9. CCD's, Cameras, Manufacturers, Software

The given data where collected from technical data sheets of the manufacturer and the manufacturer of the CCD cameras. Due to the many different camera models (Monochrome, Single-shot colour, microlenses, Anti-Gate) not all kind of CCD's are listed. The manufacturers provide many data on their website. Feel free to browse the websites of the manufacturers.
If I wasn't able to determine the exact technical data, nothing is supplied in the table.

Appendix and tables:

Table of CCD's:

Name	Type of CCD	Monochrome / Single-shot colour	Number of pixels	Full-well capacity	CCD size in millimeters	Pixel size horizontal x vertical	Spectral response (with microlenses)	Spectral response (no microlenses)	ABG
KAF-0261	Full Frame	Monochrome	512 x 512		10,2 mm x 10,2 mm	20 µm x 20 µm		450 nm, 550 nm, 650 nm: 35%, 55%, 58%	No
KAF-402	Full Frame	Monochrome	768 x 512	100000	6,9 mm x 4,6 mm	9 µm x 9 µm	max: 77% bei 400 nm: 45%	max: 65% 400 nm: 30%	No
KAF-1001	Full Frame	Monochrome	1024 x 1024		24,6 mm x 24,6 mm	24 µm x 24 µm	Bei Wellenlängen von 450 nm, 550 nm, 650 nm: 40%, 55%, 65%		
KAF-1603	Full Frame	Monochrome	1536 x 1024	100000	13,8 mm x 9,2 mm	9 µm x 9 µm	max: 77% 400 nm: 45%	max: 65% 400 nm: 30%	No
KAF-3200	Full Frame	Monochrome	2184 x 1510	55000	14,85 mm x 10,26 mm	6.8 µm x 6.8 µm	blue=55%, green= 70%, red=80%		No
KAF-4301	Full Frame	Monochrome	2048 x 2048			24 µm x 24 µm		450 nm, 550 nm, 650 nm: 40%, 55%, 65%	No

Name	Type of CCD	Monochrome / Single-shot colour	Number of pixels	Full-well capacity	CCD size in millimeters	Pixel size horizontal x vertical	Spectral response (with microlenses)	Spectral response (no microlenses)	ABG
KAF-6303	Full Frame	Monochrome	3072 x 2048	100000	27,65 mm x 18,48 mm	9 µm x 9 µm		450 nm, 550 nm, 650nm: 40%, 52%, 65%	No
KAF-8300	Full Frame	Monochrome (ABA) + Single-shot colour (CBA)	3326 x 2504	25500	18 mm x 13,5 mm	5,4 µm x 5,4 µm	clear glass (540 nm) 54% one-shot colour sensor R(600nm), G(540nm), B(480nm), 33%, 40 %, 33%		Yes
KAF-09000M	Full Frame	Monochrome	3056 x 3056	110000	36,7 mm x 36,7 mm	12 µm x 12 µm	550 nm: 64%		Yes
KAF-16801	Full Frame	Monochrome	4096 x 4096	100000	38,60 mm x 37,76 mm	9 µm x 9 µm		(450 nm, 550 nm, 650 nm) 40%, 52%, 65%	Yes
KAF-16803	Full Frame	Monochrome	4096 x 4096	85000	36,8 mm x 36,8 mm	9 µm x 9 µm	550 nm: 60%		Yes
KAI-2020	Interline	Monochrome (ABA) + Single-shot colour (CBA)	1600 x 1200		11,84 mm x 8,88 mm	7,4 µm x 7,4 µm	ABA (monochrome) : (460 nm) 55% CBA (one-shot colour sensor): 460 nm, 540 nm, 620 nm, 41%, 37%, 31%,		Yes
KAI-4021	Interline	Monochrome (ABA) + Single-shot colour (CBA)	2048 x 2048	40000	16,67 mm x 16,05 mm	7,4 µm x 7,4 µm	ABA (monochrome) : 55% CBA (one-shot colour sensor): 45%, 42%, 35%		Yes
KAI-04022	Interline; Progressive Scan	Monochrome (ABA) + Single-shot colour (CBA)	2048 x 2048	40000	15,15 mm x 15,15 mm	7,4 µm x 7,4 µm	ABA: 55%, CBA (one-shot colour sensor)BGR 45%, 42%, 35%		Yes

