OPTIKA®
MICROSCOPES
ITALY

Cameras & Digital Solutions

Cameras for Microscopy & Digital Scanner

MICROSCOPE Cameras

Icons

- Multi-Plug low voltage power supply
- Li-Ion Rechargeable battery
- CCD sensor
- CMOS sensor
- -- MP Camera resolution
- Cooling system
- USB-IN USB 2.0 input (mouse)
- USB-OUT USB 2.0 output
- USB 3.0 USB 3.0 output
- Tablet screen size
- Software included
- HDMI HDMI output
- SD/MicroSD slot
- Wi-Fi
- BlueTooth
- Mouse included

Microscope Cameras

MICROSCOPE CAMERAS

USB CAMERAS - B Series

USB User-frienldy cameras for **general purposes.** Superb results and vivid details from standard to high resolution.

C-B1 1.3 MP | C-B3 3.1 MP | C-B5 5.1 MP | C-B10 10 MP | 4083.F33 3 MP

CMOS | USB-OUT

USB 2.0 C-mount and Eyepiece Microscope Cameras

Cameras have become indispensable nowadays and OPTIKA is offering a line of remarkable solutions for digital imaging. OPTIKA B Series represents a cost-effective solution equipped with the latest technology sensors with more vivid colors and great contrast for stunning images.
This series features Aptina CMOS sensor with excellent color reproduction, significantly high frame rates and several resolutions available to match any customer need.
Thanks to the convenience and simplicity, being extremely intuitive to install and operate, the OPTIKA B Series is recommended for educational and routinary microscopes, also as eyepiece cameras (no need for additional adapters/rings in case of monocular and binocular microscopes).
All the main operating systems like Windows, IOS, Linux are supported. Software included: Optika Vision Lite, Optika LiteView and Optika ProView.

USB CAMERAS - B Series - Specifications

	C-B1	C-B3
Digital camera resolution	1.3 MP (1280 x 1024)	3.1 MP (2048 x 1536)
Signal output	USB 2.0	USB 2.0
Sensor Size	1/3"	1/2"
Sensor technology	CMOS	CMOS
Sensor type	Aptina CMOS	Aptina CMOS
Image format	5/4	4/3
Pixel size	3.6 x 3.6 µm	3.2 x 3.2 µm
Frame rate full resolution	15 fps (1280 x 1024)	12 fps (2048 x 1536)
Frame rate other resolutions	50 fps (320 x 256)	45 fps (680 x 510)
Sensitivity	1 V/lux-second	1 V/lux-second
Signal / noise ratio	44 dB	43 dB
Dynamic range	71 dB	61 dB
ADC conversion	8 Bit	8 Bit
Color Depth	1 Bit; 4 Bit; 8 Bit; 24 Bit	1 Bit ; 4 Bit; 8 Bit; 24 Bit
Exposure Time	0.14 msec - 2 sec	0.244 msec - 2 sec
Binning	1x1; 2x2; 4x4	1x1; 2x2; 3x3
IR filter	380-650 nm (IR-cut filter)	380-650 nm (IR-cut filter)
Camera power	PC USB	PC USB
C-mount	YES	YES

Accessories included: 0.37x (for 23 mm eyepiece tube), 30 mm & 30.5 mm diameter (except 4083.F33), calibration slide, 1.8 m USB cable

USB CAMERAS - B Series

Conveniently installable either on trinocular head or on monocular/binocular microscopes.

OPTIKAM FAST3 4083.F33

4083.F33	C-B5	C-B10
3 MP	5.1 MP (2592 x 1944)	10 MP (3584 x 2748)
USB 3.0	USB 2.0	USB 2.0
1\2.7"	1/2.5"	1/2.3"
CMOS	CMOS	CMOS
ISP Integrated Chip	Aptina CMOS	Aptina CMOS
16\09	4/3	4/3
3.0x3.0 µm	2.2 x 2.2 µm	1.67 x 1.67 µm
30 fps (1920x1080)	7 fps (2592 x 1944)	3.3 fps (3584 x 2748)
7 fps (2304x1936)	27 fps (1280x 960); 90fps (640x 480)	38 fps (896 x 684)
1.275 V/lux-sec (550 nm)	0.53 V/lux-second	0.31 V/lux-second
32 dB	40.5 dB	34 dB
62.7 dB	66.5 dB	65.2 dB
8 bit	8 Bit	8 Bit
8 bit	1 Bit; 4 Bit; 8 Bit; 24 Bit	1 Bit; 4 Bit; 8 Bit; 24 Bit
330 msec	0.294 msec - 2 sec	0.4 msec - 2 sec
1x1 , 2x2	1x1; 2x2; 4x4	1x1; 2x2; 4x4
700 nM	380-650 nm (IR-cut filter)	380-650 nm (IR-cut filter)
PC USB	PC USB	PC USB
YES	YES	YES

USB Cameras & Tablets PC - TB Series

Unique Features
> Simultaneous camera & power connection
> Equipped with the latest **Windows OS** & **Intel** processor
> Easily detachable, can be used as a laptop (keyboard included)

Exclusive tablet PC, powerful and versatile for a great user experience. Always one step forward to ensure the latest technology!

- For trinocular microscopes only
- A 2-in-1 solution that you can use like a PC, being Windows-based
- Powerful Intel processor ensuring top performance and speed
- High-resolution, vivid color graphic display
- Large touch screen of 10.1" with fast, responsive and smooth control
- Attached camera available in 3.1 MP (TB-3W) or 5.1 MP (TB-5W) resolution
- Holding solution for open discussion, 360° rotating
- Includes the user-friendly and intuitive Optika Vision Lite software

TB-3W

Windows tablet PC with large **10.1" LCD touch screen**, combined with a **3.1 MP camera** to create the most advanced solution for digital microscopy.

TB-5W

Windows tablet PC with large **10.1" LCD touch screen**, combined with a **5.1 MP camera** to create the most advanced solution for digital microscopy.

USB Cameras & Tablets PC - TB Series

Perform **linear measurement** on your image with OPTIKA Vision Lite just by drawing a line!

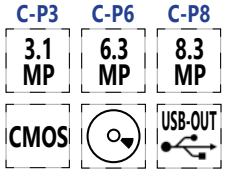
TABLET TECHNICAL SPECIFICATIONS	
Model	Tablet 10.8"
Operating System	Windows 10 32-bit
Language	Multilanguages already installed
Image capturing software	OPTIKA Vision lite
CPU	Intel® Atom™ Z3735F, Quad core
CPU speed	1.44 GHz
Graphics Card	Intel® HD Graphics 3D Accelerator
Memory	Ram 2,048 GB DDR3L
LCD display	LED 10.1" IPS Multi Touch Screen
LCD resolution	1920 x 1280, 16/10 (WXGA)
Storage	HDD 64GB
Network	Wireless, Bluetooth 4.0
Input/output ports	Micro USB-B - USB - Microphone - MicroSD card reader - Mini HDMI - Head-phone
Control Buttons	Auto rotate off, volume control
Battery Technology	Lithium-ion battery, 2x cell
Battery capacity	8400 mAh
Max load	15 W
Dimensions & Weight	Thickness 10,5 mm, Height 17,4 cm, Width 25,7 cm, Weight: 720 g

CAMERA TECHNICAL SPECIFICATIONS	TB-3W	TB-5W
Digital camera resolution	3.1 MP (2048 x 1536)	5.1 MP (2592 x 1944)
Signal output	USB 2.0	USB 2.0
Sensor Size	1/2"	1/2.5"
Sensor technology	CMOS	CMOS
Sensor type	Aptina CMOS	Aptina CMOS
Image format	4/3	4/3
Pixel size	3.2 x 3.2 µm	2.2 x 2.2 µm
Frame rate full resolution	12 fps (2048 x 1536)	7 fps (2592 x 1944)
Frame rate other resolutions	45 fps (680 x 510)	27 fps (1280x 960); 90fps (640x 480)
Sensitivity	1 V/lux-second	0.53 V/lux-second
Signal / noise ratio	43 dB	40.5 dB
Dynamic range	61 dB	66.5 dB
ADC conversion	8 Bit	8 Bit
Color Depth	1 Bit ; 4 Bit; 8 Bit; 24 Bit	1 Bit; 4 Bit; 8 Bit; 24 Bit
Exposure Time	0.244 msec - 2 sec	0.294 msec - 2 sec
Binning	1x1; 2x2; 3x3	1x1; 2x2; 4x4
IR filter	380-650 nm (IR-cut filter)	380-650 nm (IR-cut filter)
Camera power	PC USB	PC USB
C-mount	YES	YES

Accessories included: C-mount adapter for 23 mm tube, calibration slide, USB cable, keyboard with touchpad and touch pen.

