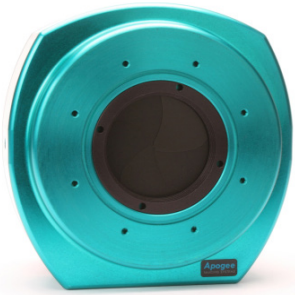
ASPEN® CG47
High Performance Cooled CCD Camera System

DESCRIPTION

Aspen® is the newest in design innovation from Apogee Imaging Systems. Aspen® increases cooling performance in a smaller package, improves stray light baffling, adds a Network interface with a built-in web server, supports dual output CCDs up to 16Mhz and sets a new standard in shutter reliability. The Aspen® CG47 has a back-illuminated full frame megapixel CCD with exceptionally high quantum efficiency. The standard midband coating (CG47-MB) has the highest peak in the visible; the optional broadband coating (CG47-BB) has somewhat higher QE in the near UV but lower QE across the visible. The UV-enhanced version (CG47-UV) has the highest QE in the UV. All Aspen® systems are backed by a 2 year warranty on the camera and lifetime warranty on the CCD chamber integrity.



SYSTEM FEATURES

- 1 to 5 MHz 16-Bit digitization
- USB and Ethernet interface
- Programmable cooling up to 65°C below ambient
- High reliability shutter (>5 million cycles)
- 32 MByte camera memory
- Subarray readout and fast sequencing modes
- Adjustable fan speed for low/zero vibration
- General purpose programmable I/O port
- Programmable status indicators
- 32/64 bit ActiveX drivers included
- Field upgradeable firmware
- AR coated silica windows
- RBI pre-flash
- Liquid cooling option
- Precision locking filter wheels optional

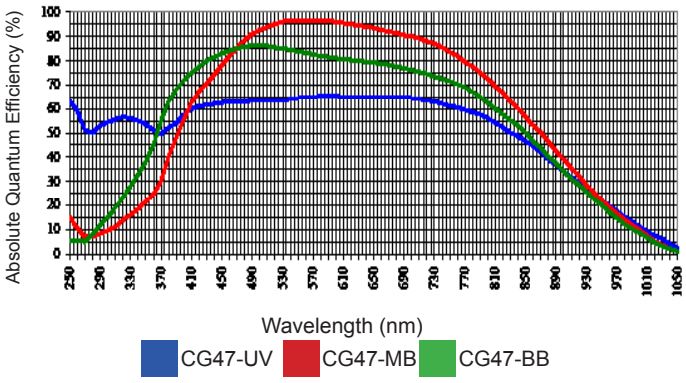
Imaging area of CCD

13.3 x 13.3mm

CCD SPECIFICATIONS

CCD	E2V CCD47-10
Array Size (pixels)	1024 x 1024
Pixel Size	13 x 13 microns
Imaging Area	13.3 x 13.3mm (177mm2)
Imaging Diagonal	18.8mm
Linear Full Well (typical)	100K electrons
Dynamic Range	83 dB
QE at 400nm	52% (MB); 75% (BB); 57% (UV)
Peak QE	96% (MB); 86% (BB); 65% (UV)
Anti-blooming	None