Name	Type of CCD	Monochrome / Single-shot colour	Number of pixels	Full-well capacity	CCD size in millimeters	Pixel size horizontal x vertical	Spectral response (with microlenses)	Spectral response (no microlenses)	ABG
KAI-10100	Interline	Single-shot colour	3760 x 2840	25000	17,86 mm x 13,49 mm	4,75 µm x 4,75 µm	R (630 nm), G (550 nm), B (470 nm) 32%, 42%, 40%		Yes
KAI-11002	Interline	Monochrome (ABA) + Single-shot colour (CBA)	4008 x 2672	60000	37.25 mm x 25.70 mm	9 µm x 9 µm	Monochrome 50% one-shot colour sensor RGB: 34%, 37%, 42%		Yes
KAI-16000	Interline	Monochrome	4872 x 3248	40000	36 mm x 24 mm	7,4 µm x 7,4 µm	(500nm) 50%		
KAI-16000	Interline	Single-shot colour	4872 x 3248	30000	36 mm x 24 mm	7,4 µm x 7,4 µm	R(630 nm), G(540 nm), B(470 nm) 30%, 37%, 42%		Yes
Sony ICX205AL	Interline	Monochrome	1360 x 1024		7,60 mm x 6,20 mm	4,65 µm x 4,65 µm			
Sony ICX205AK	Interline	Single-shot colour	1392 x 1040		7,60 mm x 6,20 mm	4,65 µm x 4,65 µm			
Sony ICX259AL	Interline	Monochrome	752 x 582		6,0 mm x 4,96 mm	6,5 µm x 6,25 µm		65% (560nm)	
Sony ICX274AL	Interline	Monochrome	1620 x 1220		8,50 mm x 6,80 mm	4,40 µm x 4,40 µm			
Sony ICX285AL	Interline	Monochrome	1392 x 1040		10,2 mm x 8,3 mm	6,45 µm x 6,45 µm			
Sony ICX285AQ	Interline	Single-shot colour	1392 x 1040		10,2 mm x 8,3 mm	6,45 µm x 6,45 µm			
Sony ICX412AQ	Interline	Single-shot colour	2080 x 1536			3,45 µm x 3,45 µm			Yes
Sony ICX413AQ	Interline	Single-shot colour	3032 x 2016		25,10mm x 17,64mm	7,8 µm × 7,8 µm		ca. 60% (green), 50% (blue, and red)	
Sony ICX424AL	Interline	Monochrome	692 × 504		5,79 mm × 4,89 mm	7,4 µm × 7,4 µm			
Sony ICX429AKL	Interline	Single-shot colour	752 x 582		5,59mm x 4,68mm	8,3 µm × 8,6 µm			

Name	Type of CCD	Monochrome / Single-shot colour	Number of pixels	Full-well capacity	CCD size in millimeters	Pixel size horizontal x vertical	Spectral response (with microlenses)	Spectral response (no microlenses)	ABG
Sony ICX429ALL	Interline	Monochrome	752 x 582		7,4 mm x 5,95 mm	8,6 µm × 8,3 µm			
Sony ICX453AQ	Interline	Single-shot colour	3024 x 2016		23,4 mm x 15,6 mm	7,8 µm × 7,8 µm		max : 540 nm ~60%, 400 nm + 650 nm 50%	Yes
Sony ICX493AQA	Interline	Single-shot colour	3900 x 2616		23,4 mm x 15,6 mm	6,05 µm × 6,05 µm	ca. 60% (green), 50% (bllue, red)		
Sony ICX655AL	Interline	Monochrome	2448 x 2050		8,5 mm x 7,1 mm	3,45 µm x 3,45 µm			
Sony ICX674ALG	Interline	Monochrome	1940 x 1460	> 20000	8,81 mm x 6,63 mm	4,54 µm x 4,54 µm	ca. 77% 580 nm		Yes
Sony ICX674AQG	Interline	Single-shot colour	1940 x 1460	> 20000	8,81 mm x 6,63 mm	4,54 µm x 4,54 µm	ca. 77% 580 nm		Yes
Sony ICX694ALG	Interline	Monochrome	2750 x 2200	> 20000	12,49 mm x 9,99 mm	4,54 µm x 4,54 µm	ca. 77% 580nm		Yes
Sony ICX694AQG	Interline	Single-shot colour	2750 x 2200	> 20000	12,49 mm x 9,99 mm	4,54 µm x 4,54 µm	ca. 77% 580nm		Yes
Sony	Interline	Single-shot colour	4610 x 3080	32000	24mm*16.4 mm	5,12 µm x 5,12 µm			Yes
E2V CCD42-40	Back-Illuminated		2048 x 2048	100.000	27,6 mm x 27,6 mm	13,5 µm × 13,5 µm			
E2V CCD47-10	Back-Illuminated		1024 x 1024	100.000	13,3 mm x 13,3 mm	13 µm × 13 µm			