USB CAMERAS - PRO Series

Professional cameras with high sensitivity, low noise and **impressive capabilities** in special applications (on different observation methods)



High-Performance USB 3.0 C-mount Microscope Cameras

Do you require a high-end camera with an especially high resolution, generous dynamic range, rapid read-out rate and a USB3.0 port?
If your answer is yes, then the PRO series is your choice. Its compact and elegantly designed housing conceals the very latest in camera technology. Your images will be of the highest quality and rich in contrast and detail.
OPTIKA PRO Series includes a wide range, to virtually fulfill each application demand.
Top-class SONY sensors, worldwide recognized, ensure you to capture your specimen in beautiful true-to-life color, delivering incredibly accurate colors just as you see them.
All the main operating systems like Windows, IOS, Linux are supported. Software included: Optika Vision Lite, Optika LiteView and Optika ProView.

USB CAMERAS - PRO Series - Specifications

	C-P3	C-P6	C-P8
Digital camera resolution	3.1 MP (2048 x 1536)	6.3 MP (3072 x 2048)	8.3 MP (3840 x 2160)
Signal output	USB 3.0	USB 3.0	USB 3.0
Sensor Size	1/2.8"	1/1.8"	1/2.5"
Sensor technology	CMOS	CMOS	CMOS
Sensor type	SONY EXMOR CMOS	SONY EXMOR CMOS	SONY EXMOR CMOS
Image format	4/3	3/2	16/9
Pixel size	2.5 x 2.5 µm	2.4 x 2.4 µm	1.62 x 1.62 µm
Frame rate full resolution	50 fps (2048 x 1536)	30 fps (3072 x 2048)	32 fps (3840 x 2160)
Frame rate other resolutions	50 fps (1920 x 1080)	38 fps (1536 x 1024)	65 fps (1920 x 1080)
Sensitivity	600 mV at 1/30sec	425 mV at 1/30sec	236 mV at 1/30sec
Dark signal	0.15 mV at 1/30sec	0.15 mV at 1/30sec	0.1 mV at 1/30sec
ADC Conversion	8 Bit - 12 Bit	8 Bit - 12 Bit	8 Bit - 12 Bit
Color Depth	1 Bit; 4 Bit; 8 Bit; 24 Bit	1 Bit; 4 Bit; 8 Bit; 24 Bit	1 Bit; 4 Bit; 8 Bit; 24 Bit
Exposure Time	0.1 msec - 15 sec	0.1 msec - 15 sec	0.1 msec - 15 sec
Binning	1x1	1x1; 2x2	1x1; 2x2
IR filter	380-650 nm (IR-cut filter)	380-650 nm (IR-cut filter)	380-650 nm (IR-cut filter)
Camera power	PC USB	PC USB	PC USB
C-mount	YES	YES	YES

Accessories included: calibration slide, 1.5 m USB cable

USB CAMERAS - PRO Series

Achieve **professional results** and outstanding images with PRO Series: incredibly sharp and high contrast images also when combined to a stereomicroscope

Several focusable C-mount adapters available

USB CAMERAS - PRO Series - C-P6FL

High-performance CCD camera for special applications. Recommended for professional microscopes, **routinary and research level** (on different observation methods)

6.0 MP | CCD | USB 3.0

High-Performance USB 3.0 C-mount Microscope Cameras

High grade SONY EXView HAD CCD sensor camera with 6.0 MP resolution recommended for special applications thanks to the impressive capabilities in the most challenging working conditions.
High sensitivity, low noise with USB3.0 connection for Windows, Mac OS and Linux. Software included: Optika Vision Lite, Optika LiteView and Optika ProView.

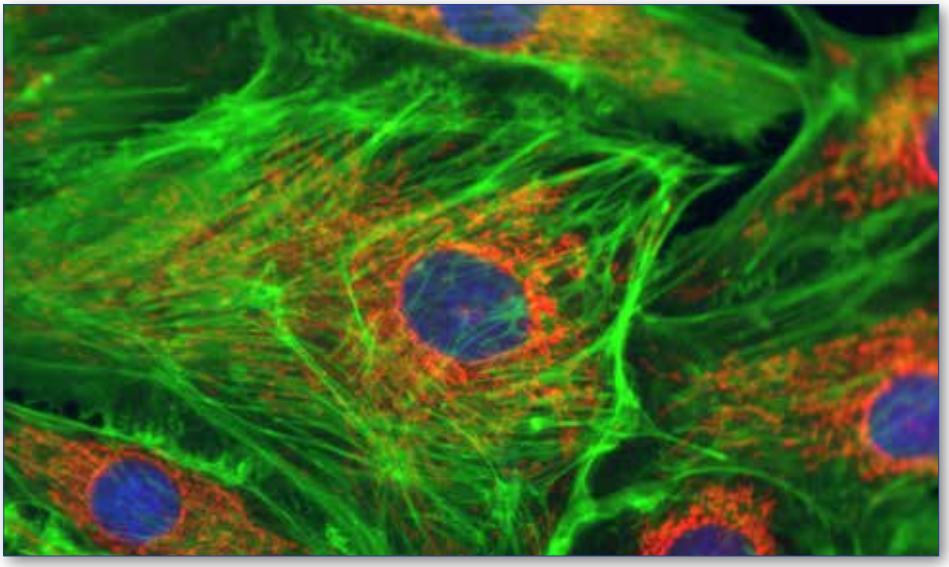
C-P6FL - Specifications

	C-P6FL
Digital camera resolution	6 MP (2748 x 2200)
Signal output	USB 3.0
Sensor Size	1"
Sensor technology	CCD
Sensor type	SONY ExView HAD
Image format	5/4
Pixel size	4.54 x 4.54 µm
Frame rate full resolution	7.5 fps (2748 x 2200)
Frame rate other resolutions	14 fps (1374 x 1092)
Sensitivity	1000 mV at 1/30sec
Dark signal	8 mV at 1/30sec
ADC Conversion	8 Bit - 14 Bit
Color Depth	1 Bit; 4 Bit; 8 Bit; 24 Bit
Exposure Time	0.06 msec - 1000 sec
Binning	1x1
IR filter	380-650 nm (IR-cut filter)
Camera power	PC USB
C-mount	YES

Accessories included: calibration slide, 1.5 m USB cable

Several focusable C-mount adapters available

USB CAMERAS - PRO Series - **C-P6FL**



CCD sensor ensures significant and impressive quality on special techniques, including fluorescence

Non-cooled high-performance CCD camera. Thanks to its very high sensitivity, it's perfect for **fluorescence microscopy**

USB CAMERAS - PRO Series - Cooled Models

20 MP | CMOS | USB 3.0

Ultra High-Performance USB 3.0 C-mount Cooled Microscope Cameras

For special applications, and requiring different observation methods, high sensor size cameras are preferred for the high sensitivity delivering high signal-to-noise ratio (low noise is achieved via cooling) and a large dynamic range.
OPTIKA Pro Cooled cameras provide an excellent sensitivity. Peltier-cooled (cooling to 45°C below ambient), with scientific-grade CMOS sensor, they ensure great performance in low light conditions, ultra-long exposure time and an impressive reliable color fidelity. All the main operating systems like Windows, IOS, Linux are supported. Software included: Optika Vision Lite, Optika LiteView and Optika ProView.

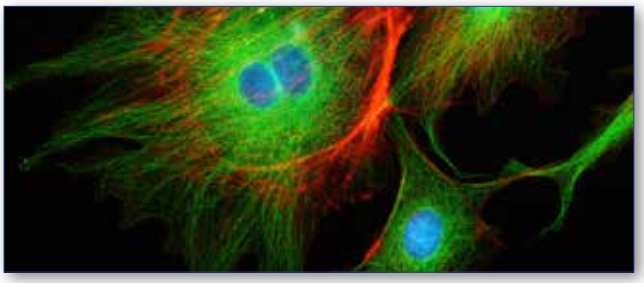
USB CAMERAS - PRO COOLED Series - Specifications

	C-P20CC (Color)	C-P20CM (Monochrome)
Digital camera resolution	20 MP (5440 x 3648)	20 MP (5440 x 3648)
Signal output	USB 3.0	USB 3.0
Sensor Size	1"	1"
Sensor technology	CMOS	CMOS
Sensor type	SONY EXMOR	SONY EXMOR
Image format	3/2	3/2
Pixel size	2.4 x 2.4 µm	2.4 x 2.4 µm
Frame rate full resolution	5 fps (5440 x 3648)	17.8 fps (5440 x 3648)
Frame rate other resolutions	10 fps (4096 x 2160); 15 fps (2736 x 1824); 30 fps (1824 x 1216)	41 fps (4096 x 2160); 51 fps (2736 x 1824); 64 fps (1824 x 1216)
Sensitivity	426mV at 1/30sec	388mV at 1/30sec
Dark Signal	0.21mV at 1/30sec	0.21mV at 1/30sec
Cooling System	Internal two-stage TE cooling system -45°C	Internal two-stage TE cooling system -45°C
ADC conversion	8 Bit - 14 Bit	14 Bit
Color Depth	1 Bit; 4 Bit; 8 Bit; 24 Bit	1 Bit; 4 Bit; 8 Bit; 24 Bit
Exposure Time	0.1 msec - 3600 sec	0.1 msec - 3600 sec
Binning	1x1; 2x2; 3x3	1x1; 2x2; 3x3
IR filter	380-650 nm (IR-cut filter)	380-650 nm (IR-cut filter)
Camera power	PC USB	PC USB
C-mount	YES	YES

