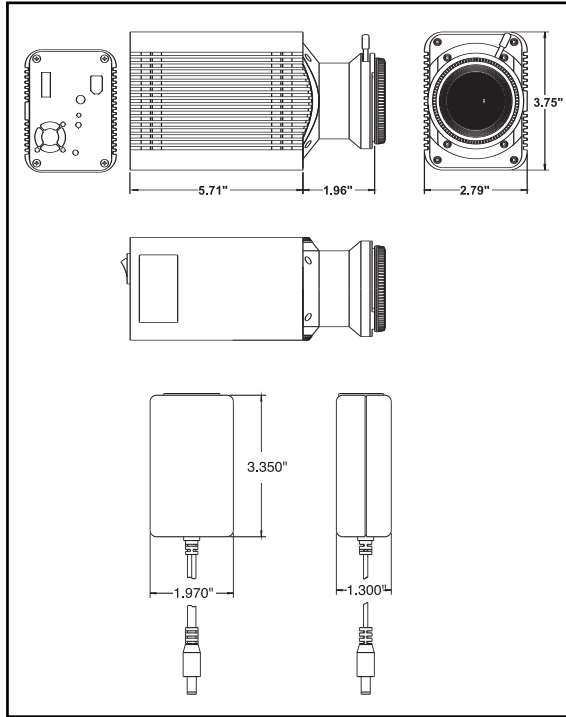


Data Sheet



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.

Features

Benefits

3 Shot image capture	More than doubles the resolution when compared to color mosaic image capture technology
1600 x 1200 pixel resolution	High resolution that resolves fine detail
Programmable gain (1-32x)	Allows short exposures to facilitate live mode previews of low light specimens
Dual channel 20 MHz readout	Produces high-speed live imaging for real-time focusing and framing
42 bit RGB color image capture	Extra bit depth is ideal for image enhancement
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

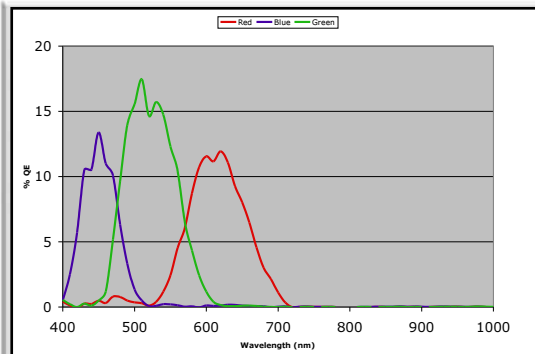
Insight™ 2 Megapixel 3-Shot Color



Data Sheet

DIAGNOSTIC
instruments, inc.
SOURCE
solution

Insight™ 2 Megapixel 3-Shot Color



Captured Frames per Second*

Binning	REGION OF INTEREST		
	1600 X 1200	512 X 512	256 X 256
1 x 1	7.0	13.5	20.4
2 x 2	11.7	19.5	25.8
3 x 3	15.2	23.0	28.2
4 x 4	17.5	25.0	29.2

*1ms exposure with post-processing deferred, taken with 2.6 Ghz Xeon processor running Windows XP

CCD information:

Kodak KAI-2020-M with cover glass
Monochrome progressive scan interline CCD
1600 x 1200, 7.4 µm square pixels
11.8mm x 8.9mm active area, 1" optical format
300x minimum anti-blooming
LCD electronic RGB color changing filter

Cooling: Convective cooled heat sink

Digitization information:

Digitized pixel by pixel at CCD sensor
Live mode: 8 bit x 40 MHz (Dual channel
8 bit x 20MHz)
Live image frame rate: 18 f/s without binning, up
to 41 f/s with binning
Capture mode: 14 bit x 20MHz (see chart
for frame rate)

A/D Converter full scale set to 33,333 e (Gain=1)
Saved bit depths: 24, 36, or 48 RGB; 8, 12
or 16 bit BW

Noise specifications:

Read noise: 17 electrons
Dark current: 1.2 e/p/s mean value

Exposure:

0.5 millisecond 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 device control: TTL level output
with programmable delay

External trigger input: TTL level input

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 (PC only), report generator,
macro scripting, interactive print dialog, online
help menu, and Correct Color Technology™.

File formats:

Bitmap, TIFF, TIFF-JPEG, JPEG, JPEG-2000, PICT,
AVI (PC, export only), Quicktime (Mac, export only)

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. Third Party Interface
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, 256 MB of RAM,
Firewire/IEEE 1394a interface*
Mac: Power PC 400 Mhz G3 or greater with
OS 10.2.8 or higher, 256 MB of RAM, Firewire/IEEE
1394a interface
Video card: 24 bit RGB @ desired resolution

Items included:

Camera head, 6 pin to 6 pin 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
Firewire® and Mac® are registered trademarks of Apple Computers, Inc.
Windows ® is a registered trademark of Microsoft.
Specifications are typical and subject to change.

Catalog Number: IN1830

