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.
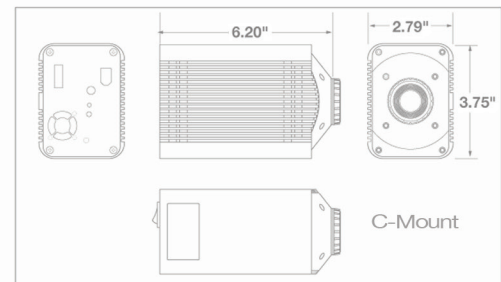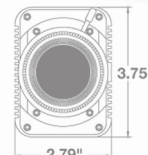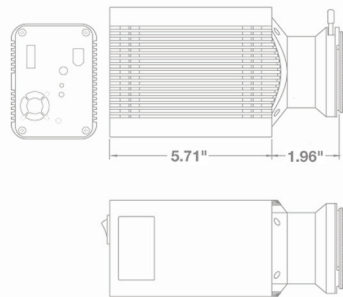
Insight™   2.0 Mp Color

F-Mount

5.71"   1.96"   2.79"   3.75"

6.20"   2.79"   3.75"

C-Mount

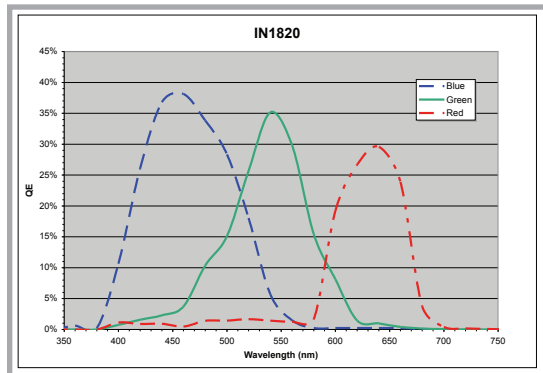| Features	Benefits
40 MHz live mode (dual channel 20 MHz)	High speed imaging for real time viewing
1600 x 1200 1.92 Mp image capture	Resolves fine detail
Programmable gain (1-32x)	Facilitates live mode previews of low light specimens
14-bit x 20 MHz capture	Extra bit depth is ideal for image enhancement
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
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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
Optical Format	1"
Active Imager Size	11.8 mm x 8.9 mm 14.8 mm diagonal
Exposure Time	0.5 ms to 536 seconds
Binning	1x1, 2x2 (monochome), 4x4 (monochrome)
Region of Interest	User selectable from 50x50 to full resolution
Read Noise	17 e⁻ rms
Full Well Depth	33,333 e⁻
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) Exposure sync output (TTL)
Tripod Mount	1/4"-20 UNC
Weight	F-Mount 1.6 lbs. (0.72kg) C-Mount 1.4 lbs. (0.62kg)
Size	(F-Mount) 2.79" x 3.75" x 7.67" (71mm x 95mm x 195mm) (C-Mount) 2.79" x 3.75" x 6.2" (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 Monochrome	13.9	15.8	26.3	39.1
4 x 4 Monochrome	22.2	24.6	36.2	46.6

*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	Live mode viewing window with controls
	Image capture window
	Image capture setups are user defined, named and saved
	Auto or manual exposure for Live and captured images
	Zoom control on Live and captured images
	Auto white balance
	Spot or average metering
	Correct Color Technology™ using ICC/ColorSync corrections
	Flatfield correction
	Annotation
	Calibration mark
	Measurement tools
	Image enhancement tools
	Sequential image capture and playback
	Report generator
	Interactive print dialog
	Help menu
	3rd Party Software Interface: Twain for Windows®, SPOT Image Capture Application & AppleEvent for Mac®
Computer Operating System Compatibility	Windows®: XP SP3 (32-bit), Vista (32 or 64-bit), 7 (32 or 64-bit) and 8 (32 or 64-bit)
	Mac®: OS 10.6 - 10.8
Minimum Computer Requirements	PC: 1GHz Pentium 4 (or equivalent x86 SSE2 processor), 1 GB RAM, IEEE 1394a port
	Mac®: Intel processor, 1 GB RAM, IEEE 1394a port
	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 and User Guide
Warranty	2 years from date of purchase

Catalog Number

	C-Mount	F-Mount
Insight 2.0 Color Mosaic	IN1820	IN1821

Specifications are typical and subject to change.

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