Accessories included: calibration slide, 1.8 m USB cable, power supply for cooling system

USB CAMERAS - PRO Series - Cooled Models

Durable and safe reinforced plastic case



Achieve **unparalleled results** and superb images on special techniques, including fluorescence, with the lastest technology **SONY EXMOR sensors**

HDMI CAMERAS - H Series - C-HE

2.0 MP | CMOS | HDMI | USB-IN | SD | mouse

HDMI camera for easy operation, no compromises in quality

- C-mount connection, eyepiece adapter available
- No installation of software required when used in HDMI mode
- HDMI (720p) camera, for TV live view
- Extremely reliable color fidelity
- Lightweight cameras, to be used even on the smallest and lightest microscopes
- SD card enables image and video capturing
- Built-in function buttons for HDMI camera control

720p HD high-speed microscope camera with Aptina CMOS sensor: **intuitive, entry-level**

HDMI CAMERAS - H Series - C-HP

2.0 MP | CMOS | HDMI | USB-IN | USB-OUT | SD | CD | mouse

HDMI / USB camera for extremely easy operation, and maximum flexibility

- C-mount connection, eyepiece adapter available
- No installation of software required when used in HDMI mode
- HDMI (1080p) and USB camera, for TV live view and PC use
- Reliable color fidelity
- Highly reccomended for wide range of applications
- SD card enables image and video capturing
- External mouse (included) for HDMI camera control
- Software included: Optika ProView

Professional 1080p FULL HD high-speed microscope camera with **measurement functions** for premium performance

HDMI CAMERAS - H Series

World-class viewing experience for crystal-clear videos and image

HDMI CAMERAS - H Series - Specifications

	C-HE	C-HP
Video resolution (USB output)	-	1920 x 1080 pixel
Video resolution (HDMI output)	HD 720p	Full HD 1080p
Digital camera resolution	2 MP (1280 x 720)	2 MP (1920 x 1080)
Signal output	HDMI	HDMI
Sensor Size	1/2.8"	1/1.9"
Sensor technology	CMOS	CMOS
Sensor type	APTINA	SONY
Image format	16/9	16/9
Pixel size	2.8 x 2.8 µm	3.75 x 3.75 µm
Frame rate (HDMI)	30 fps (1280 x 720)	60 fps (1920 x 1080) - HDMI; 26fps (1920 x 1080) - USB
Sensitivity	510 mV at 1/30sec	1120 mV at 1/30sec
Dark Signal	0.15mV at 1/30sec	0.15mV at 1/30sec
Exposure Time	0.06 msec - 1900 msec	0.34 msec - 4 sec
Binning	1x1	1x1
IR filter	380-650 nm (IR-cut filter)	YES
Camera power	DC 12V	DC 12V/1A
C-mount	YES	YES
White balance	Auto	Auto / Manual
Gain control	Manual	Auto / Manual
Exposure control	Auto / Manual	Auto / Manual

Accessories included: C-HE: HDMI Cable, SD card slot (16G), Mouse C-HP: Calibration Slide, HDMI and USB Cable, SD card slot (16G), Mouse

HDMI CAMERAS WITH SCREEN - H Series - C-HESC

2.0 MP | CMOS | HDMI | USB-IN | SD | 11.5"

HDMI camera, 2 MP CMOS, HDMI, with 11.5" Full HD LCD screen

- All-in-one: save space on the bench, with no need for external devices
- Feel free to tilt the screen and adjust the position to the preferred level, eliminating fatigue during observation. Ideal also for discussion groups
- Aptina CMOS sensor with excellent color reproduction for routine applications
- 720p HD (2 MP, 1280 x 720)
- C-mount connection on trinocular microscopes only
- Mouse, 16G SD card and HDMI cable also included

HDMI CAMERAS WITH SCREEN - H Series - C-HPSC

2.0 MP | CMOS | HDMI | USB-IN | USB-OUT | SD | 11.5"

HDMI camera, 2 MP CMOS, HDMI/USB2.0, with 11.5" Full HD LCD screen

- All-in-one: save space on the bench, with no need for external devices
- Feel free to tilt the screen and adjust the position to the preferred level, eliminating fatigue during observation. Ideal also for discussion groups
- High grade SONY CMOS sensor for reliable colors
- 1080p FULL HD (2 MP, 1920 x 1080)
- C-mount connection for professional microscopes
- Camera control panel shows exposure, gain, white balance, color adjustment, sharpness and noise control
- On-screen monitor toolbar shows measuring, mirror, comparison, zoom, freeze, cross & browser when using mouse control
- Equipped with calibration slide for establishing measurement baselines
- Mouse, 16G SD card and HDMI/USB cable also included
- Software included: Optika ProView

HDMI CAMERAS WITH SCREEN - H Series

Freely inclinable for ergonomic vision

Ideal for discussion groups, **360° rotating**

All-in-one solution

	C-HESC	C-HPSC
Camera	C-HE Camera: 720p HDMI output; Video Capturing; Still Image Capturing; For full specifications see page 365.	C-HP Camera: 1080p FULL HDMI output; Video Capturing; Still Image Capturing; For full specifications see page 365.
Screen	11.5" Full HD HDMI LCD Screen. 360° rotating. Freely inclinable for ergonomic vision	11.5" Full HD HDMI LCD Screen. 360° rotating. Freely inclinable for ergonomic vision
Accessories (Included)	USB Mouse; HDMI Cable; 16GB SD Card; Camera Power Adapter; Screen Power Adapter	USB Mouse; Calibration Slide; HDMI and USB Cable; 16GB SD Card; Camera Power Adapter; Screen Power Adapter

AUTOFOCUS HDMI CAMERA - H Series - C-HA

Equipped with the **state-of-the-art autofocus** system to ensure **precise focusing** in any condition and in real time

2.0 MP | CMOS | HDMI | USB-IN | SD

Full Hd HDMI C-mount Autofocus Microscope Camera

A superb microscope camera with the state-of-the-art autofocusing system, ensuring precise and ultra-fast automatic focus adjustment in any condition and in real time. Ideal to compensate the lack of parfocality of the microscope without any user effort.

- Aptina CMOS sensor with excellent color reproduction for routine applications
- 1080p FULL HD (2 MP, 1920 x 1080)
- C-mount connection for professional microscopes
- Camera control panel shows exposure, white balance, color adjustment and sharpness when using mouse control
- Mouse, 8G SD card and HDMI cable also included

C-HA - Specifications

	C-HA
Digital camera resolution	2 MP (1920x1080)
Signal output	HDMI
Sensor Size	1/2.8"
Sensor technology	CMOS
Sensor type	APTINA CMOS
Image format	16/9
Pixel size	2.9 x 2.9 µm
Frame rate (HDMI)	50 fps (1920x1080)
Sensitivity	510 mV at 1/30sec
Dark Signal	0.15mV at 1/30sec
Exposure Time	Auto
Binning	1x1
IR filter	YES
Camera power	5V 2A
C-mount	YES
CS-Mount	YES

Accessories included: HDMI Cable, SD card slot (8G), Mouse

AUTOFOCUS HDMI CAMERA - H Series - C-HA

Extremely simple and convenient use: **no need of focus adjustment!**

Compensates any lack of parfocality of the objectives

WIFI CAMERAS - WF Series - 4083.WiFi

5.0 MP | CMOS | USB-OUT

Camera with remote WiFi connection, ideal for teaching purposes and discussion groups

- Connection for both trinocular C-mount ports and eyepiece tubes
- WiFi & USB camera
- 5 MP resolution on USB mode and 2 MP resolution on WiFi mode
- Ideal for educational applications
- Lightweight cameras, to be used even on the smallest and lightest microscopes
- Direct connection via browser to share the specimen view (router is not needed)
- Unlimited users connectable (average speed depending on connected users)
- Supported by any device (PC, tablet or smartphone) with any type of browser
- Image and video capturing function when used in WiFi mode
- Includes the user-friendly and intuitive Optika Vision Lite software (USB mode)

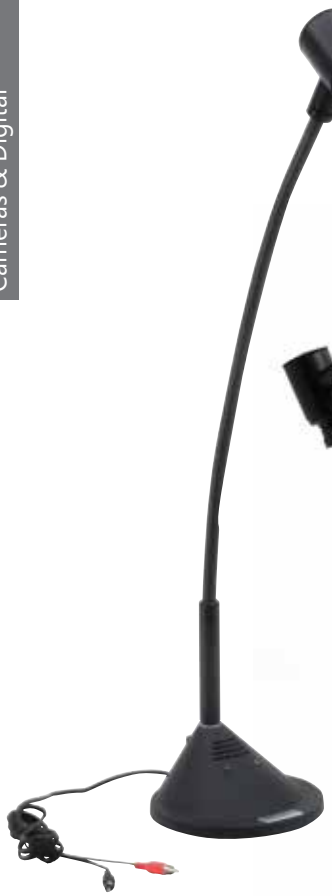
USB and WiFi camera in once.
No router needed!

