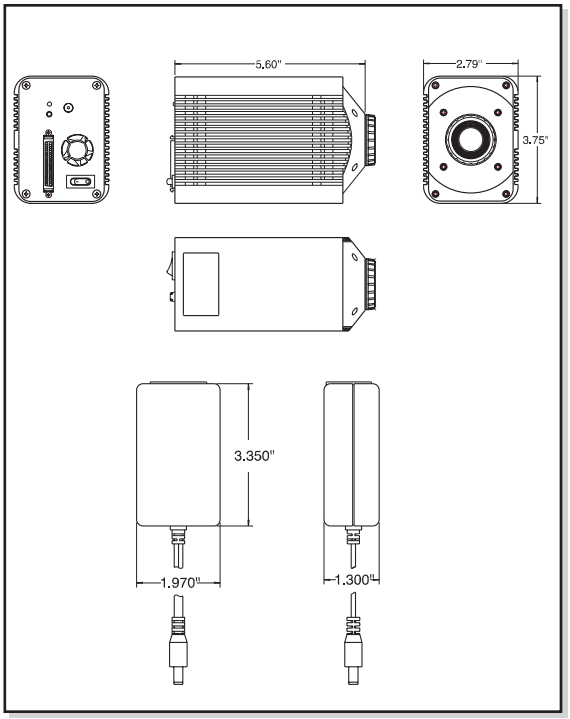
Data Sheet



Application

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

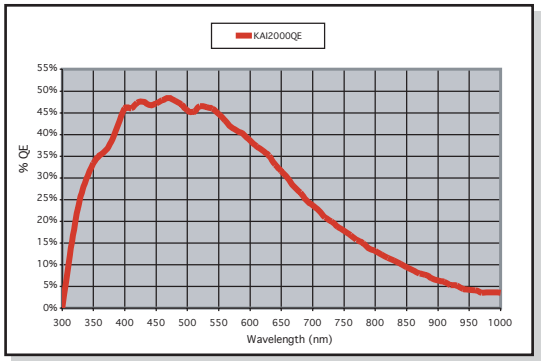
This camera is excellent for use in machine vision, metrology, metallurgical, and other industrial applications, such as defect analysis

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
8 bit x 18 MHz capture.....	Fast acquisition
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..... Mac® & Windows® operating systems Basic Applications Twain & Apple Event DLL w/ SDK and Tutorial manual 3rd Party Driver support	Provides useful tools for modern microscopy

Vision™ Monochrome

Data Sheet

Vision™ Monochrome



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

CCD information:

Kodak KAI-2000M 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

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: 8 bit x 18MHz (see chart for frame rate)
A/D Converter full scale set to 31,500 e (Gain=1)
Saved bit depths: 8 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

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

Certifications: CE, FCC Class A, EN60950

SPOT software features:

Live mode viewing window, autoexposure live and capture modes, image capture window, predefined and custom image setups, auto white balance, flat field correction, image enhancement, pan and zoom windows, annotation, calibration, measure, sequential image capture and playback, 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

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:

1/2 size PCI bus slot or PCMCIA 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 supply, power cord, SPOT software install CD (includes Twain and AppleEvent drivers), user guide, 1 year warranty

Catalog Number: IN800