

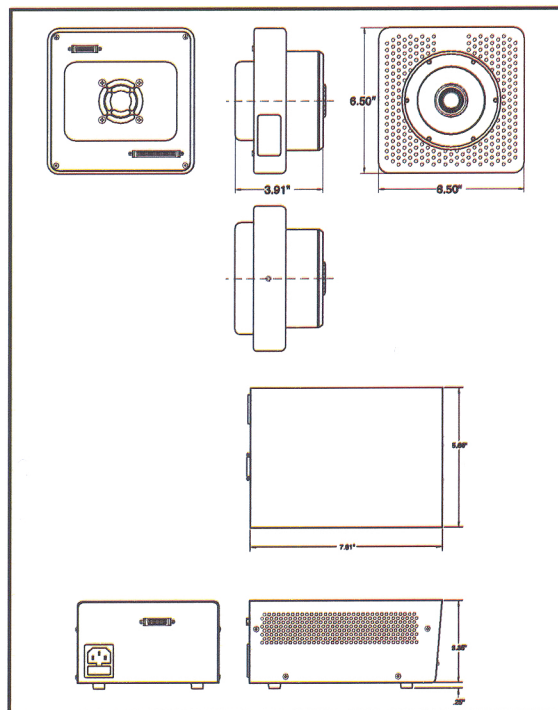
Data Sheet



Application

With deep-well pixels, this camera is designed for high sensitivity. The generous cooling results in low noise for long exposure captures.

The optional Slider Version enables quantitative monochrome and qualitative color image capture in one camera.



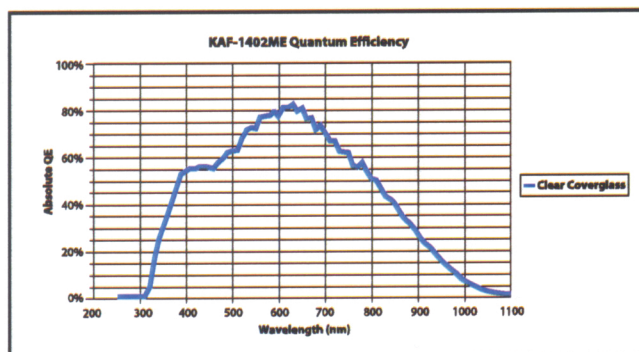
Feature

Benefit

Large capacity pixels (38,250 e Linear full well depth)	Higher Sensitivity for low light capture
Enhanced cooling (-37°C reduction from ambient)	Significantly reduces noise contribution for long exposures
12 bit x 1.08 MHz capture	Extra bit depth is ideal for image enhancement
New high quantum efficiency CCD (Kodak KAF-1402ME Series)	Increases sensitivity
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	
Slider Version also available	Offers the capability of 3-shot color image processing with the flexibility of a quick filter change to switch to monochrome image capture

EN-1400 Enhanced

Data Sheet



CCD information:

Kodak KAF-1402-ME with cover glass
1315 x 1033, 6.8 μ m square pixels
8.94mm x 7.02mm active area

Cooling: To -12°C from 25 °C ambient
(-37°C differential) \pm 1 °C over 8 hours. Uses a Peltier semiconductor with Fan cooled heat sink

Digitization information:

Digitized pixel-by-pixel at CCD sensor
Capture mode: 12 bit x 1.08 MHz
Frame rate: 4 frames per second
A/D Converter full scale set to 38,250 e (Gain=1)
Saved bit depths: 8, 12 or 16 bit BW

Noise specifications:

Read noise: 13 e rms
Dark noise: 0.05 e/p/s mean value
Signal to Noise Ratio:
69 db typical, 66 db minimum

Exposure:

80 millisecond to 17 minute range
Captured and focus mode automatic exposure
Captured and focus mode manual exposure

Lens mount: C-mount (monochrome),
F-mount (Slider)

Sealing window: UBK7 w/ multilayer
anti-reflection coating

Computer interface: PCI bus card

External shutter control: BNC TTL level
output w/programmable delay

Mechanical:

Tripod mount: 1/4 - 20 UNC

Camera head: 3.9" (99mm) x 6.5" (165mm) x 6.5" (165mm), 5.11 lbs. (2.32 kg)

Power supply: 5.66" (33mm) x 7.81" (50mm) x 3.35" (85mm), 3.18 lbs. (1.45 kg)

Operating environment: 15 to 30°C ambient,
10-80% relative humidity non-condensing

Power requirements: 100-240 VAC, 47-63 Hz

Certifications: CE, FCC Class A, EN60950

SPOT software features:

Viewing window & controls, autoexposure focus and capture modes, image capture window, predefined and custom image setups, auto white balance, flat field correction, image enhancement tools, 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 / 1.33 MB
12 bit BW / 1.99 MB
16 bit BW / 2.66 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 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 drivers), user guide, 1 year warranty

EN-1400 Enhanced