

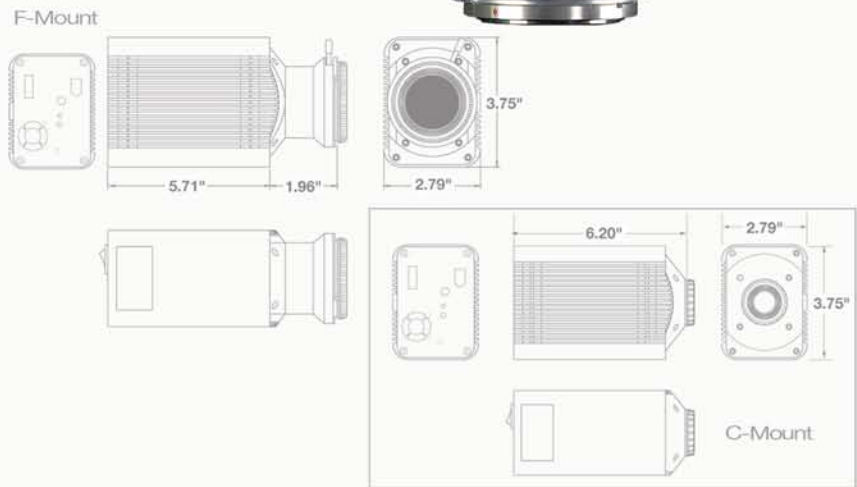
The SPOT™ Insight Color digital camera is a feature-rich imaging system with an amazing price. Its 1" format CCD sensor eliminates the need for expensive de-magnifying optics. High resolution and Correct Color Technology™ create high quality color images quickly. This versatile camera provides market-leading 14-bit digitization and refined electronics for exceptionally low noise, even when light is limited. IEEE 1394 Firewire™ connectivity enables effortless installation on computers and laptop portability.

The SPOT Insight comes with the easy to use SPOT Basic software which is fully compatible with both Windows® and Mac® operating systems and features real time image previewing, acquisition, scale bar addition, report generation, time lapse, and measuring capabilities. The suggested applications for this camera include brightfield imaging, polarized light, time lapse experiments and bright fluorescence imaging. SPOT Insight cameras come with a 2-year warranty and are supported by an experienced team of imaging specialists.



# Insight™

2.0 Mp  
Color



| Features                               | Benefits   |
|--|--|
| 40 MHz live mode (dual channel 20 MHz) | High speed imaging for real time viewing   |
| 1600 x 1200 1.92 Mp image capture      | Resolves fine detail   |
| Programmable gain (1-32x)              | Facilitates live mode previews of low light specimens  |
| 14-bit x 20 MHz capture                | Extra bit depth is ideal for image enhancement   |
| 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 |
| FireWire® interface                    | Allows for effortless installation, hot-swapping, and laptop connectivity for greater ease of use      |

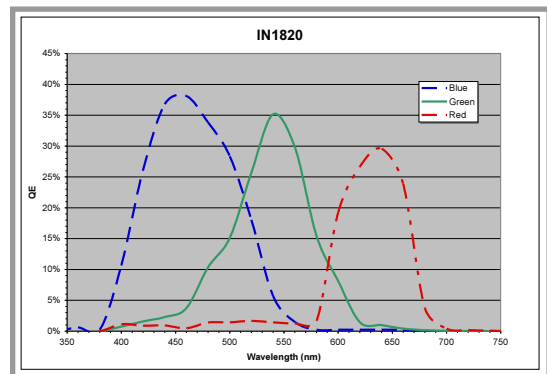


**SPOT™ Imaging Solutions**  
A division of Diagnostic Instruments, Inc.

| Sensor                   |   |
|--------------------------|---|
| Resolution               | 1.92 Mp   |
| Sensor Type              | Kodak KAI-2020-CM with cover glass. Color mosaic progressive Scan Interline CCD |
| Active Pixels            | 1600 x 1200   |
| Pixel Size               | 7.4µm x 7.4µm   |
| Active Imager Size       | 11.8 mm x 8.9 mm<br>14.8 mm diagonal  |
| Optical Format           | 1"  |
| Exposure Time            | 0.5 ms to 536 seconds   |
| Binning                  | 1x1, 2x2 (monochrome),<br>4x4 (monochrome)                                      |
| Region of Interest       | User selectable from 50x50 to full - resolution                                 |
| Read Noise               | 17 e <sup>-</sup> rms   |
| Full Well Depth          | 33,333 e <sup>-</sup>   |
| Non-Linearity            | <1%   |
| Bit Depth                | 14-bit  |
| Sensor Readout Frequency | 20 MHz  |

