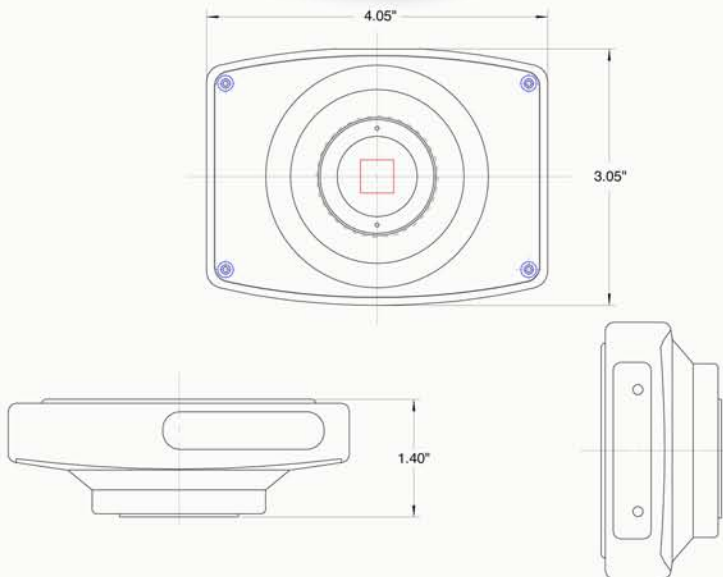# idea™ CMOS | 3.0 MP

The SPOT™ Idea™ 3.0 Megapixel camera is designed to deliver high impact digital images for the serious scientist/micro-scopist in a value-laden package. The SPOT Idea produces megapixel resolution in vivid colors, enhancing publications, documentation, and archiving. The SPOT Idea is an excellent choice for pathology, as well as clinical, life and material science, measurement, educational, and industrial applications.

Every SPOT Idea camera is packaged with easy-to-use, yet powerful SPOT software. Together with full compatibility in both Mac® and PC (includ-ing Vista®) environments, the SPOT Idea is a most versatile and efficient image capture system. With a multitude of embedded software functions and a clear software upgrade path, this is a digital imaging system for today and tomorrow.

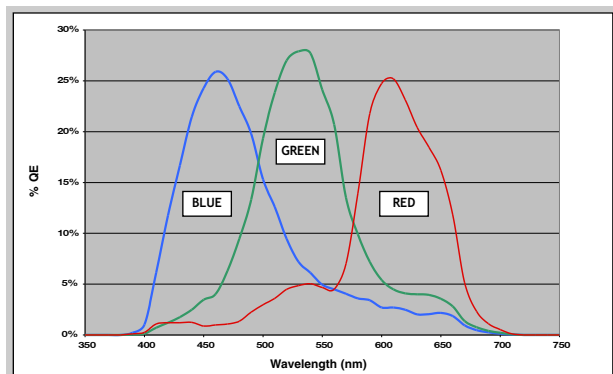| Features	Benefits
3MP Images	Resolves fine image detail
Real time Live mode	Frame and focus in real time 76 fps, zoomed in to 640 x 480 ROI at full resolution 31 fps, full frame at 1/2 resolution 12 fps, full frame at full resolution
Auto and Manual exposure control	Let the software compute the exposure time and gain or set them yourself
USB 2.0	Single cable connection provides effortless installation, reduces cable clutter and enhances laptop portability (no power supply or frame grabber card needed)
Spot Basic Imaging Software	Provides essential tools for modern microscopy
Mac® and PC	Compatible with both Mac® and Windows® computers

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Sensor

Resolution	3MP
Sensor Type	CMOS, color mosaic, Bayer pattern
Shutter	Rolling shutter with single frame capture
Active Pixels	2048 x 1536
Pixel Size	3.2µm x 3.2µm
Optical Format	1/2" (4:3)
Active Imager Size	6.55mmH x 4.92mmV 8.19mm diagonal
Exposure Time	107µs – 15sec
Variable Resolution	User selectable
Region of Interest	User selectable
Read Noise	18.5e RMS
Full Well Depth	>20,000e
Non-linearity	<1%
Bit Depth	8 or 10 bits/channel (24 or 30 bit color)
Sensor Readout Frequency	48MHz (into camera frame buffer)
Analog Gain	1, 2, 4 and 8

Camera

Lens Mount	C-mount
Computer Interface	USB 2.0
Trigger Connectors	External trigger input Sync output
Tripod Mount	1/4"-20, stainless steel threads
Weight	1.31 lbs (295g)
Size	4.05" W x 3.05"D x 1.40"H (103mm x 77mm x 36mm)
Power Consumption	2W from USB cable
Operating Environment	0 to 50°C, 95% relative humidity (non-condensing)
Storage Temperature	-20 to 60°C
Certifications	CE, FCC Class A, EN60950

Quantum Efficiency

Frame Rates

Region of Interest	2048x1536	1024x768	640x480	256x256	50x50
Live Mode (frames per second)					
Full Res	12	38	76	180	489
1/2 Res	31	80	122	196	432
1/3 Res	44	81	119	184	385
Sequential Image Capture (frames per second)					
Full Res	7	26	65	181	505
1/2 Res	26	80	123	196	434
1/3 Res	44	81	119	184	387

Frame rates measured with 107µs exposure time on 2GHz Intel Dual Core Xenon processor running Windows XP. Post-processing was deferred on sequential images. Frame rates may vary on other processors and operating systems.

Spot Software

Spot Basic Software Features	Color 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
	Drivers: Twain for Windows®, 3rd Party Interface for Mac®
Computer Operating System Compatibility	Mac®: OS X v10.3.9 - v10.5 Windows®: 2000, XP, Vista®
Minimum Computer Requirements	Mac®: 400MHz Power PC, 512MB RAM, USB 2.0 port
	PC: 1GHz Pentium, 512MB RAM, USB 2.0 port
	Mac® and PC video: 24-bit color @ 1024 x 768 resolution
Spot Advanced Software	Available (includes macro feature, floating taskbars and image archiving data base)
Spot Advanced Plus Software	Available (adds image display intensity scaling, peripheral device control and extended depth of focus)
Software Development Kit	Available for Mac®, Windows® and Linux
Native Drivers for 3rd Party Software	Available (call or visit our website)

Items Included

Camera Head	With lens cap
USB2 Cable	Carries both data and power
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

Ordering Information

Catalog Number	ID2720

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Windows® is a registered trademark of Microsoft.

Specifications are typical and subject to change.

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