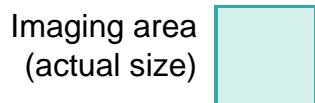
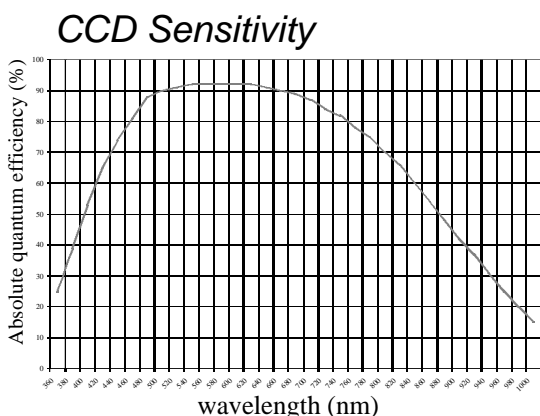




AP47p

Cooled CCD Camera



Marconi CCD47-10 CCD Specifications

Array Size (pixels)	1024 x 1024
Pixel Size	13 x 13 microns
Chip Size	13.3 mm x 13.3 mm
Linear Full Well (typ.)	100,000 e ⁻
Dynamic Range	>83 dB
CTE	0.999999
QE @ 400 nm	40%
Peak QE (500-650 nm)	>90%

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

AP47p Camera System Performance

PC Interface	Parallel port
Download time (typ.)	20 seconds
System Noise (typ.)	<10 e ⁻ RMS (preliminary)
Digital resolution	16 bits
Pixel Binning	1x1 to 8x63 on-chip
Exposure Time	30 milliseconds to 10,400 seconds (10 millisecond increments)
Frame Sizes	Full frame, subframe, focus mode
Cooling	Thermoelectric cooler with forced air. Maximum cooling 45-50° C below ambient temperature
Liquid Circulation Adapter	Optional (recommended for ambient >30C only) or operation inside an enclosure
Temperature Stability	±0.1° C
Dark Current (nom.)	1-2 e ⁻ /pixel/sec (-30° C) (preliminary)
Camera Head	Aluminum, hard black anodized. 6" x 6" x 1.3". Weight: 3 lb. T-thread mount. Optional Nikon or Canon mount.
Operating Environment	Temperature: -30° to 80° F. Relative humidity: 10 to 90% noncondensing
Cable length	Standard: 7.5m. Max. 150m with shielded twisted-pair cable.
Power requirements	25W maximum power with shutter open and cooling maximum. Power supplied by AC/DC "brick" supply with international AC input plug.
Shutter	Vincent 25mm
Back focal distance	1.15" (2.9 cm)
Remote Triggering	TTL input to PC controller allows exposure start within 100 ns of trigger for applications requiring precise synchronization of exposures to external events.