	OPTIKAM WIFI 4083.WiFi
PC camera resolution	5 MP
WiFi camera resolution	2 MP
Signal output	USB 2.0, WiFi
Sensor Size	1\2.5"
Sensor technology	CMOS
Image format	4\3
Full Image size	2592 x 1944
USB Frame rate Full resolution	3 frames/sec: 2592 x 1944
USB Frame rate other resolutions	11 frames/sec: 640 x 480, 8 frames/sec: 1024 x 768
WiFi Frame rate Low resolution	2 frames/sec: 640 x 480 with 10 users
WiFi Frame rate other resolutions	1 frames/sec: 1024 x 768 with 10 users, 1 frames/3sec: 1600 x 1200 with 10 users
Max Exposure time	Automatic
External camera power	5 V 2000mA
White Balance	Auto / Man
Gain Control	Auto / Man
Back light control	Auto / Man
Exposure control	Auto / Man
C-Mount connection	YES
CS-Mount connection	YES, ready

Accessories included: CS- to C-mount adapter, C-mount to 23mm adapter, 23mm to 30mm and 30.5mm ring adapters, micrometer slide for software calibration, 1mm/10um, 10mm/100um, USB cable.

WIFI CAMERAS - WF Series - **4083.WiFi**

EYEPIECE CAMERAS - EDUCAM & VC SERIES



4083 - 4083.1 - 4083.2 - 4083.3

USB - 4083.4

CMOS USB-OUT 4083.4 4083.4

EDUCAM - Multimedia cameras to meet various requirements in the educational field

- Direct connection to TV screen and monitor
- Versatile and flexible, yet sturdy and stable at the same time: can be used as overhead projector, for the projection of drawings, as a camera for teleconferences, assemblies, meetings or as a camera for filming
- Up to 90x magnifying power for any specimen and object
- 8mm objective lens enables focus from 0,76 cm, up to an infinite distance
- Extremely sensitive microphone to record voices/sounds (Multimedia models only)
- Includes the user-friendly and intuitive OPTIKA Vision Lite software

All models are equipped with two adapters for video-microscopy (for biological and stereo microscopes).

VC-05 - Simple eyepiece camera with CCD sensor, 420 TV Lines (PAL)

MIC- 4083.5

VC-05

	MULTIMEDIA / 4083	MULTIMEDIA PRO / 4083.1	STUDENT / 4083.2	STUDENT PRO / 4083.3
Digital camera resolution	NO	NO	NO	NO
Analog camera resolution	PAL 582 x 420	PAL 582 x 420	PAL 582 x 420	PAL 582 x 420
Signal output	PAL	PAL	PAL	PAL
Audio Signal	Analog	Analog	NO	NO
Sensor Size	1\3"	1\3"	1\3"	1\3"
Sensor technology	CCD	CCD	CCD	CCD
Image format	4\3	4\3	4\3	4\3
Full Image size	-	-	-	-
Frame rate full resolution	50 frames\sec (analog mode)	50 frames\sec (analog mode)	50 frames\sec (analog mode)	50 frames\sec (analog mode)
Max Exposure time	-	-	-	-
ON board Memory	NO	NO	NO	NO
External Memory Card	NO	NO	NO	NO
External camera power	15V DC power supply	15V DC power supply	12V DC power supply	12V DC power supply
White Balance	Auto	Auto	Auto	Auto
Gain Control	Auto	Auto	Auto	Auto
Back light control	Auto	Auto	Auto	Auto
Exposure control	Auto	Auto	Auto	Auto
C-Mount connection	YES	YES	YES	YES
CS-Mount connection	NO	NO	NO	NO
Arm length	50cm	65cm	50cm	65cm
8mm objective	YES	YES	YES	YES

Accessories included:
All models (except VC-05 and C-E2): SCART for TV plug, 23mm eyepiece tube adapter and 30mm ring adapter for microscopes.
VC-05: 23mm to 30mm or 30.5mm ring adapters for microscopes, SCART for TV plug. **C-E2:** 30 mm and 30.5 mm ring adapters for built-in 23mm eyepiece adapter, USB cable.

EYEPIECE CAMERAS - EDUCAM & VC SERIES

2.0 MP | CMOS | USB-OUT

C-E2

User-friendly eyepiece camera to be combined with any microscope

- Direct connection into the eyepiece tube instead of one of the eyepieces (23 mm, 30 mm & 30.5 mm diameter)
- No additional adapters required
- Very useful for educational purposes
- Removable miniUSB cable
- Includes the user-friendly and intuitive OPTIKA Pro View & OPTIKA Lite View.

Ready to use, instead of one of the eyepiece.

USB / 4083.4	MIC / 4083.5	VC-05	C-E2
0.3 MP	NO	NO	2 MP
PAL 582 x 420	PAL 582 x 420	PAL 582 x 420	NO
PAL , USB2.0	PAL	PAL	USB 2.0
Analog	NO	NO	NO
1\3"	1\3"	1\3"	1\3.2"
CCD	CCD	CCD	CMOS
4\3	4\3	4\3	4\3
640 x 480	-	-	1600 x 1200
50 frames\sec (analog mode), 25 frames\sec (digital mode)	50 frames\sec (analog mode)	50 frames\sec (analog mode)	5 fps (1600x1200) / 7,5 fps (1280x1024) / 22fps (640x480)
Auto	-	-	Auto
NO	NO	NO	NO
NO	NO	NO	NO
15V DC power supply	12V DC power supply	12V DC power supply	PC USB
Auto	Auto	Auto	Auto
Auto	Auto	Auto	Auto
Auto	Auto	Auto	Auto
Auto	Auto	Auto	Auto
YES	YES	NO	NO
NO	NO	NO	NO
65cm	-	-	-
YES	YES	NO	NO

RECOMMENDED ADAPTERS FOR YOUR MICROSCOPE

Upright/Inverted Microscopes (C-mount projection lens)

M-115 (0.35x)

M-114 (0.5x)

Stereomicroscopes - LAB 30 (Focusable C-mount adapter)

ST-418 (0.35x)

ST-419 (0.5x)

Upright/Inverted Microscopes (Focusable C-mount adapter)

M-620 (0.35x)

M-620.1 (0.5x)

M-620.2 (0.65x)

M-620.3 (1x)

Stereomicroscopes - SZM / SZO / SZP Series (Focusable C-mount adapter)

ST-090 (0.35x)

ST-090.1 (0.5x)

ST-090.2 (0.65x)

M-620.3 (1x)

		Upright/Inverted Microscopes		Stereomicroscopes		
Camera model	Sensor size	C-mount projection lens - **Ecovision, B-150, B-190, B-290 Series**	Focusable C-mount adapter (trino port) - **B-380, B-510, B-810, B-1000, IM-3, IM-5 Series**	C-mount projection lens - **LAB-30, SZM, SZO, SZP Series**	Focusable C-mount adapter (trino port) - **LAB-30**	Focusable C-mount adapter (trino port) - **SZM, SZO, SZP Series**
C-B1	1/3"	Included with the camera	M-620 / M-620.1	Included with the camera	ST-418	ST-090 / ST-090.1
C-B3	1/2"	Included with the camera	M-620.1 / M-620.2	Included with the camera	ST-419	ST-090.1 / ST-090.2
C-B5	1/2.5"	Included with the camera	M-620.1 / M-620.2	Included with the camera	ST-419	ST-090.1 / ST-090.2
C-B10	1/2.3"	Included with the camera	M-620.1 / M-620.2	Included with the camera	ST-419	ST-090.1 / ST-090.2
C-P3	1/2.8"	Not recommended association	M-620 / M-620.1	Not recommended association	Not recommended association	ST-090 / ST-090.1
C-P6	1/1.8"	Not recommended association	M-620.1 / M-620.2	Not recommended association	Not recommended association	ST-090.1 / ST-090.2
C-P8	1/2.5"	Not recommended association	M-620.1 / M-620.2	Not recommended association	Not recommended association	ST-090.1 / ST-090.2
C-P6FL	1"	Not recommended association	M-620.3	Not recommended association	Not recommended association	M-620.3
C-P20CC	1"	Not recommended association	M-620.3	Not recommended association	Not recommended association	M-620.3
C-P20CM	1"	Not recommended association	M-620.3	Not recommended association	Not recommended association	M-620.3
C-HP	1/2.8"	M-114 / M-115	M-620 / M-620.1	M-114 / M-115	ST-418	ST-090 / ST-090.1
C-HE	1/1.9"	M-114	M-620.1 / M-620.2	M-114	ST-419	ST-090.1 / ST-090.2
C-HA	1/2.8"	M-114 / M-115	M-620 / M-620.1	M-114 / M-115	ST-418	ST-090 / ST-090.1

