Data Sheet

NEW!
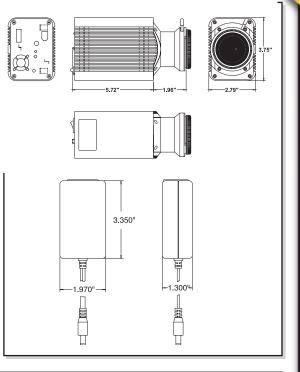
Application

This camera is designed for high-resolution qualitative capture of brightfield and moderately bright fluorescence images. The 6 Mega-sample, 3 Shot color image capture measures every pixel, doubling mosaic technology. This camera finds widespread use for photo-documentation, poster presentations, publication submittals, and metallurgical applications.

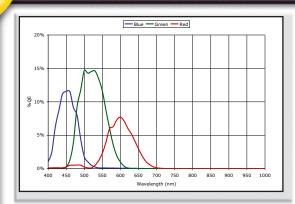| Feature	Benefit
3 Shot image capture of 6 MPixel Samples..	More than doubles the resolution when compared to color mosaic image capture technology
1600 x 1200 @ 6 Mega-sample................	High resolution that resolves fine detail
Programmable gain (1-16x)	Allows short exposures to facilitate live mode previews of low light specimens
Dual Channel 18 MHz readout	Produces high-speed live imaging for real-time focusing and framing
30 bit RGB color image capture	Extra bit depth is ideal for image enhancement
New high quantum efficiency CCD	Increases sensitivity for faster image captures
Interline progressive scan CCD	Electronic shuttering eliminates mechanical shutter shortcomings related to speed, wear, and vibration
FireWire® interface	Allows for effortless installation, hot-swapping, and laptop connectivity for greater ease of use
SPOT™ Software.................................	Provides essential tools for modern microscopy and is widely supported by 3rd party software companies for high end applications

Insight™ FireWire® 3-Shot Color

SPOT™

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Captured Frames per Second*

Binning	REGION OF INTEREST		
	1600 X 1200	512 X 512	256 X 256
1 x 1	7.8	16.8	25.4
2 x 2	14.4	25.1	50.6
3 x 3	20.1	33.4	50.6
4 x 4	25.2	49.9	50.6

*.04 ms exposure, no post-processing, images saved to RAM on AMD XP2000+(1600Mhz) processor running Windows XP

CCD information:

Kodak KAI-2001-M with cover glass
Monochrome progressive scan interline CCD
1600 x 1200, 7.4 µm square pixels
11.8mm x 8.9mm active area
100x minimum anti-blooming
LCD electronic RGB color changing filter

Digitization information:

Digitized pixel by pixel at CCD sensor
Live mode: 8 bit x 36 MHz (Dual channel
8 bit x 18MHz)
B/W Live image frame rate: 22 frames per second
Capture mode: 10 bit x 18MHz (see chart for frame rate)
A/D Converter full scale set to 31,500 e (Gain=1)
Saved bit depths: 24, 36, or 48 RGB; 8, 12 or 16 bit BW

Noise specifications:

Read noise: 55 e rms
Dark noise: 5.0 e/p/s mean value

Exposure:

40 microseconds to 536 seconds
Captured and live mode automatic exposure
Captured and live mode manual exposure

Lens mount: Nikon F-mount

Sealing window: IR Filter w/ multilayer anti-reflection coating

External shutter control: BNC TTL level output w/ delay

External Trigger Input: Plug on camera back w/TTL level

Mechanical:

Tripod mount: 1/4 - 20 UNC
Camera head: 2.79" (71mm) x 3.75" (95mm) x 7.68" (180mm), 1.6 lbs. (0.72 kg)
Power supply: 1.3" (33mm) x 1.97" (50mm) x 3.35" (85mm), 0.34 lbs. (0.16 kg)
Operating environment: 0 to 30°C ambient, 0-80% relative humidity noncondensing
Power requirements: 100-240 VAC, 47-63 Hz

Certifications: CE, FCC Class A, EN60950

SPOT software features:

Color live mode viewing window & controls, auto-exposure live and capture modes, image capture window, predefined and custom image setups, auto white balance, flat field correction, image enhancement tools in three color spaces (RGB, HSL, HSV), pan and zoom windows, customizable floating taskbar, spot metering, annotation, calibration mark, measurement tools, sequential image capture and playback, exportable image archiving database, report generator, macro scripting, interactive print dialog, online help menu

File formats:

BMP, TIFF, TIFF-JPEG, JPEG, JPEG-2000, PICT, AVI

TIFF File sizes:

8 bit BW / 1.83MB	24 bit RGB / 5.49 MB
12 bit BW / 2.75 MB	36 bit RGB / 8.24 MB
16 bit BW / 3.66 MB	48 bit RGB / 10.99 MB

Drivers included:

Twain for supported Windows® operating systems. AppleEvent for supported Mac® operating systems

Native drivers for 3rd party software:

Call or visit our website (www.diaginc.com)

Minimum system requirements:

PC: Pentium 400 Mhz or greater with Windows 98SE, 2000, ME, or XP, 128 MB of RAM, Firewire/IEEE 1394a interface*
Mac: Power PC 400 Mhz G3 or greater with OS 10.1 or higher, 256 MB of RAM, Firewire/IEEE 1394a interface
Video card: 24 bit RGB @ desired resolution

Items included:

Camera head, FireWire® data cable, power supply cable, power supply, power cord, SPOT software install CD (includes drivers), user guide, 2 year warranty

*Desktop computers may require IEEE 1394a to PCI bus interface card, laptop computers may require IEEE 1394a to PCMCIA interface card

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Catalog Number: IN1130