

Excel M Cooled Camera

High Resolution Cooled Digital Camera

The Excel M cooled CCD digital camera has been specifically engineered to meet the critical demands of high resolution, low light level scientific and industrial applications. Assembled in an ISO rated clean room, the hermetically vacuum sealed cooling system maintains stringent temperature stability to ensure a high dynamic range, low noise image. The thoughtful design enables optical interface to the industry standard C-mount and single-cable connection to a PC for ease of use. The intuitive software control ensures successful camera operation for the novice and sophisticated operator. Dage-MTI advanced camera technologies are engineered to the highest standards, yet refreshingly easy to use.



Model XLMT shown above. Standard XLMT shipment includes IEEE 1394 FireWire cable, IEEE 1394 PCI card, cooler power supply, focus wrench, Exponent software and access to SDK. Lens not included.

FEATURES AND BENEFITS

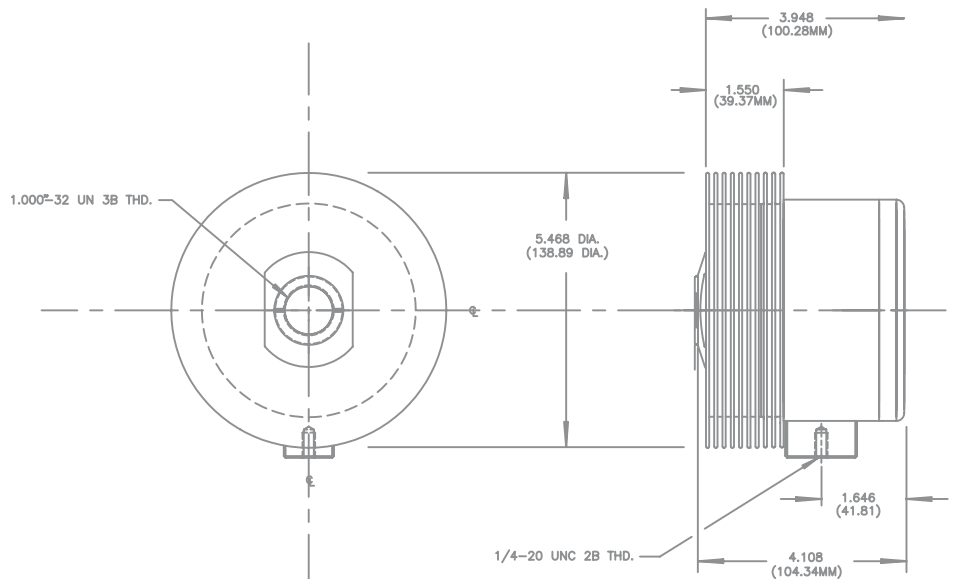
High Resolution Sensor	Utilizes Kodak 4 million pixel sensor (color or monochrome) Exceptionally sharp, detailed images
High Performance	Full 2048 x 2048 @ 7.2 fps
Large Pixels (7.4um x 7.4um)	High sensitivity (Visible-NIR) Large well capacity
Cooling (Hermetically Vacuumed Sealed)	-30°C with two-stage Peltier cooler Maintains stringent temperature stability for low noise images
ROI (Region of Interest)	Provides full screen display of selected area of interest for detailed observation. Continuously variable to full resolution. Increases frame rate for focusing and dynamic images
Binning	Color and monochrome binning Increases sensitivity and frame rate
Multiple Display Algorithms	User selectable for speed or quality enhancement
User-Defined Memory Presets	Allows up to 15 different camera settings Ensures retention and repeatability

(continued)

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External Sync & Trigger	Allows synchronizing capture to external events such as strobes, shutters, or other equipment
General Purpose Input	Provides access to a footswitch control for hands-free image capture.
Versatile Exposure Control	Automatically adjusts gain and/or shutter to achieve correctly exposed image, even under difficult lighting conditions
IIDC Compliant	Adheres to standards set forth by IEEE 1394 Trade Association Provides defined guidelines to ensure easy integration and consistency for software interface.
IEEE 1394 FireWire	Single-cable connection to PC Simple installation and ease of use Cable and PCI card included Compatible with laptop computer
Firmware Update via Software	Provides seamless firmware upgrade through software Eliminates camera down time
Exponent Software	Full featured camera control software
Software Support	ImageJ, Metamorph, Twain, 3rd party specific, SDK

The hermetically vacuum sealed cooling system keeps the Excel M at -30° C.



