DeltaPix
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DP 300

Digital camera for microscopes
USB 2.0
Windows 2000 / XP

Fast Streaming Video and High-Resolution Still Image

The DP 300™ 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 300 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 300 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 300 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 300 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 300 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.

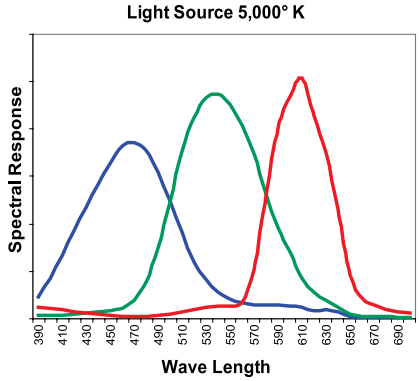
Features:

- 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 wide-ranging 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 5 steps from 2,048 x 1,536 pixels
- Perfect image and colour quality with the good detail
- Resolution up to 3.100.000 pixels in colour
- Selectable resolution between 307.000, 480.000, 786.000, 1.300.000 and 3.100.000 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 300 specifications:

Imager

Effective size:	1/2” format 6.5 mm x 4.9 mm
Colour filter:	Red, Green, and Blue in Bayer pattern
Effective pixels:	2,048 x 1,536 pixels (3.1 million)
Pixel size:	3.2 x 3.2 microns
Dynamic range:	>60 dB
Dark current noise:	20 electrons/pixel/ second
Exposure time:	0.1 milliseconds to 6 seconds
Sensitivity:	ISO 200 to 600
Binning:	Red, Green, Blue and colour
Exposure sensitivity:	Adjustable from 1 times to 3.7 times
Exposure mode:	Automatic, manual or converging
Colour balance:	Automatic, manual or spot white balance
Shutter:	Electronic rolling shutter



Digital video

Resolution:	2,048 x 1,536 pixels 6 frames per second
	1,280 x 1,024 pixels 15 frames per second
	640 x 480 pixels 60 frames per second

Digital still image

Single exposure:	2,048 x 1,536 pixels (3.1 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

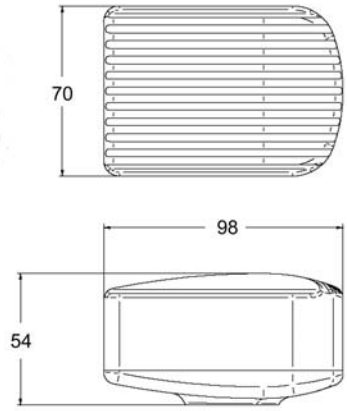
Data interface:	480 Mb/s high-speed USB 2.0 architecture
Cable:	Standard USB 2.0 cable with series “B” connector
Power:	Direct powered from the USB 2.0 bus
Application interface:	Intuitive, easy-to-use user application
Application support:	TWAIN driver for integration to 3rd party imaging applications
	DirectX driver for integration to 3rd party video applications

Operational requirements

Temperature:	0° C to +50° C
Humidity:	20 % to 80 % RH (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 300 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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