Cameras with Kodak CCD's, Part 1

Name	Apogee	ATIK	Celestron	Farpoint Opticstar	Fingerlakes Microline	Fingerlakes Proline	Lumenera	Meade	Moravian
KAF-0261					ML0261E				
KAF-402					ML402E/ME-1 ML402E/ME-2				
KAF-1001					ML1001E	PL1001E-1			
KAF-1603					ML1603E/ME	PL1603E/ME			
KAF-3200					ML3200E/ME				G2-3200 Models
KAF-4301E					ML4301E-1 ML4301E-2				
KAF-6303					ML6303E	PL6303E			
KAF-8300	ALTA8300	383L+	Nightscape 8300 CCD Camera		ML8300 + ML8300-C	PL8300 + PL8300C	ALCCD 9 + ALCCD 9c		G2-8300 Models
KAF-09000	U9000				ML09000	PL09000	ALCCD 15		
KAI-10100			Nightscape CCD Camera						
KAF-16801					ML16801	PL16801-2			
KAF-16803	U16M				ML16803	PL16803	ALCCD 16		G4-16000
KAI-2020									
KAI-4021M									

Name	Apogee	ATIK	Celestron	Farpoint Opticstar	Fingerlakes Microline	Fingerlakes Proline	Lumenera	Meade	Moravian
KAI-04022		ATIK 4000 + ATIK 4000LE							G2-4000 Models
KAI-11002		ATIK 11000					ALCCD 11		G3-11000 Models
KAI-16000M	ALTA U16000								

Cameras with Kodak CCD's, Part 2

Name	Orion USA	QSI	SBIG	Starlight Xpress
KAF-0261			ST9-Models	
KAF-402		504+604-Models	ST-402, ST7-Models	
KAF-1001			STL-1001E	SXVR-H18
KAF-1603		516+616-Models	ST-1603, ST8-Models	SXVF-H35
KAF-3200		532+632-Models	ST-3200, ST-10-Models	
KAF-4301E				
KAF-6303			ST-6303E	
KAF-8300	Parsec 8300M + Orion Parsec 8300C	583 + 683-Models	ST-8300, STF Models, STT Models	
KAF-09000				SXVF-H36
KAI-10100-CXC	Parsec 10100C Color Astronomical Imaging Camera			

Name	Orion USA	QSI	SBIG	Starlight Xpress
KAF-16801				
KAF-16803			STX-16803	
KAI-2020		520+620-Models	ST-2000	
KAI-4021M				
KAI-04022		540 + 640-Models	ST-4000 Models	
KAI-11002M			STL-11000 Models	
KAI-16000M				SXV-H16

Cameras with Sony + Fairchild CCD's Part 1

Name	ATIK	Apogee	Farpoint Opticstar	Fingerlake Proline	Lumenera	Meade	Orion	Starlight Xpress
Sony ICX205AL	ATIK 314E		DS-142M XL + DS-142M ICE					
Sony ICX205AK			DS-142C ICE					
Sony ICX259AL					ALCCD 5.2			
Sony ICX274AL	ATIK 320E ATIK 420							
Sony ICX285AL	ATIK 314L und ATK 314L+		DS-145M ICE			Deep Sky Imager PRO III		SXV-H9
Sony ICX285AQ			DS-145C ICE			Deep Sky Imager III		

Name	ATIK	Apogee	Farpoint Opticstar	Fingerlake Proline	Lumenera	Meade	Orion	Starlight Xpress
Sony ICX412AQ			DS-336C XL					
Sony ICX413AQ			DS-616C XL		ALCCD 8L		Starshoot Pro V2.0 Deep Space Color CCD Camera	
Sony ICX424AL								SXVF-H5
Sony ICX429AKL						Deep Sky Imager II Color Camera		
Sony ICX429ALL					ALCCD 5.2 Pro			
Sony ICX453AQ					ALCCD 6c + ALCCD 6 Pro			SXVF-M25
Sony ICX493AQA					ALCCD 10			SXVR-M26C
Sony ICX655	ATIK 450							
Sony ICX674	ATIK 428EX							SXVR-H674C +SXVR-H674
Sony ICX694	ATIK 460EX							SXVR-H694C +SXVR-H694
Sony								
Fairchild E2V CCD42-40		U42		PL230-42				
Fairchild E2V CCD47-10		U47						

