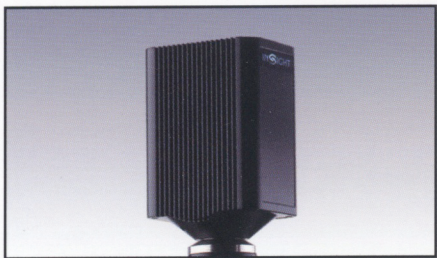


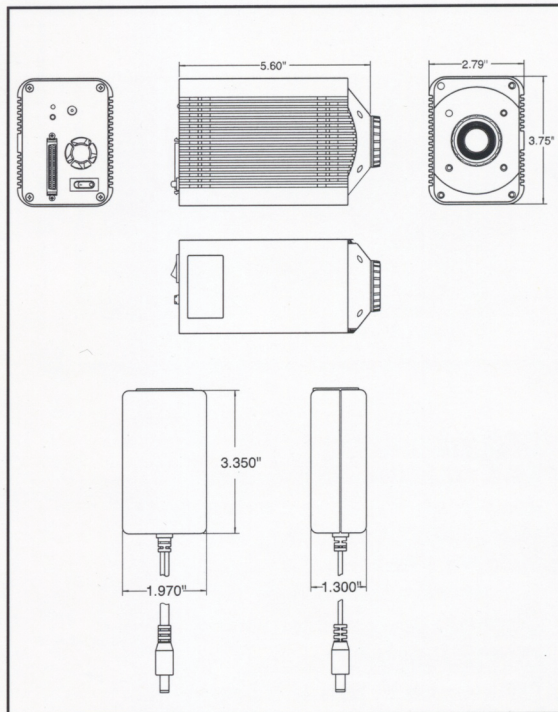
Data Sheet



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

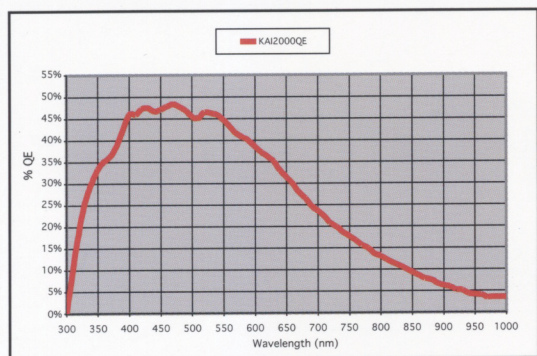
Benefit

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 (1-32x)	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
PCI Interface	Stable, high-speed interface for PC and Mac platforms is over 50% faster than Firewire™ (IEEE 1394)
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™ QE Monochrome

Data Sheet

Insight™ QE Monochrome



CCD information:

Kodak KAI-2000-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

Cooling: Fan cooled heat sink *50° Below Ambient*

Digitization information:

Digitized pixel by pixel at CCD sensor
Live mode: 8 bit x 36 MHz (Dual channel
8 bit x 18MHz)
Color live image frame rate: 15 -19 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 microsecond to 536 seconds
Captured and live mode automatic exposure
Captured and live mode manual exposure

Lens mount:

C-mount
Sealing window: BK7 w/ multilayer
anti-reflection coating

Computer interface:

PCI bus card
External shutter control: BNC TTL level
output w/ delay

Mechanical:

Tripod mount: 1/4 - 20 UNC
Camera head: 2.79" (71mm) x 3.75" (95mm) x 5.6"
(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

*.04ms exposure, no post-processing, images saved
to RAM on 1.7 GHz P4 running Windows XP

Certifications:

SPOT software features:

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, annotation,
calibration mark, measurement tools, sequential
image capture and playback, archiving data base,
report generator, 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:

Full size PCI bus slot or PC/MCIA CardBus slot*
*-Requires Magma Adapter (sold separately)

PC: Pentium 166 or greater w/

Windows 95, 98, 00, NT, ME, XP

Mac: Power PC, OS 8.6 - OS X

RAM: 64MB minimum, 256MB suggested

Video card: 24 bit RGB @ desired resolution

Items included:

Camera head, PCI plug-in
board, data cable, power supply cable, power sup-
ply, power cord, SPOT software install CD (includes
drivers), user guide, 1 year warranty