

## SBIG® ALUMA® CCD COMPACT CCD DETECTOR

### RESEARCH-GRADE COMPACT CCD CAMERAS

The SBIG Aluma CCD series are the perfect research-grade cameras 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 allowing you to select the right pixel size and imaging array to match your application and budget. Sensor options range from 9.1-megapixel sensors to small arrays of large 24um pixels. Peak quantum efficiency (QE) ranges from 75 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:

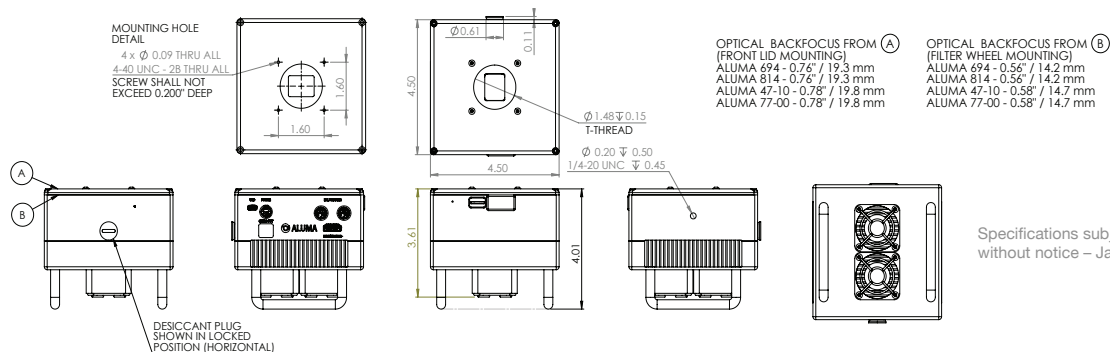
Monochrome CCD sensor	High dynamic range and maximum resolution using 16-bit ADC
Even-illumination Electromechanical shutter	Convenient dark and bias frames, ideal for robotic automation
SmartCooling™ intelligent thermal management	Thermoelectric Cooling $\Delta T \sim 50^{\circ}C$ below ambient with dynamic fan speed for rapid cool-down and thermal stability
USB 2.0 interface	Supports longer cable lengths than USB 3.0
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.

ORDER THE SBIG SCIENTIFIC CAMERA OF YOUR DREAMS THIS YEAR FROM OUR WORLDWIDE NETWORK OF DEALERS

SBIG MODEL NAME	ALUMA 47-10	ALUMA 77-00	ALUMA 694	ALUMA 814
Active pixels	1024 x 1024	512 x 512	2750 x 2200	3388 x 2712
ADC resolution	16-bit	16-bit	16-bit	16-bit
Anti-blooming (N = best for photometry)	N	N	Y	Y
Dark current (e-/p/s)	0.2 @ -30°C	0.7 @ -30°C	0.025 @ 0°C	0.025 @ 0°C
Full well capacity (e-)	100 000	300 000	18 000	15 000
Illumination	Back	Back	Front	Front
Peak quantum efficiency	93%	93%	75%	77%
Pixel size (µm)	13.00	24.00	4.54	3.69
Read noise (e-)	5.0	7.0	4.5	4.5
Sensor	Teledyne e2v CCD47-10	Teledyne e2v CCD77-00	Sony ICX-694	Sony ICX-814
Sensor diagonal (mm)	18.8	17.4	19.4	16.0
Sensor dimensions (mm)	13.3 x 13.3	12.3 x 12.3	14.6 x 12.8	12.5 x 10.0
Sensor type	Full frame	Full frame	Interline	Interline

*UV, Midband, and Broadband coatings are available for the 47-10. Midband coating available for the 77-00.*

OPTIONAL ACCESSORIES
<b>Adaptive Optics Unit:</b> AO-8A
<b>Filter wheel:</b> FW8S-Aluma with 8-position carousel
<b>Guiding Camera:</b> SBIG StarChaser SC-2 off-axis guiding camera
<b>Optical filters:</b> 36mm round, optional 1.25" threaded
<b>Spare molecular desiccant cartridge:</b> DESICCANT-AL



Specifications subject to change without notice - January 2021

## DIFFRACTION LIMITED

59 Grenfell Cr., Unit B  
 Ottawa, ON K2G 0G3  
 Canada  
 +1-613-225-2732  
[diffractionlimited.com](http://diffractionlimited.com)