Astronomical Software:

Program	Acquiring images	Image processing	Astrometry	Photometry	Manufacturer	Commercial/Freeware	Platform
Astroart	X	X	X	X	MSB Software	Commercial	Windows
Astrometrica			X		Herbert Raab	Shareware	Windows
CCDStack		X			CCDWare	Commercial	Windows
CCDSoft	X	X			Software Bisque	Commercial included with SBIG-Cameras	Windows
DeepSkyStacker		X			Luc Coiffier	Freeware	Windows
Fitswork		X			Jens Dierks	Freeware	Windows
ESA ESO NASA Fits Liberator		X			ESA,ESO, NASA	Open Source	Windows / Mac
Focas				X		Freeware	Windows
ImagesPlus	X/DSLR	X			Mike Mlunsold	Commercial	Windows
IRIS	X/DSLR	X	X	X	Christian Buil	Freeware	Windows
MaximDL	X	X			Diffraction Limited	Commercial	Windows
Nebulosity	X/DSLR	X			Craig Stark (Stark Labs)	Commercial	Windows / Mac
Pisco	X					Freeware	Windows
PRISM	X	X			Alcor System	Commercial	Windows
Pixinsight		X			Pleiades Astrophoto S.L.	Commercial	Windows / Linux / Mac
Regim		X			Andreas Rörig	Freeware	Java

Websites:

Name	Website	Main features
Adobe Photoshop	http://www.adobe.com	General image processing
Astroart	http://www.msb-astroart.com	Acquiring images (CCD + DSLR) Image processing of astronomical images General image processing
Astrometrica	http://www.astrometrica.at	Astrometry of astronomical images
CCDSoft	http://www.bisque.com/	Acquiring images (CCD) Image processing of astronomical images General image processing
CCDStack	http://www.ccdware.com/	Calibration, Stacking, Deblooming, specialized image processing
DeepSkyStacker	http://deepskystacker.free.fr	Stacking Image processing of astronomical images (CCD + DSLR)
GIMP	http://www.gimp.org/	General image processing
ESA ESO NASA Fits Liberator	http://www.spacetelescope.org/announcements/ann1013/	Image processing of astronomical images
Fitswork	http://www.fitswork.de/software/softw_en.php	Image processing of astronomical images (CCD + DSLR)
Focas	http://astrosurf.com/cometas-obs/	Photometry of astronomical images
GIMP	http:/www.gimp.org	Alle Arten von Bildbearbeitung
ImagesPlus	http://www.mlunsold.com/	Acquiring images (DSLR) Image processing of astronomical images General image processing
IRIS	http://astrosurf.com/buil/us/iris/iris.htm	Acquiring images (CCD + DSLR) Image processing of astronomical images General image processing
MaximDL	http://www.cyanogen.com	Acquiring images (CCD + DSLR) Image processing of astronomical images General image processing Complete observatory control

Name	Website	Main features
Nebulosity	http://www.stark-labs.com/	Acquiring images (CCD + DSLR) Image processing of astronomical images General image processing
Photoline	http://www.pl32.com	General image processing
Pisco	http://www.astrosurf.com/audine	Acquiring images (CCD)
Pixinsight	http://pixinsight.com	Acquiring images (CCD + DSLR) Image processing of astronomical images General image processing
PRISM	http://www.prism-astro.com/	Acquiring images (CCD + DSLR) Image processing of astronomical images Complete observatory control
Regim	http://www.andreasroerig.de/regim/regim_e.htm	Image processing of astronomical images (CCD + DSLR)

Manufacturers of CCD-Cameras:

Name	Country	Website
Apogee Imaging Systems	USA	http://www.ccd.com/
Astro Lumina	Germany	http://www.astrolumina.de
ATIK Cameras	Portugal	http://www.atik-cameras.com/
Celestron	USA	http://www.celestron.com/
Farpoint Opticstar CCD Cameras	USA	http://www.farpointastro.com
Finger Lakes Instrumentation	USA	http://www.flicamera.com
Meade	USA	http://www.meade.com/
Moravian Instruments	Czech Republic	http://ccd.mii.cz/
QHY	China	http://www.qhyccd.com
Orion USA	USA	http://www.telescope.com
Quantum Scientific Imaging	USA	http://qsimaging.com/
SBIG	USA	http://www.sbig.com
Starlight Xpress	Great Britain	http://www.starlight-xpress.co.uk/