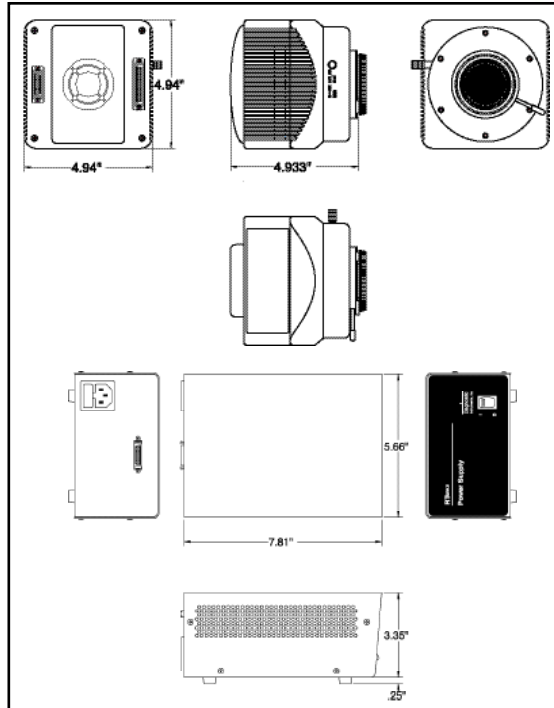# Data Sheet

Application

This camera is designed for high-resolution quantitative capture of low light images as well as bright-field images in both color and B/W

This camera is commonly used in low light fluorescence, Dual Phase/fluorescence, Ca++, and GFP applications.

RT™ SE6 Slider

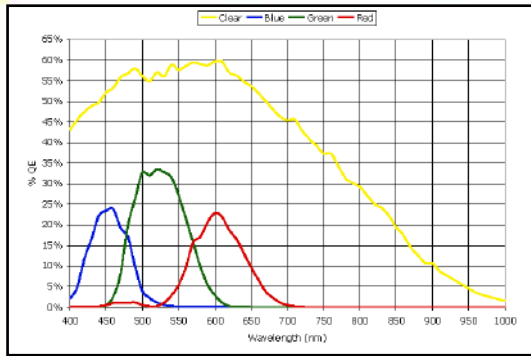| Feature	Benefit
CCD cooled to -28°C from an ambient temperature of 20°C (-48°C differential) ..	Reduces dark noise for long exposure image capture
1360 x 1024 (1.39 Mpixel) image capture ..	Resolves fine detail
Live mode programmable gain (1-16x)	Facilitates live mode previews of low light specimens
18 MHz live mode	High-speed imaging for real time focusing and framing
12 bit x 6 MHz A-D conversion	4096 Brightness levels measured
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)
Mode changing slide	Quantitative and Qualitative modes in a single camera
SPOT™ Software .... Mac® & Windows® operating systems Basic & Advance Applications, Twain & Apple Event, 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

Data Sheet

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Captured Frames per Second*

Binning	REGION OF INTEREST		
	1360 X 1024	512 X 512	256 X 256
1 x 1	3.0	9.4	19.2
2 x 2	6.2	16.8	28.9
3 x 3	9.2	22.2	34.2
4 x 4	11.7	26.1	38.0

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

CCD information:
Sony ICX-285AL with cover glass
Monochrome progressive scan interline CCD
1360 x 1024, 6.45 μm square pixels, 8.77mm x 6.60mm active area, 100x minimum anti-blooming, LCD electronic RGB color changing filter w/IR filter

CCD grade: Grade 0

CCD Cooling:
-48°C differential from ambient via thermoelectric cooler with fan cooled heat sink (-28°C from an ambient of 20°C)

Digitization information:
Digitized pixel-by-pixel at CCD sensor
Live mode: 8 bit x 18 MHz
Live image frame rate: 15 frames per second at full resolution
Capture mode: 12 bit x 6MHz
(see chart for frame rate)
A/D Converter full scale set to 14,800 e (Gain=1)
Saved bit depths: 8, 12 or 16 bit BW

Noise specifications:
Read noise: 6-8 e rms
Dark noise: 0.012 e/p/s

Exposure:
40 microseconds to 71 minutes
Captured and live mode automatic exposure
Captured and live mode manual exposure

Lens mount: Nikon F-mount

Sealing window: UBK7 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: 4.96" (126mm) x 4.94" (125.5mm) x 5.51" (140 mm), 3.5 lbs., 1.6 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 non-condensing
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, customizable floating taskbar, spot metering, annotation, calibration mark, measurement tools, sequential image capture and playback, exportable image archiving database, report generator, macro scripting, interactive print dialog, online help menu

File formats:
BMP, TIFF, TIFF-JPEG, JPEG, JPEG-2000, PICT, AVI

TIFF File sizes:
8 bit BW/1.33MB	24 bit RGB/3.99 3
12 bit BW/2.00 MB	36 bit RGB/6.00
16 bit BW/2.66 MB	48 bit RGB/7.98

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, 2 year warranty

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Windows ® is a registered trademark of Microsoft.

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