

SBIG® ALUMA® CCD COMPACT CCD DETECTORS

RESEARCH-GRADE COMPACT CCD CAMERAS

The SBIG Aluma CCD series are the perfect research-grade camera for photometry or image acquisition and astrophotography with modest-sized telescopes. Their compact size also makes them suitable for devices with a small image circle, microscopy or laboratory equipment.



The SBIG Aluma CCD cameras offer a choice of sensors from multiple manufacturers, allowing you to select the right pixel size and imaging array to match your application and budget.

Sensor options range from 8.3-megapixel sensors to small arrays of large 24um pixels. Peak quantum efficiency (QE) ranges from 54 to 93%.

The advanced Aluma® architecture features an on-board processor, custom logic, and field-upgradable firmware. It's SmartCooling™ dual-fan design provides rapid cool-down and thermal stability using only ambient air. Like most large SBIG cameras, the Aluma CCD-series features an even-illumination electromechanical shutter for easy dark frames and precise exposure control.

FEATURES AND BENEFITS

The Aluma CCD series cameras feature:

Monochrome CCD sensor	High dynamic range and maximum resolution using 16-bit ADC
Even-illumination Electromechanical shutter	Convenient dark and bias frames, ideal for robotic automation
SmartCooling™ intelligent thermal management	Thermoelectric Cooling $\Delta T \sim 50^\circ C$ below ambient with dynamic fan speed for rapid cool-down and thermal stability
USB 2.0 interface, optional WiFi	Supports longer cable lengths than USB 3.0
ST-4 guide port	Controls telescope mount for round stars, precise tracking
Auxiliary control port	External trigger and control of optional filter wheel, adaptive optics
DL Imaging drivers and multi-platform SDK	Support for Window® 7 through 10, MacOS® 10.14, and Canonical® Ubuntu Linux 18.04 LTS. ASCOM driver included for Windows.
Cyanogen Imaging® MaxIm LT Imaging software	Get up and running immediately with the included image acquisition and processing software. Upgradable to MaxIm DL Pro for robotic automation, telescope and observatory control.

 **SBIG®** IMAGING SYSTEMS

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TECHNICAL SPECIFICATIONS

SBIG model name	Aluma 47-10*	Aluma 77-00	Aluma 694	Aluma 814	Aluma 3200	Aluma 8300
Sensor	Teledyne e2v CCD47-10	Teledyne e2v CCD77-00	Sony ICX-694	Sony ICX-814	ON Semiconductor KAF-3200	ON Semiconductor KAF-8300
Illumination	Back	Back	Front	Front	Front	Front
Peak quantum efficiency	93%	93%	75%	77%	85%	54%
Sensor type	Full frame	Full frame	Interline	Interline	Full frame	Full frame
Anti-blooming (N = best for photometry)	N	N	Y	Y	N	Y
Active pixels	1024 x 1024	512 x 512	2750 x 2200	3388 x 2712	2184 x 1472	3326 x 2504
Pixel size (µm)	13.00	24.00	4.54	3.69	6.80	5.40
Sensor dimensions (mm)	13.3 x 13.3	12.3 x 12.3	14.6 x 12.8	12.5 x 10.0	14.85 x 10.3	17.96 x 13.5
Sensor diagonal (mm)	18.8	17.4	19.4	16.0	18.0	22.5
Dark current (e-/p/s)	0.200	0.700	0.025	0.025	0.500	0.150
Full well capacity (e-)	100 000	300 000	18 000	15 000	55 000	25 000
Read noise (e-)	5.0	7.0	4.5	4.5	10.0	10.0
ADC resolution	16-bit	16-bit	16-bit	16-bit	16-bit	16-bit

* Sensor options: midband, broadband, and UV enhanced

OPTIONAL ACCESSORIES

Adaptive optics unit:
AO-8A

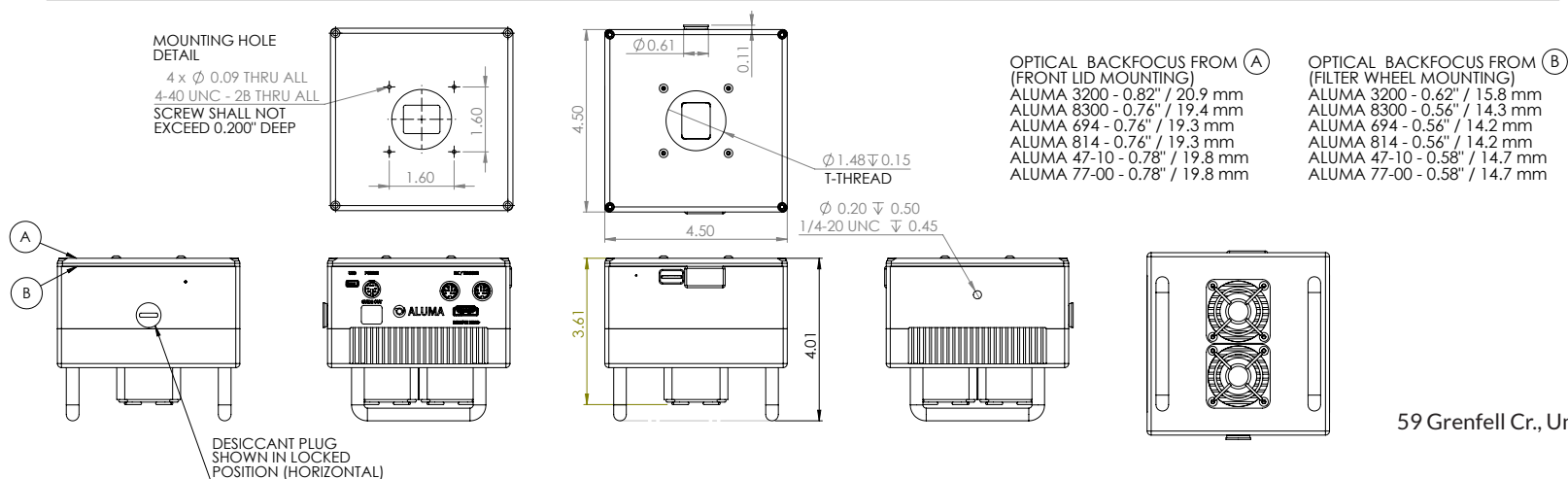
Guiding camera:
SBIG StarChaser SC-2
off-axis guiding camera
MS-REMOTEHDSTT
remote guide head

Filter wheel:
FW8S-Aluma with
8-position carousel
FW8G-Aluma self-guiding
filter wheel, 8-position
carousel

Optical filters:
36mm round,
optional 1.25" threaded

**Spare molecular
desiccant cartridge:**
DESICCANT-AL

Mechanical adapters:
M42x0.75, M48x0.75,
STL-thread, SCT-thread
or custom-fabricated



CONTACT US

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