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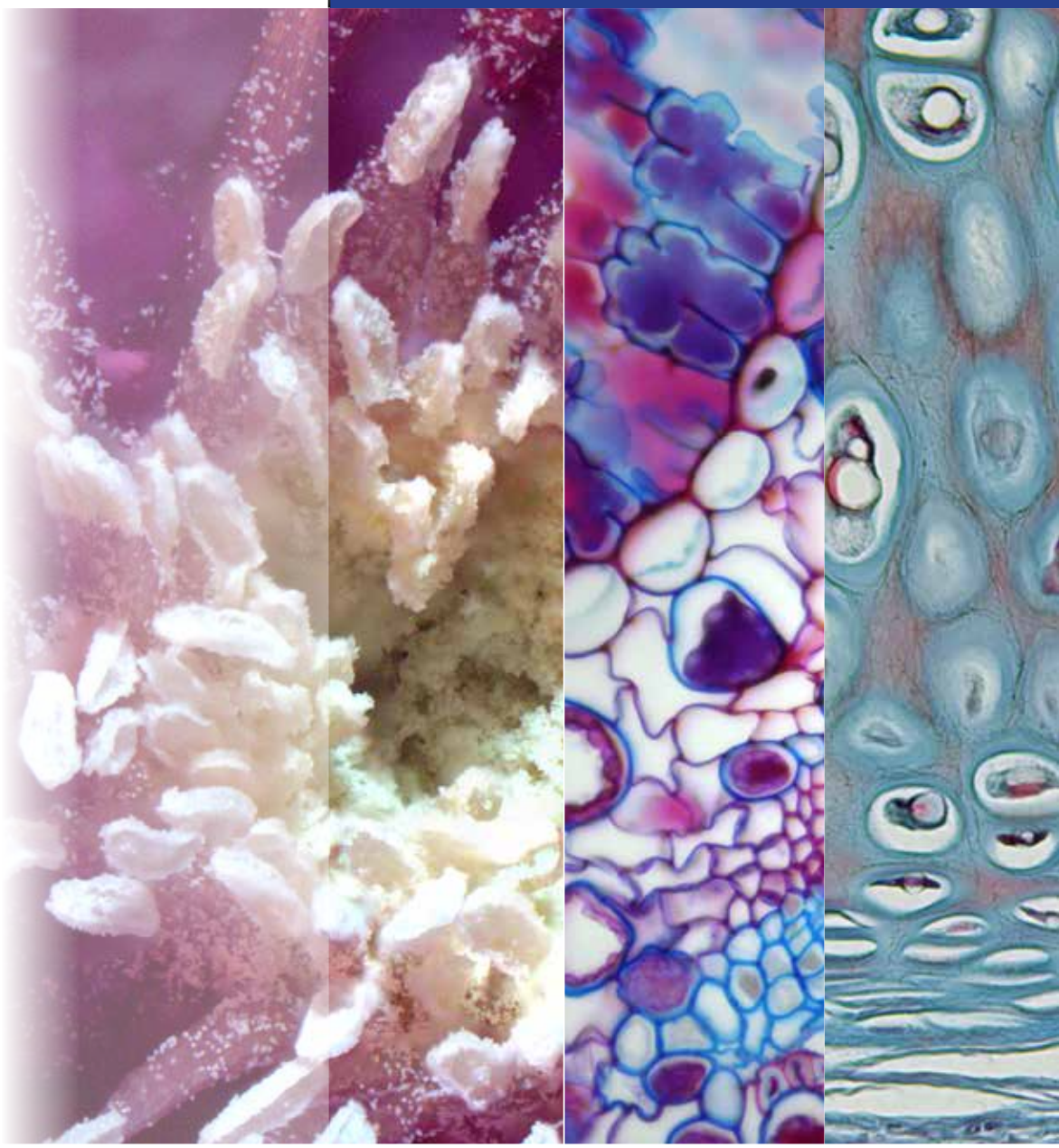
OPTIKA®
MICROSCOPES
ITALY

OPTIKA SOFTWARE



OPTIKA SOFTWARE SUITES

OPTIKA SOFTWARE - Comparison chart

Software

• Before proceeding with the SW installation, please check the table below "Software Function list" to identify the most suitable software.

SOFTWARE FUNCTION LIST

	FUNCTION		OPTIKA PRO VIEW	OPTIKA LITE VIEW	OPTIKA VISION LITE
GENERAL	Simultaneous management of several cameras		X	X	X
	GUI (Graphical User Interface)		X		
	Report generator		X		X
	Archiving		X	X	X
	Language	Catalan	X	X	
		Chinese (simpl.)	X	X	
		Chinese (trad.)	X	X	
		Korean	X	X	
		English	X	X	X
		French	X	X	X
		German	X	X	X
		Indonesian	X	X	
		Italian	X	X	X
		Japanese	X	X	
		Polish	X	X	X
		Russian	X	X	
		Spanish	X	X	X
		Swedish			X
		Thai	X	X	
		Turkish	X	X	

	FUNCTION		OPTIKA PRO VIEW	OPTIKA LITE VIEW	OPTIKA VISION LITE
MEASUREMENTS	Measurements on "live"		X		
	Measurements on "captured"		X		X
	2D Measurements	Line	X		X
		Angle	X		
		Parallel lines	X		
		Rectangle	X		
		Ellipse	X		
		Circle	X		
		Annulus	X		
		Arc	X		
		Curve	X		
		Polygon	X		
	Particle count		X		
	Export to Excel		X		X

OPTIKA SOFTWARE - Comparison chart

SOFTWARE FUNCTION LIST

IMAGE ACQUISITION

FUNCTION		OPTIKA PRO VIEW	OPTIKA LITE VIEW	OPTIKA VISION LITE
Simultaneous management of several cameras		X	X	
IMAGE acquisition		X	X	X
Image formats	tiff	X	X	X
	jpg	X	X	X
	bmp	X	X	X
	png	X	X	
	pcx	X	X	
	jp2	X	X	
	dcm	X	X	
IMAGE acquisition		X	X	X
VIDEO formats	avi	X	X	X
	wmv	X	X	X
	mp4	X	X	X
	asf	X	X	X
	3gp	X	X	X
	mov	X	X	X
	h264	X	X	X
	h265	X	X	X
Continuous automatic exposure		X	X	X
Manual Exposure		X	X	X
Mobile spot for exposure		X	X	X
Resizable spot for exposure		X	X	X
Colour acquisition		X	X	X
Grey-scale acquisition		X	X	X
Manual Time-Lapse		X		X
Automatic Time-Lapse		X		
Fast Image Acquisition		X	X	X
Focus Indicator		X		
White Balance		X	X	X
Black balance		X		
Background correction		X		
Dark Field Correction		X	X	
Image Enhancement		X	X	X
Live Histogram		X	X	X
Flip	Horizontal	X	X	X
	Vertical	X	X	X
Rotate		X		

PROCESSING

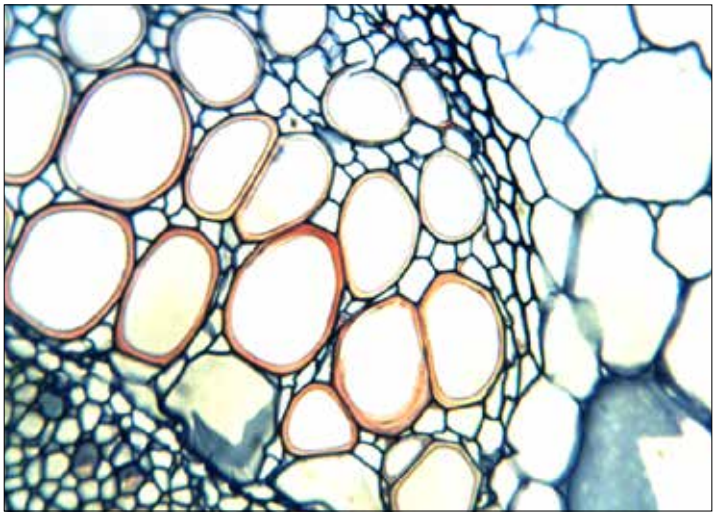
FUNCTION	OPTIKA PRO VIEW	OPTIKA LITE VIEW	OPTIKA VISION LITE
Several function of image processing (filters)	X		
Multiple image combining	X		
EDF (Extended Depth of Focus)	X		
Colour Combine (Multi-Fluorescence Imaging)	X		
Shift Correction	X		
HDR (High Dynamic Range)	X		
Layer Management	X		X
Text Overlay	X		
Ruler Overlay	X		
Measurement Overlay	X		
Grids	X		X

4083.Wifi, 4083.4 and 4083.EC2 work with Vision Lite only. Cameras with HDMI connection only, do not require any software.

