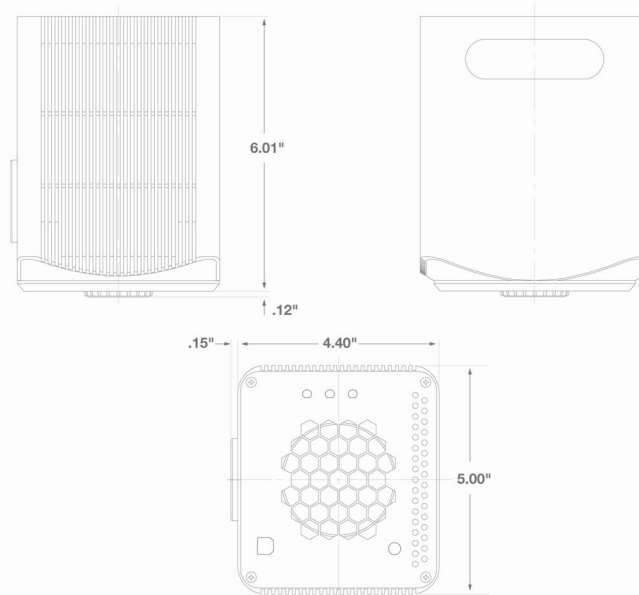




Xplorer™ 1.4 Mp MONOCHROME

The SPOT™ Xplorer Monochrome digital camera offers deep cooling and high speed, optimizing sensitivity for low light scientific applications. 14-bit digitization with multiple readout speeds add flexibility for recording dynamic events. Its CCD sensor provides megapixel resolution and high quantum efficiency, especially in the near-IR portion of the spectrum. The primary applications for this camera include live cell GFP imaging, ion tracking, high content screening, immunofluorescence and 3D deconvolution.

The SPOT Xplorer includes SPOT Basic software (Windows® and Mac® OS) for real-time image preview and acquisition, and drivers are available for many third-party imaging software applications. Advanced triggering enables precise synchronization with peripherals. The SPOT Xplorer camera's robust design and well-documented, free Software Development Kit (SDK) provide easy OEM integration.



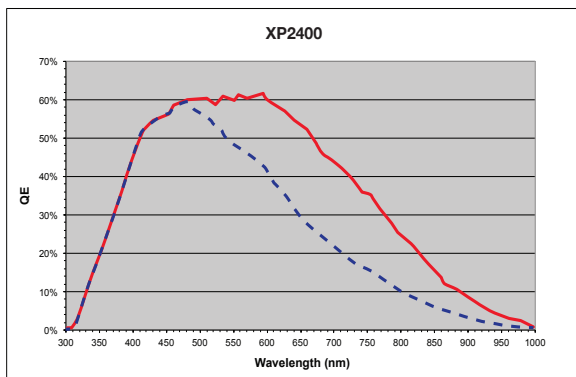
| Features | Benefits |
|----------------------------------|--|
| Nearly 11 full frames per second | High speed image capture |
| -40° C regulated cooling | Dark noise reduction and repeatable dark frame correction for long exposures |
| Enhanced IR Mode | Increases the Sensitivity for wavelengths > 525 nm (see QE chart) |
| No Glow Mode | Turns off all sources of On-CCD circuit glow during exposure. Important for long exposures. |
| 4.5 e ⁻ Read Noise | Great low light detection limit and SNR |
| 14-bit digitization | Over-sampled bit depth ensures best data quality |
| Interline progressive scan CCD | Electronic shuttering eliminates mechanical shutter shortcomings related to speed, wear, and vibration |



Specifications

| | |
|-----------------------|---|
| Resolution | 1.4 Mp |
| Sensor Type | Sony ICX285AL with cover glass Monochrome Progressive scan interline CCD Shutter |
| Active Pixels | 1360 x 1024 |
| Pixel Size | 6.45 µm x 6.45 µm |
| Optical Format | 2/3" |
| Active Imager Size | 8.77mm (H) x 6.60mm (V) |
| Exposure Time | 0.5ms – 1500sec |
| Anti-Blooming | 100x minimum |
| Binning | 2 x 2, 3 x 3, 4 x 4, 8 x 8 |
| Region of Interest | User selectable |
| Read Noise | 4.5 e ⁻ @ 10 MHz; 5.5 e ⁻ @ 20 MHz |
| Dark current | 0.0013 e/p/s |
| Full Well Depth | >16,000 e ⁻ (no binning) >24,600 e ⁻ (with binning) |
| Non-linearity | <1% |
| A-D Converter | 14-Bit @ 20 MHz DCS |
| Saving Bit Depth | 8, 12 or 16 bits/channel (Monochrome) |
| Cooling | -40° C regulated cooling via thermoelectric cooler with her- metically sealed, fan cooled heat sink, -70° C maximum differen- tial cooling from ambient |
| Lens Mount | C-Mount with adjustable back focus |
| Computer Interface | PCI Express |
| Triggers | Camera ready output (TTL) External trigger input (TTL) Exposure sync output (TTL) |
| Tripod Mount | 1/4"-20 UNC |
| Weight | 4.5 lbs (1.09 kg) |
| Size | 5.00" W x 4.40" D x 7.13" H (127mm x 112mm x 181mm) |
| Power Requirements | 100-240 VAC 1A |
| Operating Environment | 0 to 30°C ambient, 0- 80% relative humidity (non-condens- ing) |
| 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 | | | | |
|---------------|--------------------|---------|---------|---------|-------|
| | 1360x1024 | 640x480 | 512x512 | 256x256 | 50x50 |
| None | 10.8 | 21.1 | 20.1 | 35.0 | 92.4 |
| 2 x 2 | 19.7 | 37.1 | 34.8 | 58.2 | 114.0 |
| 3 x 3 | 27.4 | 48.4 | 46.3 | 74.4 | 124.6 |
| 4 x 4 | 33.8 | 59.2 | 57.4 | 84.6 | 130.0 |
| 8 x 8 | 55.3 | 83.6 | 83.2 | 108.7 | 138.8 |

*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 Auto white balance Spot or average metering 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: Standard Twain for Windows®, SPOT Image Capture Application & Apple Event 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, FireWire® IEEE 1394a port Mac®: Intel processor, 1 GB 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, custom dialogs and image archiving database) |
| SPOT Advanced Software Modules (Optional) | Available (adds image display intensity scaling, peripheral device control, extended depth of focus and extended third party interface) |
| 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 | Computer interface |
| Power Supply with 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 |
|----------------------------|---------|---------|
| Xplorer 1.4 Mp Mono w/o IR | XP2400 | N/A |



Specifications are typical and subject to change.

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

6540 Burroughs Avenue • Sterling Heights • MI • 48314-2133
phone: 586.731.6000 • fax: 586.731.6469 • website: www.spotimaging.com
Data Sheet: Xplorer 1.4 Mp Mono