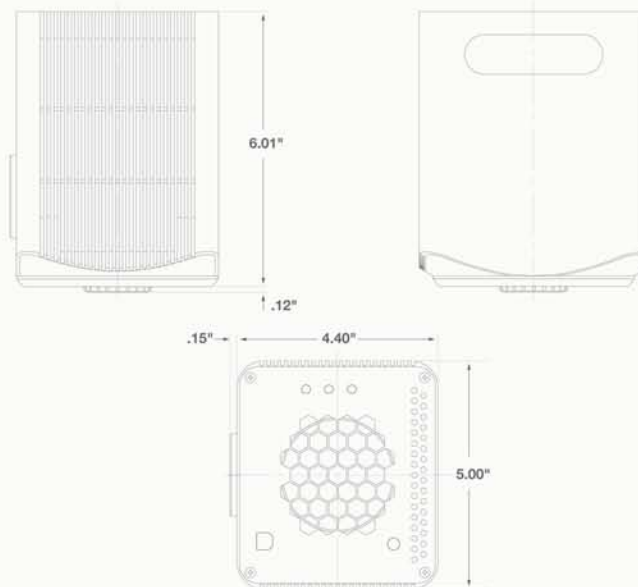


The SPOT™ Pursuit Monochrome digital camera delivers very low thermal noise and deep well capacity, optimizing sensitivity for demanding scientific applications. Its 21.4 mm interline CCD sensor generates an exceptionally large field of view without the need for expensive de-magnifying couplers. 14-bit digitization with multiple readout speeds and regulated Peltier cooling provide linear digital data for quantification. The primary applications for this camera include wide-field fluorescence microscopy, FISH, fixed cell GFP imaging, immunofluorescence and 3D deconvolution.

The SPOT Pursuit includes SPOT Basic software (Windows® and Mac® OS) for real-time image preview and acquisition. Drivers are available for many third party imaging software applications, and a Software Development Kit (SDK) is available at no charge for integrating with custom applications. Advanced triggering enables precise synchronization with peripherals.



# Pursuit™ 4.0 Mp MONOCHROME

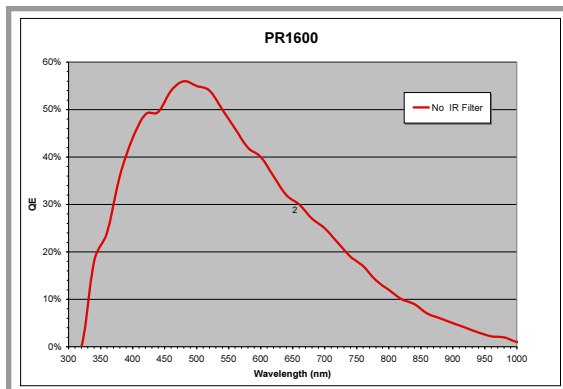


Features	Benefits
-10°C Regulated Cooling	Reduces dark noise and increases repeatability for long exposure image captures
4 Mp CCD with 21.4 mm diagonal	Provides field of view that closely matches that in the microscope eyepieces without requiring expensive optical couplers
9 e <sup>-</sup> Read Noise	Excellent lowlight detection limit and SNR
Adjustable gain and binning levels	Facilitates live mode previews of low light specimens
14-bit Image Capture	Extra bit depth is ideal for image enhancement
40 MHz Live Mode (dual channel 20 MHz)	High-speed imaging for real time viewing
Exposure while downloading	Allows user to overlap exposure with previous image down load to improve speed



Specifications	
Resolution	4.0 Mp
Sensor Type	Kodak KAI-4022-M with cover glass Monochrome Progressive scan interline CCD Shutter
Active Pixels	2048 x 2048
Pixel Size	7.4 $\mu\text{m}$ x 7.4 $\mu\text{m}$
Optical Format	4/3"
Active Imager Size	15.16 mm x 15.16 mm (21.4 mm diagonal)
Exposure Time	-1 ms to >96 hrs
Anti-Blooming	300x minimum
Binning	2 x 2, 3 x 3, 4 x 4, 8 x 8
Region of Interest	User selectable, 50 x 50 to full resolution
Read Noise	9 e <sup>-</sup> @ 10 MHz; 12 e <sup>-</sup> @ 20 MHz
Dark current	0.0022 e/p/s
Full Well Depth	>30,000 e <sup>-</sup> (no binning) >60,000 e <sup>-</sup> (with binning)
Non-linearity	<1%
A-D Converter	14-Bit @ 10/20 MHz DCS
Saving Bit Depth	8, 12 or 16 bits/channel (Monochrome)
Cooling	Peltier thermoelectric cooling, -10° C regulated, -37° C maximum differential cooling from ambient
Lens Mount	C-Mount
Computer Interface	PCI Express
Triggers	Camera ready (TTL) External trigger input (TTL) Exposure sync output (TTL)
Tripod Mount	1/4"-20 UNC
Weight	4.4 lbs (2.0 kg)
Size	5.00" W x 4.40"D x 6.01"H (127 mm x 112 mm x 153 mm)
Power Requirements	100-240 VAC 3A
Operating Environment	0 to 30°C ambient, 0- 80% relative humidity (non-condensing)
Storage Temperature	-20 to 60°C
Certifications	CE, FCC Class A, EN60950, RoHS

### Quantum Efficiency



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

Binning level	Region of interest			
	2048x2048	1024x1024	512x512	256x256
1 x 1	3.8	6.4	9.7	13.2
2 x 2	6.3	9.7	13.2	16.1
3 x 3	8.2	11.7	16.5	17.3
4 x 4	9.6	13.1	16.0	19.9
8 x 8	12.9	15.9	17.9	19.1

\*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>Color 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>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 Windows®: XP, Vista®, 7 (32 bit versions only)
Minimum Computer	Mac®: 400MHz Power PC, 512MB RAM, FireWire® IEEE 1394a port PC: 1GHz Pentium, 512MB RAM, FireWire® 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
PCI Express card	Data cable
Power Supply and Power Cable	With power cord, 3.61" (92mm) x 3.90" (99mm) x 8.13" (207mm), 3.2 lbs. (1.5kg)
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
Pursuit 4.0 Mp Mono	PR1600	NA

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Data Sheet: Pursuit 4.0Mp Mono Rev. B