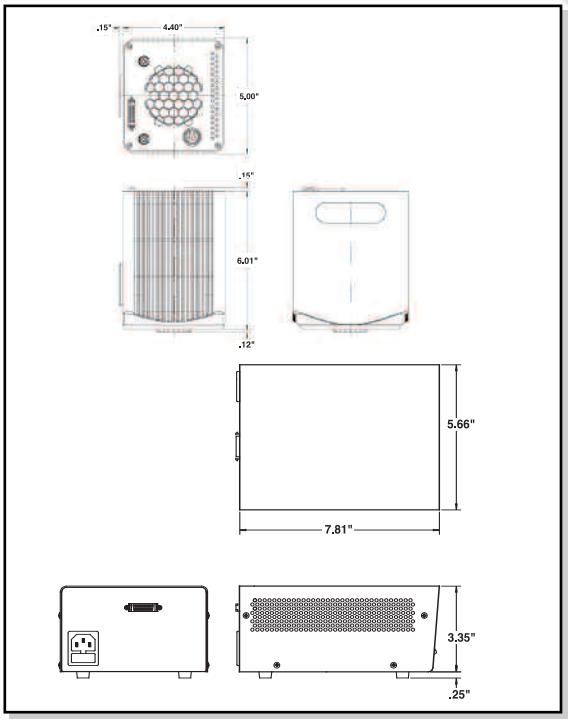
Data Sheet



Application

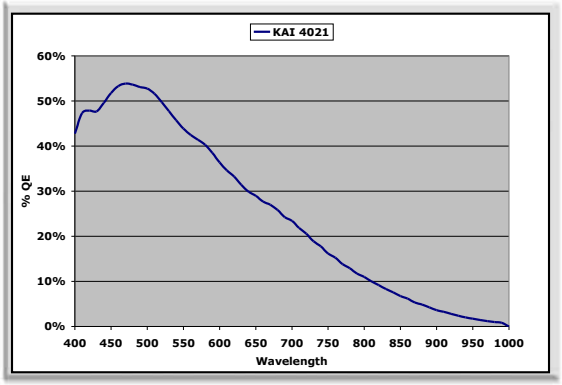
The Pursuit™ Monochrome is a high speed 14-bit monochrome digital camera with a large format CCD that provides a wide field of view and high quantum efficiency. Regulated cooling and multiple readout modes make it ideal for quantitative applications like FRET, FRAP, live-cell imaging, FISH, and ion imaging.

Features	Benefits
-10°C regulated cooling	Reduces dark noise and increases repeatability for long exposure image captures
4 Mpixel CCD with 21.4 mm diagonal	Provides field of view that closely matches that in the microscope eyepieces without requiring expensive optical couplers
Multiple readout speeds	Allows the user to select between high speed and low noise image captures
Adjustable gain and binning levels	Facilitates live mode previews of low light specimens
14 bit image capture	Extra bit depth is ideal for image enhancement
40 MHz live mode (dual channel 20 MHz)	High-speed imaging for real time viewing
Exposure while downloading	Allows user to overlap exposure with previous image download to improve speed
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 & Advanced Applications Twain & Third Party Interface DLL w/ SDK and Tutorial manual 3rd Party Driver support	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

Pursuit™ Monochrome

Data Sheet

PursuitTM Monochrome



Captured Frames per Second*

Binning	REGION OF INTEREST			
	2048x2048	1600x1200	512x512	256x256
1x1	3.8	6.2	10.7	14.5
2x2	6.9	9.7	14.5	17.7
3x3	8.9	11.9	16.5	18.3
4x4	10.4	13.6	17.6	19.9
8x8	13.9	16.9	19.7	21.2

*1ms exposure with post-processing deferred and 20 Mhz readout, taken with 1 Ghz PIII processor running Windows XP

CCD information:

Kodak KAI-4021-M with cover glass
Monochrome progressive scan interline CCD
2048 x 2048, 7.4 µm square pixels
15.16 x 15.16 mm active area, >1" optical format
300x anti-blooming

Cooling:

-10°C regulated cooling via two-stage Peltier thermoelectric cooler; -40°C maximum differential from ambient

Digitization information:

Digitized pixel by pixel at CCD sensor
Live mode: 8 bit x 40 MHz (Dual channel 8 bit x 20 MHz)
Live image frame rate: 11 f/s without binning; up to 17 f/s with binning
Nonlinearity: <1% (gain 1)
Capture mode: 14 bit (10 and 20 Mhz selectable)
A/D Converter full scale set to 30,000 e (no binning); 60,000 e (with binning)
Saved bit depths: 8, 12 or 16 bit BW

Noise specifications:

Read noise: 9 e at 10 Mhz; 12 e at 20 Mhz
Dark current: 0.022 e/p/s

Exposure:

No maximum exposure; 1 ms minimum exposure
Captured and live mode automatic exposure
Captured and live mode manual exposure

Lens mount: C-mount

Sealing window: UBK7 multilayer anti-reflection coating

Computer interface: PCI bus card

External device control: TTL level output with programmable delay

External trigger input: TTL level input with programmable delay

Mechanical:

Tripod mount: 1/4 - 20 UNC
Camera head: 5.00" (127 mm) x 4.40" (112 mm) x 6.01" (153 mm), 4.4 lbs. (2.0 kg)
Power supply: 3.61" (92 mm) x 3.90" (99 mm) x 8.13" (207 mm), 3.2 lbs. (1.5kg)
Operating environment: 0 to 30°C ambient, 0-80% relative humidity noncondensing
Power requirements: 100-240 VAC, 3 A

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, multiple customizable floating taskbars, spot metering, non-destructive annotations, non-destructive calibration marks, measurement tools, sequential image capture and playback, exportable image archiving database (PC only), report generator, macro scripting, interactive print dialog, online help menu

File formats:

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

TIFF File sizes:

8 bit BW / 4 MB
12 bit BW / 6 MB
16 bit BW / 8 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:

Full height, half length PCI bus slot (desktop) or PCMCIA cardbus slot (laptop)*
*-Requires Magma™ adapter (sold separately)
PC: Pentium 400 Mhz – Windows 98, SE, 2000, ME, or XP
Mac: 400 Mhz G3 – OS 10.2.8 or higher
RAM: 256 MB RAM
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 drivers), software user guide, hardware user guide, 2 year warranty

Specifications are typical and subject to change without notice.
Ambient temperature is defined as 20°C.

Catalog Number: PR1600