OPTIKA Vision Lite - Extremely Intuitive Software

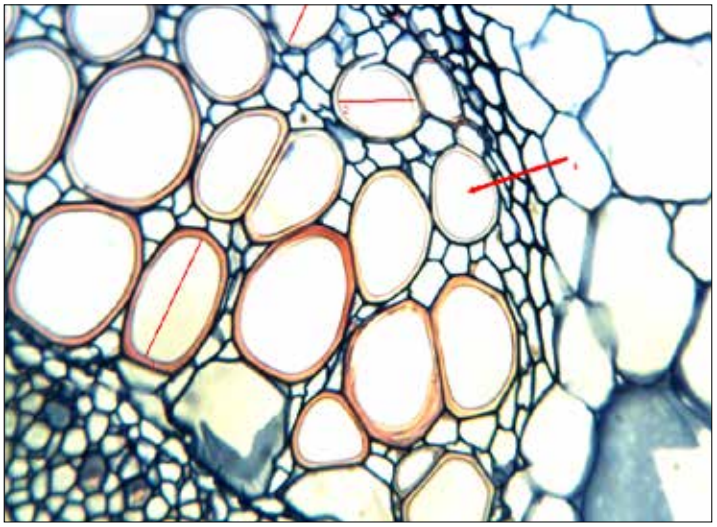
Optika Vision Lite has been designed and developed to be incredibly intuitive, simple and easy to use for customers needing a convenient solution to be combined with OPTIKAM cameras.

» Friendly interface, multilanguage
» Capture still images & stream live videos
» Perform linear measurements
» Export comprehensive reports



Friendly interface, multilanguage
Engineered for easy user interaction and optimized image acquisition, the main purpose of OPTIKA Vision Lite is ensure clear communication.

•An efficient means to efficiently completing your jobs
•Pleasant, easy-to-navigate menus
•Eight languages pre-installed, others upgreadable

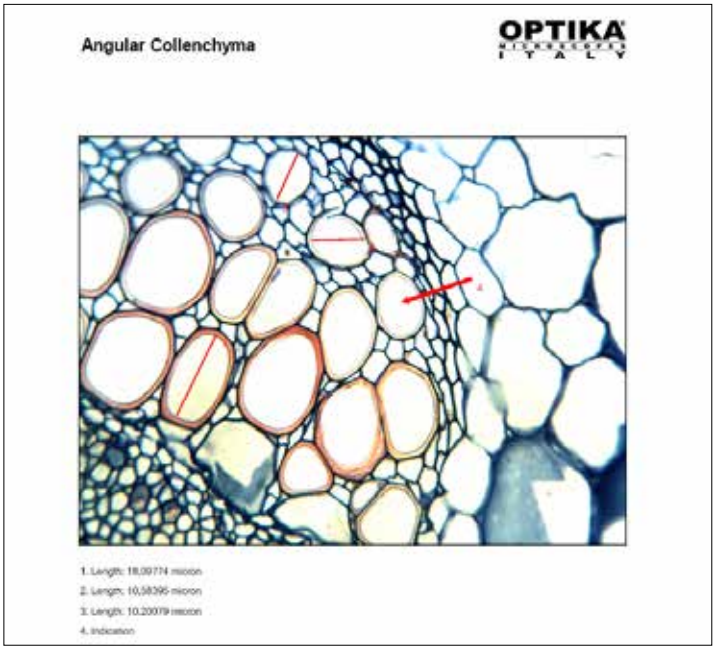


Capture still images & stream live videos
Use the live preview to accurately focus your image and change parameters to obtain the perfect final result you are looking for. Images can be saved in different formats and even as test reports, including personal comments.

Additional features:
• Image stack acquisition
• Grid addition for rapid considerations
• Image flipping option available

Perform linear measurements
Perform linear measurements in an extremely way just by drawing a line after creating your preferred calibration based on the magnification.

• Accurate measurements through simple calibration
• Comprehensive data export (notes & measures included)
• Indicate particular objects in the image to add persona comments

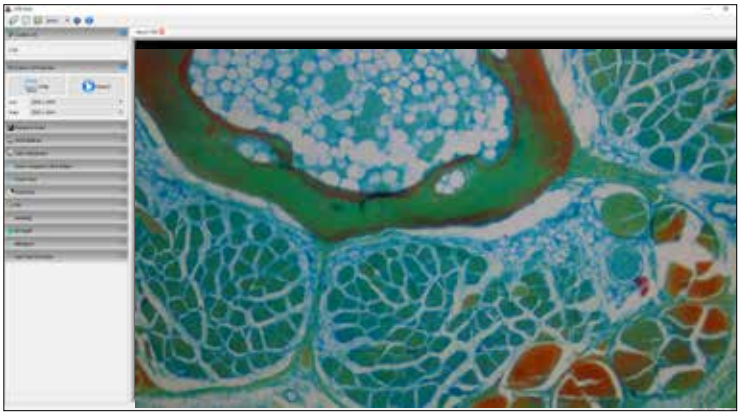


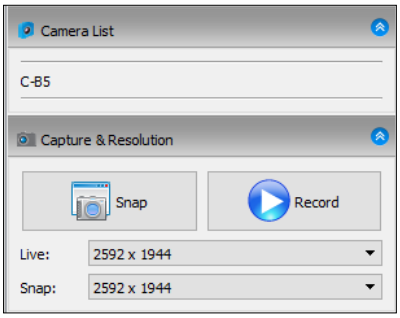
Export comprehensive reports
Detailed test reports can be generated, printed and saved. Reports can be also customized with company logos.

OPTIKA LITEView - Life is Easier

OPTIKA LITEView is a basic image acquisition software. The user who simply wants acquire a still image or a video, with no no need to perform measurements, has, with this powerful and intuitive software, the perfect solution.

-) Simple management of «live» image
-) Acquisition of still images or video
-) Basic imaging functions
-) Background correction

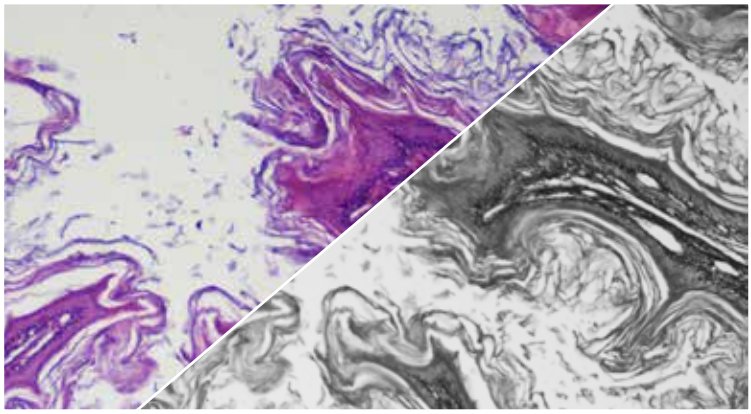




Simple management of «live» image

Image preview is freely customizable by the user. A simple White Balance function with a mobile spot allows to perform the balance even on very small areas, once the specimen has been framed and focused.

Basic functions:
- Automatic or manual acquisition
- Possibility to have «live» and «capture» at different resolutions
- White Balance with mobile spot
- Background correction for the acquisition of perfectly illuminated images.



Color / Grey scales

Capturing still images or video

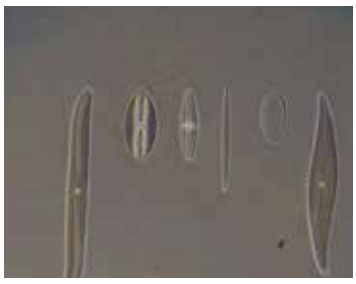
Just select the option and the software performs: acquiring still images or videos is simply and intuitive.

Basic imaging functions

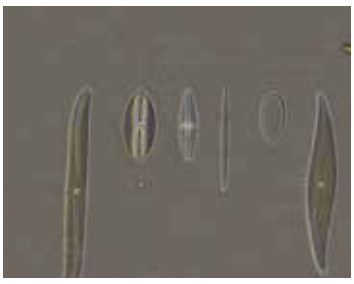
Image parameters can be modified according user's needs. Color, Contrast and Gamma can be chaned in real time.
More, it is possible to use a color camera in «SGrey Scales» modo in order to increase the camera sensitivity.

Background Correction

Any inhomogeneity of illumination of the microscope can be corrected by using the background correction function.
This allows to obtain a faithful reproduction of the image without annoying inhomogeneity due to a not perfect illumination.