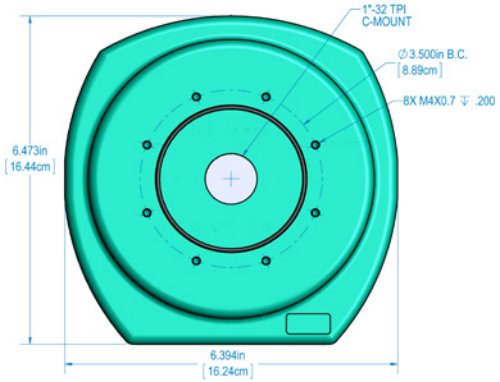
CCD SENSITIVITY



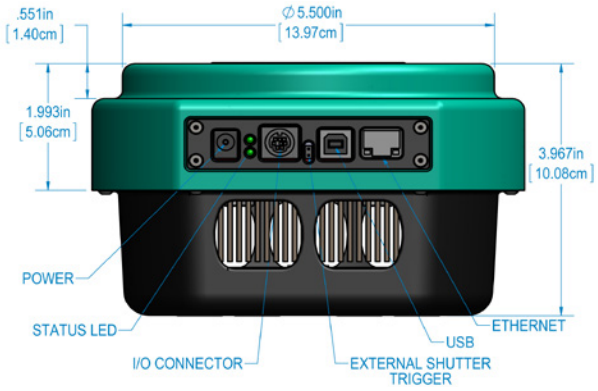
SYSTEM SPECIFICATIONS

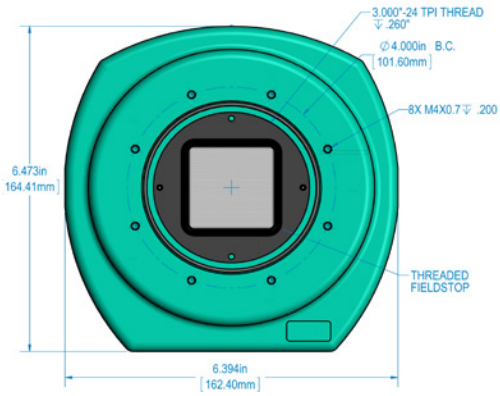
PC Interface	USB 2.0; Network interface with built-in web server, up to 2MHz throughput	**Temperature Stability**	+/- 0.1ºC
Max. Cable Length	USB: 5 meters between hubs; 5 hubs maximum (max. total of 30m) Ethernet: 100 meters maximum	**Operating Environment**	-25º to 40ºC. Relative humidity: 10 to 90% non-condensing.
Digital Resolution	16 bits dual or single channel	**Power**	50W maximum power with cooling maximum. AC/DC "brick" supply with int'l AC input plug (100-240V, 50-60Hz). Alternate 12V input from user's source.
System Noise (typical)	9 e^- RMS at 1 MHz	**Remote Triggering**	LVTTL trigger input, expose strobe output.
Pixel Binning	1 x 1 to 8 x 1024 on chip	**Camera Head Size**	Standard: G01. Optional: G07. Aluminum, hard teal anodized. 6.5" x 6.4" x 3.9" (16.4 x 16.2 x 10 cm) Weight: 3.1 lb. (1.4 kg)
Exposure Time	100 milliseconds to 183 minutes (2.56 microsecond increments)	**Back Focal Distance**	Standard: 0.68" (1.72cm). Optional: 1.017" (2.58cm). [optical]
Image Sequencing	1 to 65535 image sequences under software control	**Mounting**	1" Aperature, C-mount, 1-32 UN-2B Thread
Frame Sizes	Full frame, subframe, focus mode	**Shutter**	Standard: 35mm. Optional: 58mm.
Cooling (typical)	Thermoelectric cooler with forced air. Maximum cooling up to 65°C below ambient temperature.		
Dark Current (typical)	0.2 e^-/pixel/sec (-20°C)		

CONFIGURATION OPTIONS

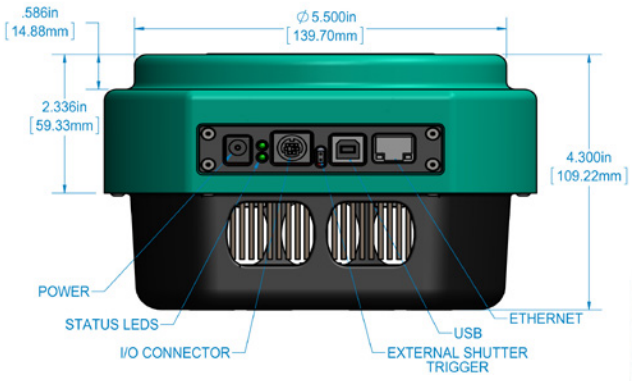


Standard: G01





Optional: G07



151 N. Sunrise Ave. Ste 902 tel 916 218 7450
Roseville CA 95661 USA fax 916 218 7451
www.ccd.com