



Digital camera for microscopes USB 2.0 Windows 2000 / XP



## Fast Streaming Video and High-Resolution Still Image

The DP 200™ is designed for various demands of digital microscopy for analysis and documentation purposes. It offers exceptional fast streaming video at high-resolution on the computer monitor together with still images of high resolution.

### Easy-to-use

The DP 200 is a small and compact digital camera with a standard C-mount interface for universal use and flexible attachment to microscopes.

Installation of the electronic connection is also very simple through connecting a single standard USB 2.0 cable between the camera and the computer. The DP 200 uses the USB 2.0 cable for power, control information and to transmit data.

### Fast video

The use of the 480 Mbits/s high-speed architecture of the USB 2.0 international standard has allowed the DP 200 to deliver fast streaming colour video in high-resolution on the monitor of the connected computer.

With a frame rate of 60 frames per second the microscopy image appears on the computer screen without delay. The steady, full-screen live image gives higher user comfort and productivity when focusing and interactively optimizing the image.

## **Direct Digitalization**

In relation to colour quality and precise details the DP 200 demonstrates it's superiority. The digitalization of the image signal direct at the sensor allows high transfer speed and reliable data communication with no loss of information or reduction in image quality. Using this technology, the live image is not only noise-free but has also significantly more details than an image generated by a video camera.

### **Comfortable Operation**

The powerful software included with the camera provides a wide range of image capture and image processing functions. Easy handling and a user-friendly application play an important role in the design of the product, making sure that both first-time users and experienced, creative users can take full advantage of digital imaging.

A standard TWAIN interface provides support for a wide range of 3rd party solutions for image capture and data integration with image management, editing and analysis solutions.

The DP 200 digital camera is powerful, compact, easy-to-use and is the ideal first camera for professionals in the fields of industry, research, medicine and natural science.

#### Features:

- Excellent performance of a small and compact digital camera for microscopy with exceptional fast live images and high-resolution still image
- Ideal camera for documentation and analyses for an exceptionally wideranging spectrum of applications
- Streaming live video on computer monitor through the high-speed USB 2.0 bus at 480 Mbits/s
- Fast streaming colour video images in high resolution with 60 fps at 640 x 480 pixels resolution
- Selectable video resolution in 4 steps from 1,280 x 1,024 pixels
- Perfect image and colour quality with the good detail
- Resolution up to 1.300.000 pixels in colour
- Selectable resolution between 307.000, 480.000, 786.000 and 1.310.000 pixels in colour
- Automatic and manual exposure and sensitivity control
- Superior anti-blooming (overexposure) behaviour
- Easy and flexible daily use with dynamic insertion and removal of the camera to PC and notebook through a single standard USB 2.0 high-speed interface
- Small compact microscopy camera with optical C-mount for easy attachment to a microscope
- Tripod receptable for mounting on stands for macro photography
- Silent operation without noisy fan due to very low power consumption
- Intuitive user interface with powerful and easy-to-use image capture and processing functions
- Standard TWAIN driver for integration to 3rd party imaging application and software
- Standard DirectX driver for integration to 3rd party video application and software
- Support for the Dicom file standard

### DP 200 specifications:

Effective size: 1/2" format

6.7 mm x 5.3 mm

Colour filter:

Red, Green, and Blue in Bayer pattern

1,280 x 1,024 pixels Effective pixels:

(1.3 million)

Pixel size: 5.2 x 5.2 microns

Dynamic range: >60 dB

Dark current noise: 20 electrons/pixel/

second

0.1 milliseconds to Exposure time:

6 seconds

Sensitivity: ISO 200 to 600

Red, Green, Blue and Binning:

colour

Exposure sensitivity: Adjustable from 1

times to 3.7 times

Automatic, manual Exposure mode:

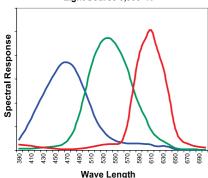
or converging

Colour balance: Automatic, manual or

spot white balance

Shutter: Electronic rolling shutter

#### Light Source 5,000° K



### Digital video

Resolution:

1,280 x 1,024 pixels 15 frames per second

1.204 x 768 pixels 24 frames per second

800 x 600 pixels 37 frames per second

640 x 480 pixels 60 frames per second Digital still image

1,280 x 1,024 pixels Single exposure:

(1.3 million pixels) 24 bit RGB: 3.8 MB 30 bit RGB: 7.6 MB

Data format & compression

Digital output: 24 bit uncompressed

TIFF-RGB (8 bits per colour)

30 bit uncompressed

TIFF-RGB

(10 bits per colour)

24 bit loss-less

compressed JPEG2000 (8 bits per colour)

24 bit compressed

**JPEG** 

(8 bits per colour)

24 bit uncompressed

DICOM

(8 bits per colour)

24 bit uncompressed video in AVI format (8 bits per colour)

### Computer & software

Data interface:

480 Mb/s high-speed USB 2.0 architecture

Standard USB 2.0 cable Cable:

with series "B" connector

Power: Direct powered from

the USB 2.0 bus

Application interface: Intuitive, easy-to-use

user application

TWAIN driver for Application support:

integration to 3rd party imaging applications

DirectX driver for integration to 3rd party video applications

**Operational requirements** 

0° C to +40° C Temperature:

15 to 80 % RH Humidity:

(non-condensing)

Physical data

Optical mount: Standard C-mount

Mechanical mount: Tripod receptable for

macro photography

Housing: Aluminium

with cooling fins

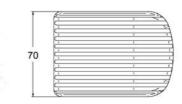
Height: 54 mm

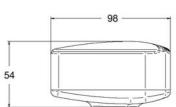
Width: 70 mm

Depth: 98 mm

Weight: 425 g

Compliance: CE, FCC Class B





## Minimum computer platform

Pentium 4,1.3 GHz or similar

**256 MB RAM** 

15 GB free harddisk space

USB 2.0 Port

Windows XP, Windows 2000

## **Product includes:**

- DP 200 digital camera for USB 2.0
- CD-ROM with
  - Stand-alone user application - TWAIN driver
  - DirectX driver
  - Documentation
- USB 2.0 cable (2.0 m)

# Optional:

- Software Developer Kit (SDK) for developing deep integration with other software applications

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