No Background correction

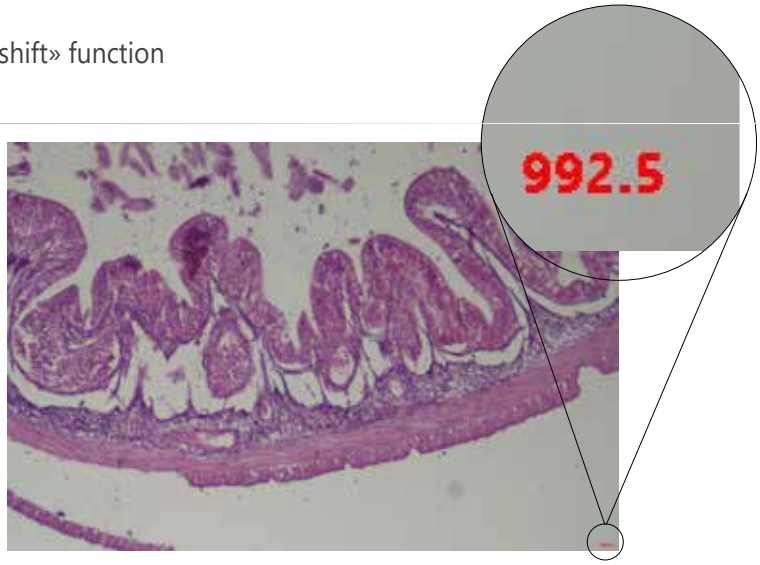


With Background correction

OPTIKA PROView - Professional Image Analysis

OPTIKA PROView is a professional image analysis software. The user who needs to acquire an image or video and to perform a series of processings or measurements, can easily achieve incredible results thanks to this software. PROView incorporates all the functions of the LITEView package, but in addition allows:

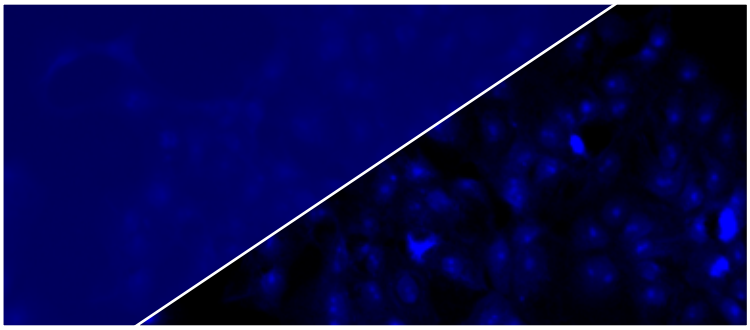
- White Balance and Black Balance
- Simultaneous management of several cameras
- Graphical User Interface fully customizable
- Imaging of Multichannel Fluorescence Images with «pixel shift» function
- Multilanguage Software



Beginners? Experts?
An «On-line» manual will help any user (no matter on how expert he can be) to get the best from the software

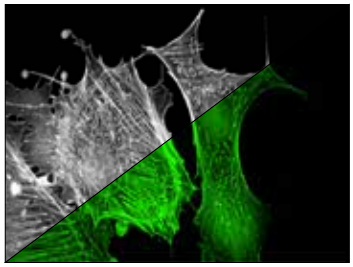
Images always perfect
The management of the acquisition parameters allows to get always the best from your camera. White balance, black balance, background correction, «live» management of Colors, Contrast, Gamma, Gain and Exposure Time ensure to obtain a faithful image. A numerical focus indicator will ensure an optimal focusing, also on specimaens with different focal planes.

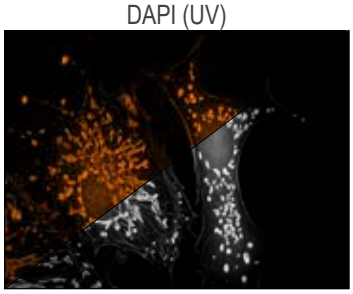
White Balance and Black Balance
It is possible to obtain the balance either on the whole frame or on a small ROI (Region Of Interest) of the image simply resizing and moving the spot in one part of the specimen

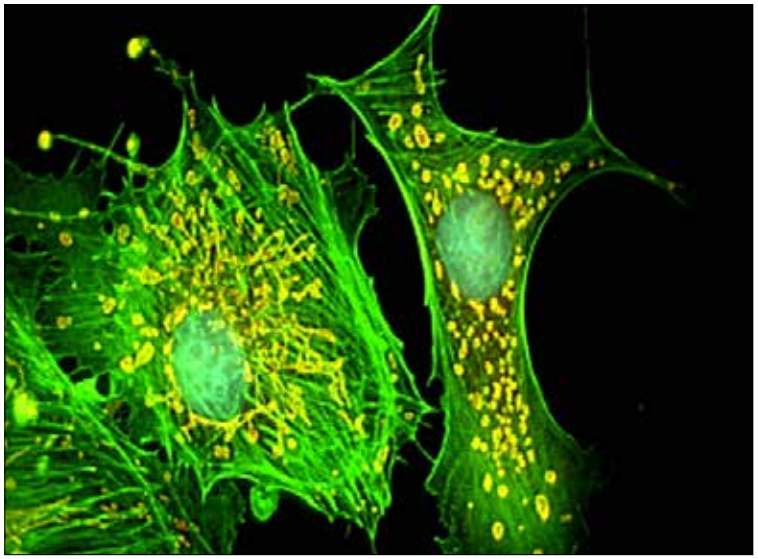

No black correction / Black correction

Multichannel Fluorescence Image processing
Acquire fluorescence images with a specific filtercube, use a false color for the used fluorochrome, get a single multichannel image is simply and intuitive.


DAPI (UV)


FITC (B)

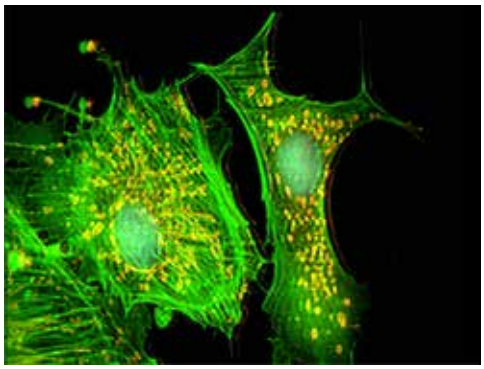

TEXAS RED (G)

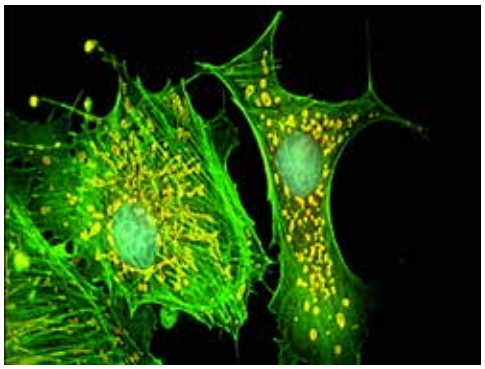

Combined multichannel image

OPTIKA PROView - Professional Image Analysis

«Pixel Shift» function

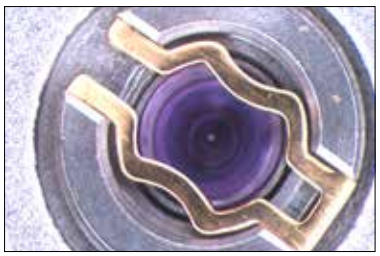
Fluorescence ilter cubes, sometimes, are not perfectly aligned.
During acquisition of multichannel luorescence images, this can cause a non perfect overlapping of the different signals, making the colocalization calculation almost impossible.
«Pixel Shift» function allows to correct these small misalignments:

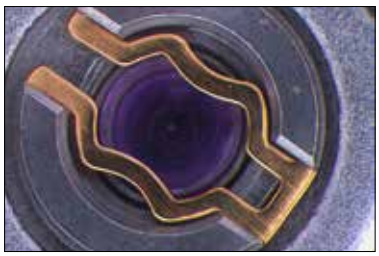

Orignal image


Corrected image

HDR (High Dynamic Range) acquisition

Acquisition of different images with different exposure times allows this function to create a final image where bright and dark zones of the specimen are perfectly displayed.


Standard Dynamic Range


High Dynamic Range

Extended Depth of Focus (EDF)

Acquire images with different focal planes, specially on specimens observed under a stereomicroscope, and to obtain a focused final image with a theoretical infinite focus. **EDF** function (also known as «Z-stack») allows a very refined image processing.



