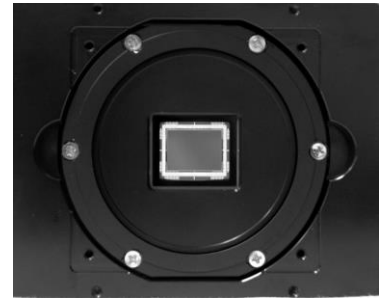


XR-81 TEM Cooled Camera Series

Large 8 Megapixel Scientific CCD Sensor
20/40 MHz High Speed Readout, Low Noise Readout
Peltier Cooled
GigE Interface
High Performance Lenses



Standard XR81 Camera Configurations

XR-81S-B

Classic Wide Angle Side-Mount

- 1) >100% photographic or greater field-of-view imaging with up to a 26x36 mm phosphor (TEM dependent)
- 2) 11 μ m square pixels at phosphor.
- 3) Uses AMT's high performance B-lens.
- 4) Film compatible.

XR-81M-B

Wide-Angle Multi-Discipline Mid-Mount

- 1) 50% photographic or greater field-of-view imaging with up to a 26x36 mm phosphor.
- 2) 11 μ m square pixels at phosphor.
- 3) Uses AMT's high performance B-lens.

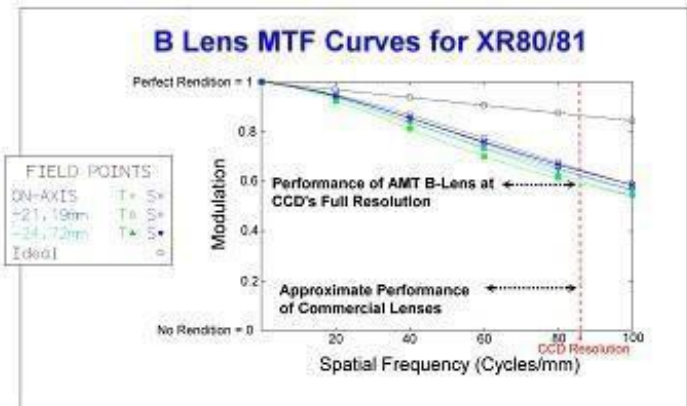
XR-81L-B

High Mag Low-Mount

- 1) ~40% photographic field-of-view imaging with 26x36 mm phosphor.
- 2) 11 μ m square pixels at phosphor.
- 3) Uses AMT's high performance B-lens.
- 4) Film compatible.

XR-81 Camera Properties

AMT's B Lens: Combines extraordinary speed with high resolution. This lens maintains a >50% MTF @100 line-pairs/mm across the entire image to provide unmatched sharpness at its large aperture. With an NA of 0.23 @image B lens systems have extremely high sensitivity. The B lens has <1% distortion across the field.



Advanced Microscopy Techniques 242 West Cummings Park, Woburn, MA 01801

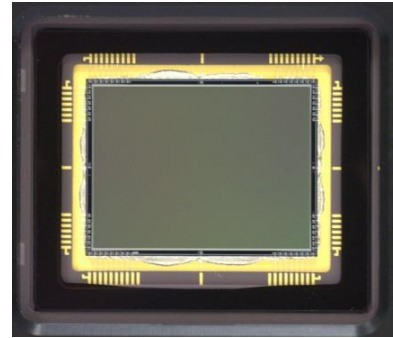
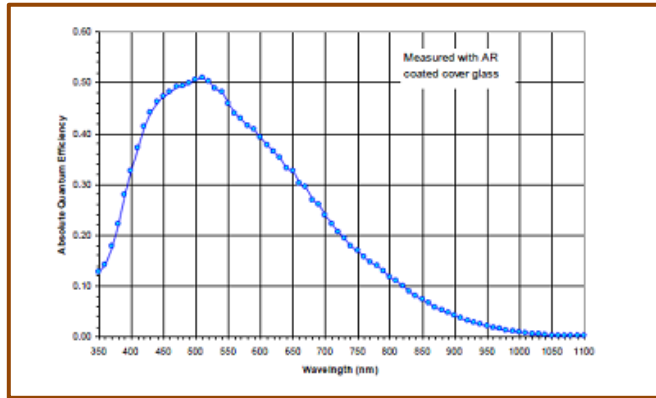
Tel: (978) 774-5550 Fax: (978) 739-4313

Email: info@amtimaging.com URL: <http://www.amtimaging.com>



Selection/Satisfaction/Service = The AMT Advantage

Sensor: Truesense Imaging KAI 08050 scientific grade, CCD sensor with 3296 x 2472 x 5.5 mm pixels with 13x18 mm active area. The absolute quantum efficiency is approximately 45% at the output wavelength of the scintillator.



Cooling: The sensor is Peltier cooled to 10° C for minimum dark noise at long exposures. No water connections are needed for this cooler and all cooled components are outside the TEM's vacuum.

Shutter: Electronic Shutter with no beam blanking or mechanical shutter required with exposures adjustable from 1 ms to 10 min. with multi-frame integrations.

Digital Interface and Electronics: High speed GigE digital camera interface for both data transfer and control. All electrical components are outside the TEM vacuum for reliability and maintenance.

Readout Rate: 40MHz and 20MHz readout selection with single and dual port options. Raw data acquired at 12 bits resolution with recording to 16 bits with multi-frame summations of ADC output.

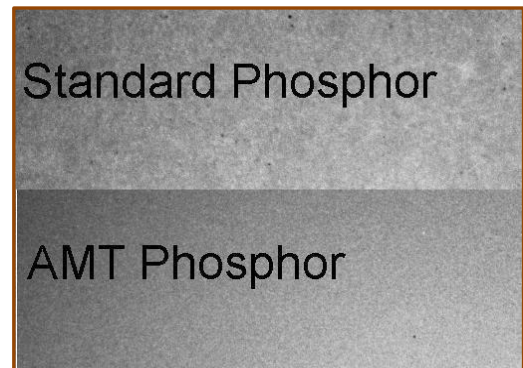
Maximum viewing speeds:

Full field/1x1 binning: 6.5 fps

Full field/2x2 binning: 15 fps

Full field/4x4 binning: 21 fps

Scintillator: AMT's advanced phosphor and substrate technologies produce brighter images with less structured noise than competing phosphors, while resisting beam damage. Phosphors are matched to the beam energy range. Note that AMT phosphors have reduced structured noise, which improves both aesthetics and quantitative data quality.



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