control API;



## 9.11.2 S3CMOS Datasheet(2)

Order Code	Sensor & Size	Pixel(μm)	G Responsivity Dynamic range SNRmax	FPS/Resolution	Binning	Exposure
<b>S3CMOS05000KPA TP305000A</b>	5.0M/MT9P001(C) 1/2.5"(5.70x4.28)	2.2x2.2	0.53 V/lux-sec 66.5dB 40.5dB	15@2560x1920 15@2048x1536 30@1920x1080	1x1,2x2	Auto
<b>S3CMOS05000KPC TP305000C(New)</b>	5.0M/SC5033(C) 1/2.7"(5.18x3.89)	2.0x2.0	2 V/lux-sec 64dB 35dB	15@2592x1944 20@2048x1536 20@1600x1200 30@800x600	1x1,2x2	Auto

C: Color; M: Monochrome;

### Other Specification for S3CMOS Camera

Spectral Range	380-650nm (with IR-cut Filter)
White Balance	Auto White Balance
Color Technique	N/A
Capture/Control SDK	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

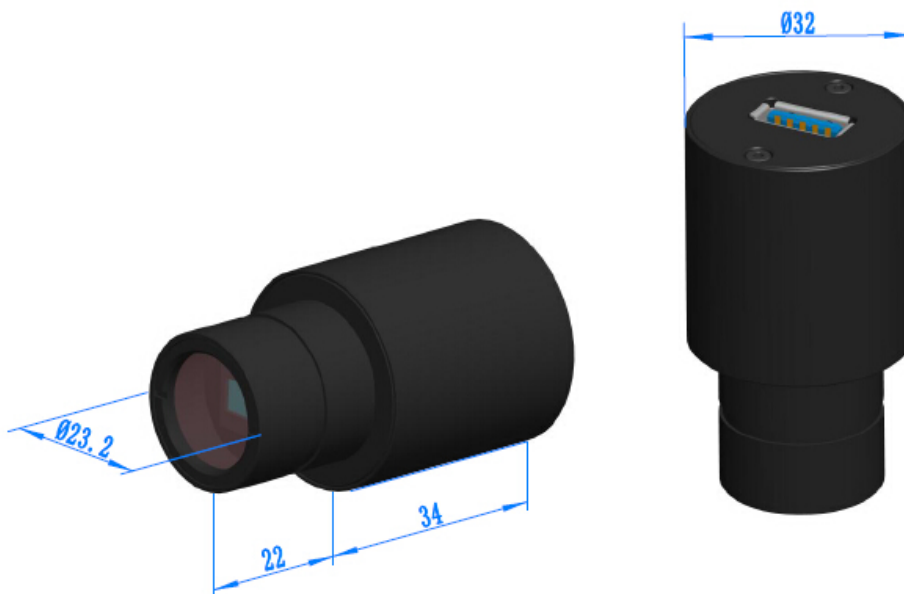
Operating Temperature(in Centidegree)	-10~ 50
Storage Temperature(in Centidegree)	-20~ 60
Operating Humidity	30~80%RH
Storage Humidity	10~60%RH
Power Supply	DC 5V over PC USB3.0 Port

### Software Environment

Operating System	Microsoft® Windows® XP / Vista / 7 / 8 / 10 (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:USB3.0 High-speed Port
	Display:17" or Larger
	CD-ROM

### 9.11.3 Dimension of S3CMOS

The S3CMOS body, made from aluminum alloy blackening, ocular housing: Dia.32 X 56mm 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. This design ensures a rugged, robust solution with an increased lifespan when compared to other industrial camera solutions.



Dimension of S3CMOS

### 9.11.4 Packing Information for S3CMOS



Packing Information of S3CMOS

Standard Camera Packing List	
<b>A</b>	Carton L:52cm W:32cm H:33cm (20pcs, 12~17Kg/ carton), not shown in the photo
<b>B</b>	Gift box L:15cm W:15cm H:10cm (0.25~0.35Kg/ box)
<b>C</b>	S3CMOS series camera
<b>D</b>	High-Speed USB3.0 USB315-ATA   USB 3.0 A Male to A Male Cable,1.5m
<b>E</b>	CD (Driver & utilities software, Ø8cm)
Optional Accessory	
<b>F</b>	C-Mount Adapter Housing:108027(HS502)
<b>G</b>	108015(Dia.23.2mm to 30.0mm Ring)/Adapter rings for 30mm eyepiece tube
<b>H</b>	108016(Dia.23.2mm to 30.5mm Ring)/ Adapter rings for 30.5mm eyepiece tube
<b>I</b>	108017(Dia.23.2mm to 31.75mm Ring)/ Adapter rings for 31.75mm eyepiece tube
<b>J</b>	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.)

# 10 Microscope USB2.0 CMOS Camera

## 10.1 ECMOS Series C-mount USB2.0 CMOS Camera

### 10.1.1 ECMOS Basic Characteristic

ECMOS adopt SONY Exmor CMOS sensor as the image-picking device and USB2.0 is used as the data transfer interface.

ECMOS hardware resolutions range from 1.2M to 8.3M and come with the integrated CNC aluminum alloy compact housing.

ECMOS comes with advanced video & image processing application ToupView; Providing Windows/Linux/ OSX multiple platforms SDK; Native C/C++, C#/VB.NET, DirectShow, Twain Control API;

The ECMOS can be widely used in bright field light environment and microscope image capture and analysis with higher frame rate.

The basic characteristic of ECMOS cameras are as follows:

- SONY Exmor, Exmor R(Back-illuminated), Exmor RS CMOS sensor with USB2.0 interface;
- Real-time 8/12/14/16bit depth switch(depending on sensor);
- Super high sensitivity up to 2040mV(IMX224);
- Ultra low noise and low power dissipation by using column-parallel A/D conversion;
- With hardware resolution among 1.2M to 8.3M;
- Rolling Shutter;
- Standard C-Mount camera;
- CNC aluminum alloy housing;
- USB2.0 interface ensuring high speed data transmission;
- With advanced video & image processing application ToupView;
- Providing Windows/Linux/Mac OS multiple platforms SDK;
- Native C/C++, C#/VB.Net, DirectShow, Twain;