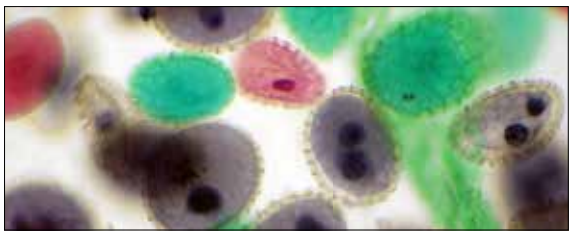
Single Focal Plane Images


EDF Image

Stitching & Tiling

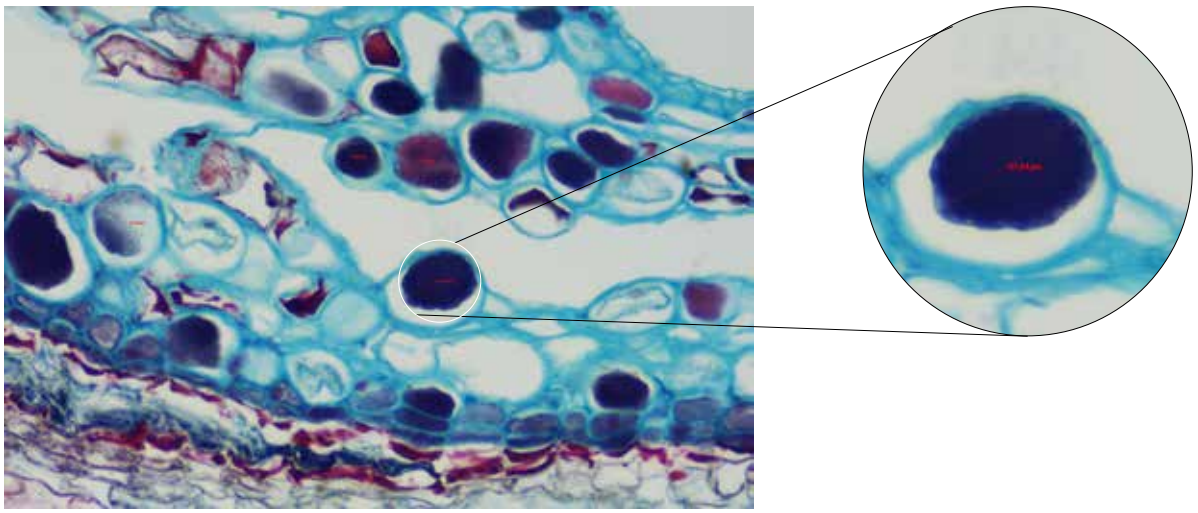
Get an image with high resolution but, at the same time, have a wide view of the specimen under observation.
Impossible? No. The multiple image alignment function allows to get a singe image starting from adjacent images of the specimen.


Separate Images


Stitched image

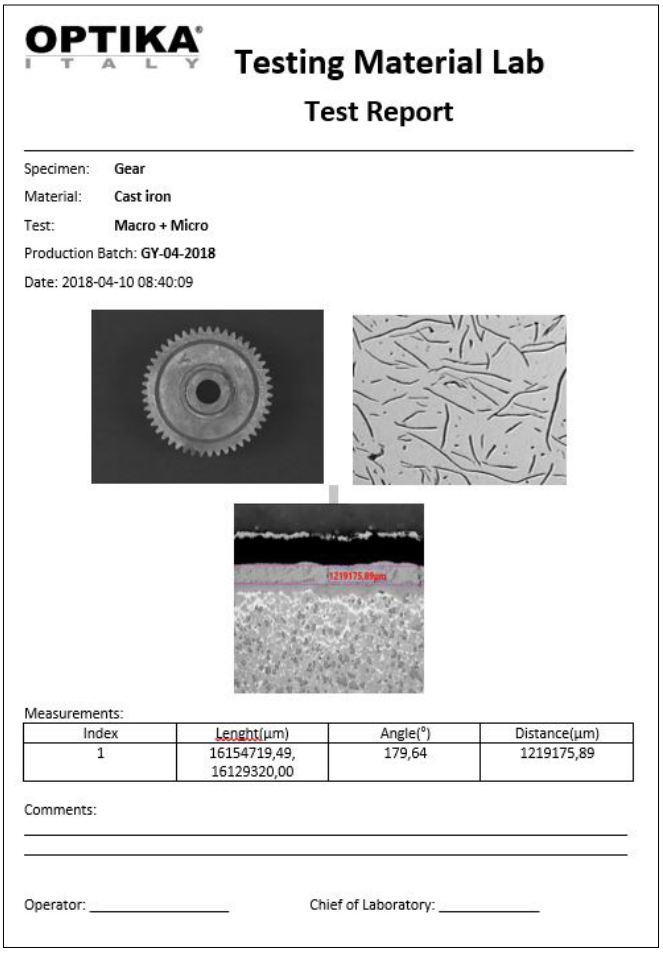
OPTIKA PROView - Professional Image Analysis

Measurements
User can perform measurements on the «live» image (no need to capture an image) and on captured images.



From Beginners To Experts
Measurements available:
- linear measurements
- angles
- circles
- annuli
- poligons
- touch count

Report Generator
At the end of the analysis it is possible to export images and measurement results either on a Excel sheet and on a Report Generator in MS Word format.
The template is freely configurable and can be modified according to laboratory standards.



OPTIKA ITALY

Testing Material Lab

Test Report

Specimen: **Gear**
Material: **Cast iron**
Test: **Macro + Micro**
Production Batch: **GY-04-2018**
Date: 2018-04-10 08:40:09

Measurements:

Index	Lenght(µm)	Angle(°)	Distance(µm)
1	16154719,49, 16129320,00	179,64	1219175,89

Comments:

Operator: _____ Chief of Laboratory: _____

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OPTIKA®
MICROSCOPES
ITALY

OPTISCAN

OPTISCAN10
Digital scanner

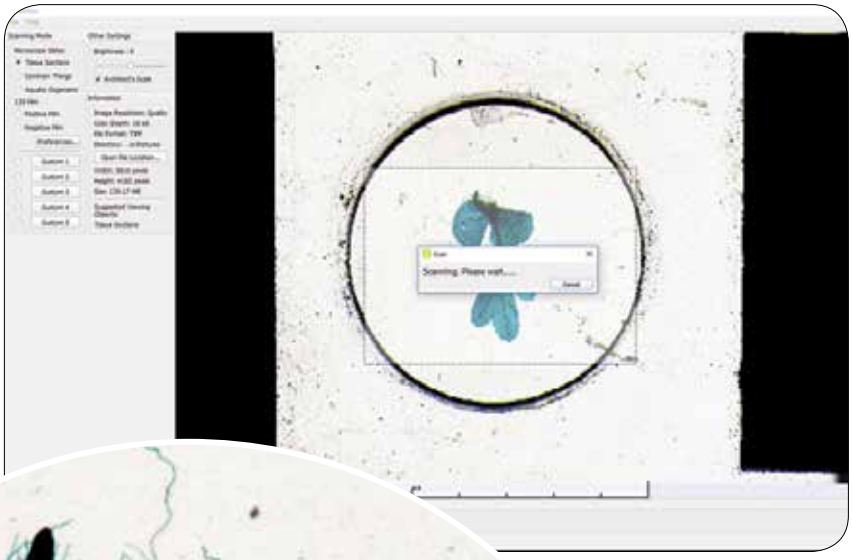
OPTISCAN10 - 4083.SC10

CONVERT YOUR GLASS SLIDES INTO DIGITAL DATA !

Rapid and high resolution scanner to convert your slides into digital slides. The digital slide can be easily manipulated to see any location at any magnifications. Digitizing slides opens up a variety of new possibilities, like:

- Creating a database to be incorporated into a laboratory information system
- Networking slide libraries to be consulted from distant facilities and research institutes
- Sharing expertise for evaluation processes and discussing
- Information storing (digital data does not deteriorate, are secure from damages and losses)

Main application fields are quality control & research, education, veterinary, histology / pathology, entomology / insectology, etc.



Main Features:

- High Resolution (up to 10.000 dpi)
- True & Neutral Color Fidelity
- White Balance & Distortion-free Images
- Dedicated Illumination (LED Transmitted Light)
- Efficient Scanning Area, Wide Field of View
- Impressive Scanning Speed (from 40 sec. to few minutes)
- High Sensitivity CCD Sensor
- Largest Field Of View, Better Than Any Camera

Ideal for:

- building up a comprehensive database of images for routine operations
- sharing expertise for evaluation processes
- archiving confidential patient information

OPTISCAN10 - Technical Specifications

OPTISCAN10 is an extremely convenient scanner for professionals, labs & teaching purposes, offering unmatchable price/performance ratio and coming along with a comprehensive but user-friendly software.
A ultra efficient, compact scanning device carrying high resolution features for spot detection with easy operation figure.
It is equipped with a dedicated LED transmitted light system and high resolution CCD sensor, ensuring high sensitivity with low background noise.

Signal output	USB 2.0
Illumination	LED
Resolution	5'000 dpi (Normal), 10'000 dpi (Quality)
Allowed slide	Standard 24 x 75 mm
Scan view size	Any size, Max 24 x 36mm
Prescan function time	25 seconds
Scanning time (Normal)	1min 30sec (24 x 36mm); 40 sec (standard 15x15mm cover slide)
Scanning time (Quality)	2min 10sec (24 x 36mm); 1min (standard 15x15mm cover slide)
Always included	1.5 m USB cable, power supply, CD rom
System requirements	Windows XP service pack 2, Vista / win7 / win8 / win10 / 32-64 bit / USB 2.0
Supplied software	Multilanguage software for image scan
Capture features	Prescan, slide scan 24x36mm, crop scan, brightness, contrast, saturation, image flip

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