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.

### Feature

<table>
<thead>
<tr>
<th>Feature</th>
<th>Benefit</th>
</tr>
</thead>
<tbody>
<tr>
<td>CCD cooled to -28°C from an ambient temperature of 20°C (-48°C differential)</td>
<td>Reduces dark noise for long exposure image capture</td>
</tr>
<tr>
<td>1360 x 1024  (1.39 Mpixel) image capture</td>
<td>Resolves fine detail</td>
</tr>
<tr>
<td>Live mode programmable gain (1-16x)</td>
<td>Facilitates live mode previews of low light specimens</td>
</tr>
<tr>
<td>18 MHz live mode</td>
<td>High-speed imaging for real time focusing and framing</td>
</tr>
<tr>
<td>12 bit x 6 MHz A-D conversion</td>
<td>4096 Brightness levels measured</td>
</tr>
<tr>
<td>New high quantum efficiency CCD</td>
<td>Increases sensitivity for faster image captures</td>
</tr>
<tr>
<td>Interline progressive scan CCD</td>
<td>Electronic shuttering eliminates mechanical shutter shortcomings related to speed, wear, and vibration</td>
</tr>
<tr>
<td>PCI Interface</td>
<td>Stable, high-speed interface for PC and Mac platforms is over 50% faster than Firewire™ (IEEE 1394)</td>
</tr>
<tr>
<td>Mode changing slide</td>
<td>Quantitative and Qualitative modes in a single camera</td>
</tr>
<tr>
<td>SPOT™ Software</td>
<td>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</td>
</tr>
</tbody>
</table>

Mac® & Windows® operating systems
Basic & Advance Applications, Twain & Apple Event, DLL w/ SDK and Tutorial manual, 3rd Party Driver support
CCD information:
Sony ICX-285AL with cover glass
Monochrome progressive scan interline CCD
1360 x 1024, 6.45 µm square pixels, 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 6 MHz
(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 ºC ambient, 0-80% relative humidity non-condensing
Power requirements: 85-264 VAC, 47-63 Hz

Captured Frames per Second*

<table>
<thead>
<tr>
<th>REGION OF INTEREST</th>
<th>1360 X 1024</th>
<th>512 X 512</th>
<th>256 X 256</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 x 1</td>
<td>3.0</td>
<td>9.4</td>
<td>19.2</td>
</tr>
<tr>
<td>2 x 2</td>
<td>6.2</td>
<td>16.8</td>
<td>28.9</td>
</tr>
<tr>
<td>3 x 3</td>
<td>9.2</td>
<td>22.2</td>
<td>34.2</td>
</tr>
<tr>
<td>4 x 4</td>
<td>11.7</td>
<td>26.1</td>
<td>38.0</td>
</tr>
</tbody>
</table>

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
12 bit BW/2.00 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, 2 year warranty

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