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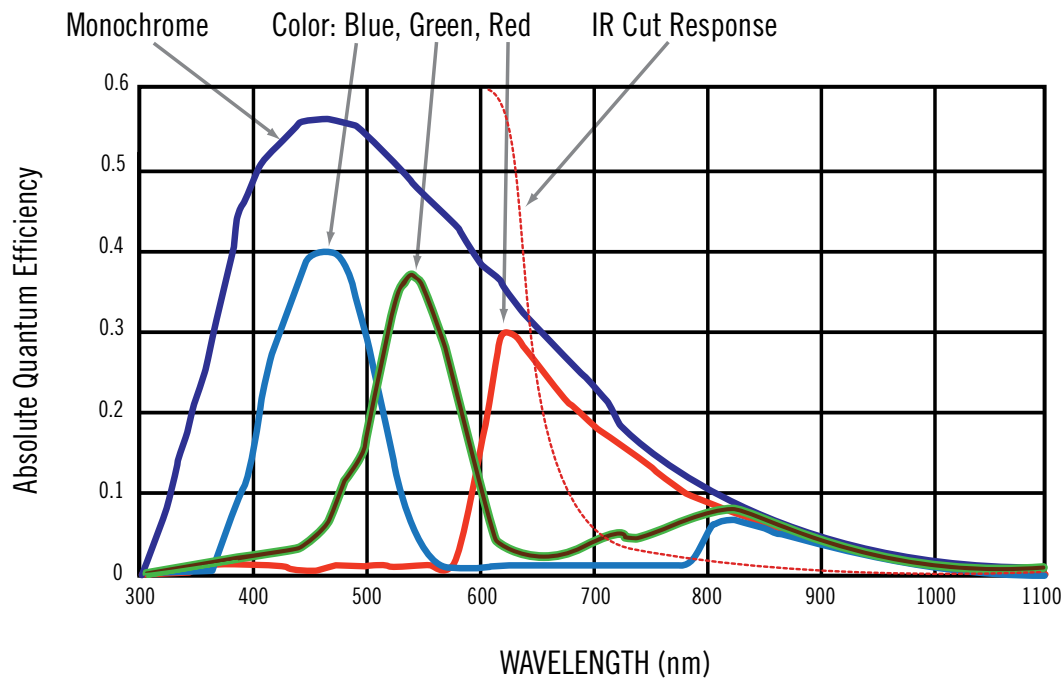
SPECIFICATIONS

CCD Pixels	4 million; 2048 x 2048
Sensor	Kodak, KAI-4022 progressive-scan interline CCD (color or monochrome)
Pixel Size	7.4um x 7.4um
Cooling	Two-stage Peltier cooling, hermetically vacuum sealed in ISO 14644-1(6) clean room
Cooling Temperature	-30° C
Digital Output	12 bits
Frame Rate	7.2 fps full resolution
Digital Interface	IEEE 1394 FireWire, 6 pin; IIDC standard Version 1.31
Camera Firmware	Update via software
ROI Scan	User selectable and continuously variable to full resolution
Binning	Mono: 2x2, 4x4; Color: 3x3, 5x5
White Balance	Auto, Manual, Auto Tracking
Gain	Mono: 0 to +25db; Color: 0 to +21.5db
Viewing Modes	1:1, Fit to Window, Full Screen
Memory Presets	15 User Defined Presets plus factory default
Video Interpolation	Bilinear, Bicubic, Nearest Neighbor, High Quality Bilinear & Bicubic
Exposure/Integration	Factory preset to 10 minutes (extended optional) Auto Exposure, Auto Gain, Auto Shutter
Trigger Types	Internal, External, Software
External Trigger	Mode 0: Asynchronous Reset (IIDC v1.31) Mode 1: Bulb Shutter Mode (IIDC V1.31)
External GPIO	One Input, One Output. Software accessible. Control Power: +3.3VDC limited to 100mA
Additional Features	Timestamp, Histogram, Camera Name
Lens Mount	C-mount with adjustable back focus. F-mount adapter optional.
Thread Mount	¼" – 20 mount
Cooler Power	12V@1.5A cooled
Operating System	Windows®XP, SP2, Linux®
Standards	FCC, part 15 class B, CE, RoHS
Software	Exponent capture software, Twain, 3rd party specific, SDK

**specifications subject to change.*

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SPECTRAL RESPONSE



Note: Monochrome cameras have an "Anti-Reflective" coated clear window fitted in the C-mount focus ring to protect the sensor. This is not an IR cut filter. Color cameras have an "IR Cut" color balancing filter fitted in the C-mount focus ring.



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