| Camera                |   |
|-----------------------|---|
| Lens Mount            | C-mount or F-mount  |
| Computer Interface    | FireWire® IEEE 1394a interface  |
| Trigger Connectors    | External trigger input (TTL)<br>Exposure sync output (TTL)  |
| Tripod Mount          | 1/4"-20   |
| Weight                | F-Mount 1.6lbs. (0.72kg)<br>C-Mount 1.4lbs. (0.62kg)  |
| Size                  | (F-Mount)<br>2.79" x 3.75" x 7.67"<br>(71mm x 95mm x 195mm)<br><br>(C-Mount)<br>2.79" x 3.75" x 6.2"<br>(71mm x 95mm x 142mm) |
| Power Requirements    | 100-240 VAC, 47-63Hz  |
| Operating Environment | 0 to 30°C ambient, 0 to 80% relative humidity (non-condensing)  |
| Certifications        | CE, FCC Class A, EN60950, RoHS  |

### Quantum Efficiency



### Captured Frame Rates Captured Frames per Second \*

| Binning level | Region of interest |             |           |           |
|---------------|--------------------|-------------|-----------|-----------|
|               | 1600 x 1200        | 1024 x 1024 | 512 x 512 | 256 x 256 |
| 1 x 1         | 7.6                | 8.9         | 16.1      | 26.9      |
| 2 x 2         | 13.9               | 15.8        | 26.3      | 39.1      |
| Monochrome    |                    |             |           |           |
| 4 x 4         | 22.2               | 24.6        | 36.2      | 46.6      |
| Monochrome    |                    |             |           |           |

\*1ms exposure with post-processing deferred, taken with 2.6 Ghz Xeon processor running Windows XP. Capture rates on other computers OS platforms may vary.

| SPOT Software                             |  |
|---|--|
| SPOT Basic Software Features              | <ul style="list-style-type: none"> <li>Live mode viewing window with controls</li> <li>Image capture window</li> <li>Image capture setups are user defined, named and saved</li> <li>Auto or manual exposure for Live and captured images</li> <li>Zoom control on Live and captured images</li> <li>Auto white balance</li> <li>Spot or average metering</li> <li>Correct Color Technology™ using ICC/ColorSync corrections</li> <li>Flatfield correction</li> <li>Annotation</li> <li>Calibration mark</li> <li>Measurement tools</li> <li>Image enhancement tools</li> <li>Sequential image capture and playback</li> <li>Report generator</li> <li>Interactive print dialog</li> <li>Help menu</li> <li>Drivers: Twain for Windows®, 3rd Party Interface for Mac®</li> </ul> |
| Computer Operating System Compatibility   | Mac®: OS X<br>Windows®: XP, Vista®, 7 (32 bit versions only)   |
| Minimum Computer Requirements             | Mac®: 400MHz Power PC, 512MB RAM, FireWire® IEEE 1394a port<br>PC: 1GHz Pentium, 512MB RAM, FireWire® IEEE 1394a port<br>Mac® and PC video: 24-bit color @ 1024 x 768 resolution   |
| SPOT Advanced Software                    | Available (includes macro feature, floating taskbars and image archiving database)   |
| SPOT Advanced Software Modules (Optional) | Available (adds image display intensity scaling, peripheral device control and extended depth of focus)  |
| Software Development Kit                  | Available for Mac® and Windows®  |
| Native Drivers for 3rd Party Software     | Available (call or visit our website)  |

| Items Included                 |  |
|--------------------------------|--|
| Camera Head                    | With lens cap  |
| FireWire® Cable                | Data cable (6-pin)   |
| Power Supply                   | With power cord, 1.3" (33mm) x 1.97" (50mm) x 3.35" (85mm), 0.34 lbs. (0.16kg) |
| Quick Start Installation Guide | Instructions on how to get up and running quickly                              |
| Software CD                    | Includes SPOT Basic software (for both Mac and Windows) and User Guide         |
| Warranty                       | 2 years from date of purchase  |

| Catalog Number           | C-Mount | F-Mount |
|--------------------------|---------|---------|
| Insight 2.0 Color Mosaic | IN1820  | IN1821  |

Mac® is a registered trademark of Apple Inc.  
Windows® is a registered trademark of Microsoft.  
Specifications are typical and subject to change.



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Data Sheet: Insight 2.0 Color Rev. B