

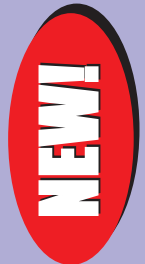
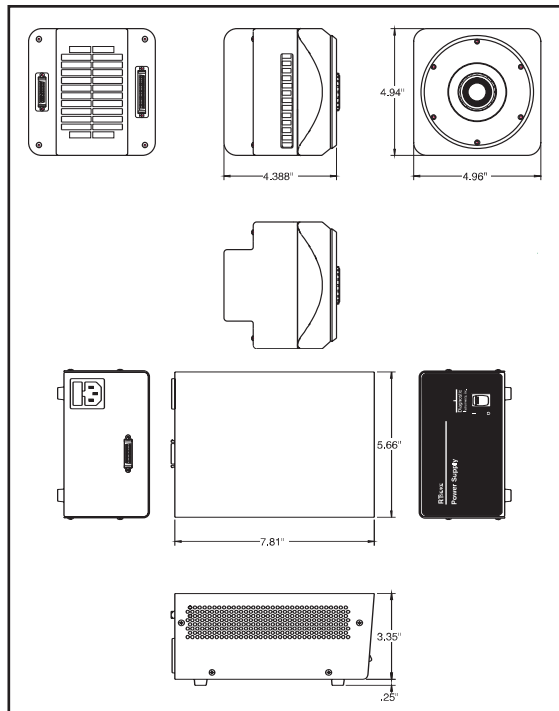
Data Sheet



Application

This camera is designed for qualitative capture of low light fluorescence as well as standard transmitted and reflective brightfield specimens.

Application areas include Phase/DIC, Live Cell Imaging, and Fluorescence/GFP.



Feature

Benefit

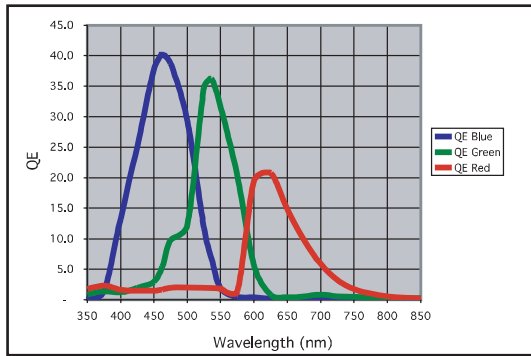
| | |
|---|---|
| CCD cooled to -26°C from an ambient temperature of 20°C (-46°C differential).... | Reduces dark noise to allow for long exposures |
| 36 MHz live mode (dual channel 18MHz) | High-speed imaging for real time viewing |
| 1600 x 1200 (1.92 Mpixel) image capture | Resolves fine detail |
| Programmable gain (1-32x) | Facilitates live mode previews of low light specimens |
| 12 bit x 6 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 | |

RT™ KE Color Mosaic

Data Sheet

NEW!

RT™ KE Color Mosaic



Captured Frames per Second*

| Binning | REGION OF INTEREST | | |
|---------|--------------------|-----------|-----------|
| | 1600 X 1200 | 512 X 512 | 256 X 256 |
| 1 x 1 | 2.4 | 10.1 | 25.3 |
| 2 x 2 | 5.1 | 20.1 | 33.4 |
| 4 x 4 | 10.1 | 33.4 | 50.4 |

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

CCD information:

Kodak KAI-2000-CM with cover glass
Color mosaic progressive scan interline CCD
1600 x 1200, 7.4 µm square pixels
11.8mm x 8.9mm active area
100x minimum anti-blooming

CCD Cooling:

-46°C differential from ambient via thermoelectric cooler with fan cooled heat sink (-26°C from an ambient of 20°C)

Digitization information:

Digitized pixel by pixel at CCD sensor
Live mode: 8 bit x 36 MHz (Dual channel 8 bit x 18MHz)
Live image frame rate: 19 frames per second
Capture mode: 12 bit x 6MHz (see chart for frame rate)
A/D Converter full scale set to 31,500 e (Gain=1)
Saved bit depths: 24, 36, or 48 RGB; 8, 12 or 16 bit BW

Noise specifications:

Read noise: 19 e rms maximum (preliminary)
Dark noise: 0.06 e/p/s mean value (preliminary)

Exposure:

40 microsecond to 71 minute range
Captured and live mode automatic exposure
Captured and live mode manual exposure

Lens mount: C-mount

Sealing window: IR filter w/ 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: 4.96" (126mm) x 4.94" (125.5mm) x 4.39" (111.5mm), 3.4 lbs. (1.5 kg)

Power supply: 5.66" (143.7mm) x 7.81" (198.3mm) x 3.60" (91.5mm), 3.3 lbs. (1.5 kg)

Operating environment: 0 to 30°C ambient, 0-80% relative humidity noncondensing

Power requirements: 85-264 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, 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 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
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