High Performance Cooled CCD Camera System
ALTA E9

The Alta E9 uses a large format 6-megapixel Kodak Blue Plus sensor, ideal for applications requiring a large field of view with a smaller pixel.

Imaging Area of CCD

- 3072 x 2048 array, 9 x 9 micron pixels
- 1 MHz 16-bit digitization to camera head memory
- 24Mbyte available camera memory
- 200 kpixel/sec transfer to host computer via TCP/IP
- Ethernet 100baseT interface: no plug in cards or external controllers
- Programmable, intelligent cooling to 50°C below ambient
- Binning up to 8 Horizontal x 2048 Vertical
- Subarray readout and fast sequencing modes
- Precision time delayed integration (TDI) and kinetics mode readout
- Programmable fan speed for low / zero vibration
- Two serial port outputs for control of peripheral devices
- General purpose programmable I/O port
- External triggering and strobe controls
- ActiveX drivers included with every system
- Field upgradeable firmware
- Fused silica windows
- Runs from single 12V supply with input voltage monitor
- Compact enclosure
- Programmable status indicators

- Sky surveys
- Bioarray readers

CCD SPECIFICATIONS

CCD	Kodak KAF-6303E
Array Size (pixels)	3072 x 2048
Pixel Size	9 x 9 microns
Imaging Area	27.6 x 18.4 mm (510 mm2)
Imaging Diagonal	33.2 mm
Video Imager Size	2.1”
Linear Full Well (typical)	100K electrons
Dynamic Range	76 dB
QE at 400 nm	30%
Peak QE (580, 660 nm)	67%
Anti-blooming	none

For complete CCD specifications, including cosmetic grading, see data sheet from manufacturer.

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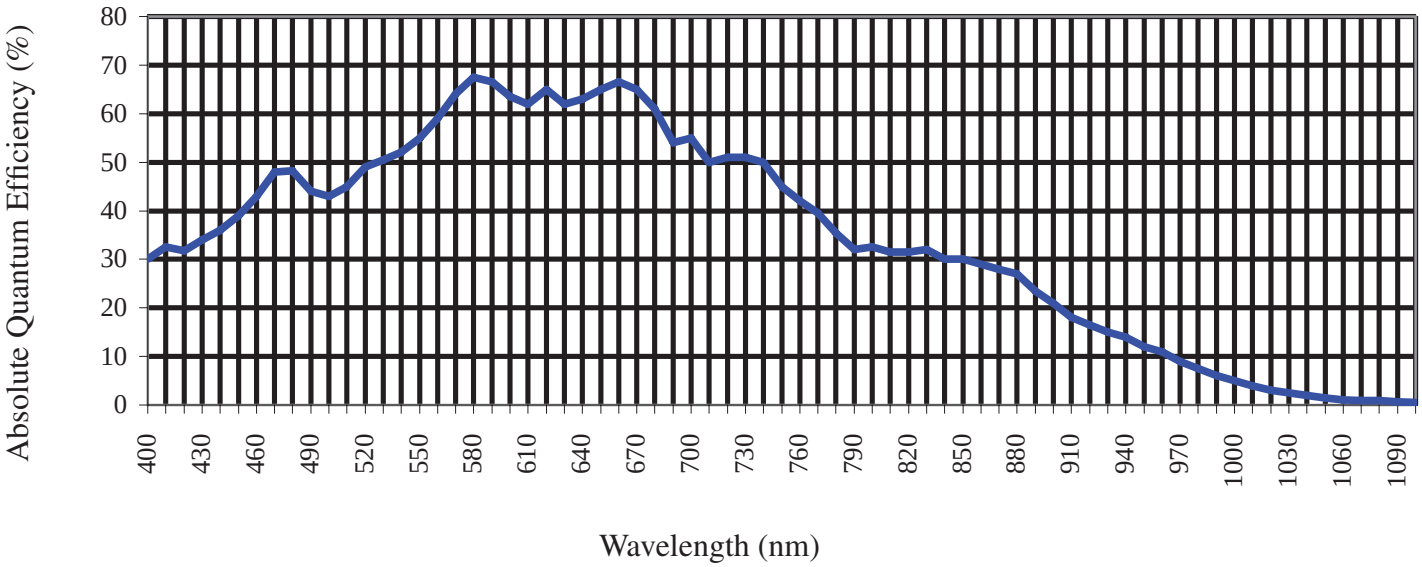
PC Interface	Ethernet 100baseT
Max. Cable Length	100 meters
Digital Resolution	16 bits at 1 MHz (to camera head memory)
System Noise (typical)	15 e^- RMS at 1 MHz
Pixel Binning	1x1 to 8 x 2048 on-chip
Exposure Time	30 milliseconds to 183 minutes (2.56 microsecond increments)
Image Sequencing	1 to 65535 image sequences under software control
Frame Sizes	Full frame, subframe, focus mode
Cooling (typical)	Thermoelectric cooler with forced air. Maximum cooling 50°C below ambient temperature
Dark Current (typical)	0.1 e^-/pixel/sec (-25°C)
Temperature Stability	± 0.1°C
Camera Head Size	D2. Low profile: D6. Aluminum, hard blue anodized. 6" x 6" x 2.5" (15 x 15 x 6.35 cm) Weight: 3.1 lb. (1.4 kg)
Mounting	3.5" bolt circle. 2" 24 tpi thread. Optional Nikon F-mount or Canon FD mount.
Back Focal Distance	Standard: 1.021" (25.93 mm). Low profile: 0.456" (11.58 mm). [optical]
Operating Environment	-22° to 27°C. Relative humidity: 10 to 90% non-condensing.
Cable Length	Standard: 15 ft (4.5m)
Power	40W maximum power with shutter open and cooling maximum. AC/DC "brick" supply with int'l AC input plug (100-240V, 50-60 Hz). Alternate 12V input from user's source.
Shutter	Standard: Melles Griot 43mm. Low profile: no shutter.
Remote Triggering	LVTTL input allows exposure to start within 25 microseconds of rising edge of trigger

CCD SENSITIVITY



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