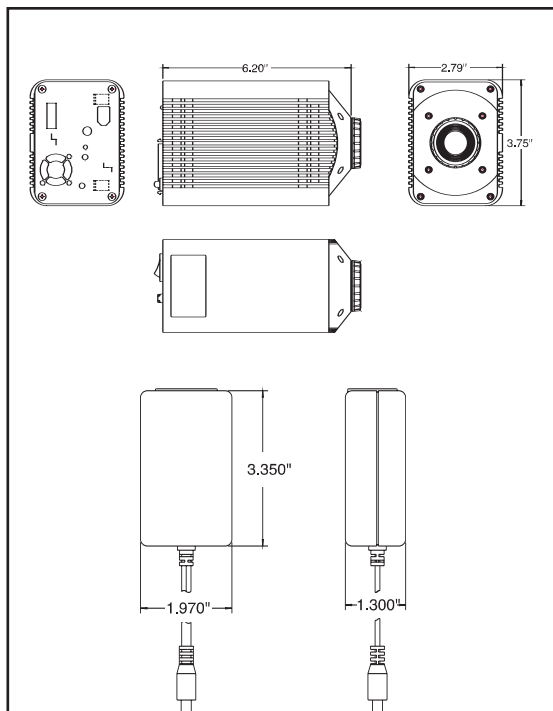




Application

This camera is designed for high-resolution capture of brightfield and moderately bright fluorescence images.

This camera is excellent for use in machine vision, metrology, metallurgical, and other industrial applications, such as defect analysis.



Feature

Benefit

36 MHz live mode (dual channel 18MHz)	High-speed imaging for real time viewing
1600 x 1200 (1.92 Mpixel) image capture ..	Resolves fine detail
Programmable gain (1-16x)	Facilitates live mode previews of low light specimens
10 bit x 18 MHz 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 as well as providing DLL with SDK for OEM Driver development
Mac® & Windows® operating systems	
Basic & Advance Applications	
Twain & Apple Event	
DLL w/ SDK and Tutorial manual	
3rd Party Driver support	

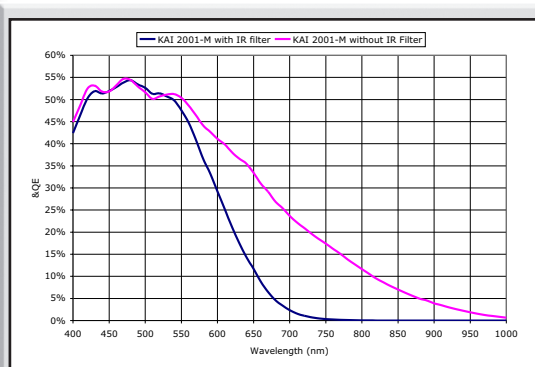
Insight™ FireWire® Monochrome



Data Sheet

DIAGNOSTIC
Instruments, Inc.
source
solution

Insight™ FireWire® Monochrome



CCD information:

Kodak KAI-2001-M with cover glass
Monochrome progressive scan interline CCD
1600 x 1200, 7.4 μ m square pixels
11.8mm x 8.9mm active area
100x minimum anti-blooming

Cooling: Fan cooled heat sink

Digitization information:

Digitized pixel-by-pixel at CCD sensor
Live mode: 8 bit x 36 MHz (Dual channel
8 bit x 18MHz)
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: 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: C-mount

Sealing window:

UBK 7 w/anti-reflection coating (IN1100)

IR Filter w/anti-reflection coating (IN1100)

External shutter control: BNC TTL level
output w/programmable 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 6.2"
(142mm), 1.4 lbs. (0.62 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

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

Certifications: CE, FCC Class A, EN60950

SPOT software features:

Live mode viewing window & controls, auto-
exposure live and capture modes, image capture
window, predefined and custom image setups,
flat field correction, 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

12 bit BW / 2.75 MB

16 bit BW / 3.66 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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Firewire® and Mac® are registered trademarks of Apple Computers,
Inc. Windows ® is a registered trademark of Microsoft.

Insight™ FireWire® Monochrome: Catalog Number: IN1100

Insight™ FireWire® Monochrome/IR Filter: Catalog Number: IN1110

