

Table 8: ZWO Astronomy Cameras - Complete Specifications and Recommendations

ZWO Camera Model	Color / Monochrome	Sensor	Sensor Diagonal Size (mm)	Sensor Format	Sensor Resolution (MP)	Sensor Size (mm)	Sensor Dimensions (pixels)	Pixel Size (microns)	Max Data Resolution (bits)	Max Download		Minimum Read Noise (e)	Maximum Full Well Depth (ke)	Anti Amp Glow (?)	Diameter (mm / in)	Weight (g/oz)	Back Focus (mm)	All-Sky Lens Included	Window	Application/Comments	Planetary	Solar/Lunar	Deep-Sky	EAA	All-Sky
										Rate@Max Resolution (fps)	Resolution (fps)														
<b>PLANETARY/SOLAR SYSTEM CAMERAS (UNCOOLED)*</b>																									
ASI120MC-S	Color	ON MT9M034	6.0	1/3"	1.2	4.8 x 3.6	1280x960	3.75	12	60	4	13	No	62/2.4	100/3.5	12.5	Yes	UV-IR	Planetary, autoguiding	*****	****	***	***	***	
ASI120MM-S	Monochrome	ONS AR0130CS	6	1/3"	1.2	4.8 x 3.6	1280x960	3.75	12	60	4	13	No	62/2.4	100/3.5	12.5	Yes	AR	Planetary, autoguiding	*****	****	***	***	***	
ASI224MC	Color	Sony IMX224	6.1	1/3"	1.3	4.9 x 3.7	1304x976	3.75	12	150	0.8	19.2	No	62/2.4	120/4.2	12.5	Yes	AR	Planetary, autoguiding	*****	****	***	***	***	
ASI290MM	Monochrome	Sony IMX290	6.4	1/3"	2.1	5.6 x 3.2	1936x1096	2.90	12	170	1.0	14.6	No	62/2.4	120/4.2	12.5	Yes	AR	Planetary, Lunar, Solar, EAA	*****	****	***	***	***	
ASI462MC	Color	Sony IMX462	6.4	1/2.8"	2.1	5.6 x 3.2	1936x1096	2.90	12	136	0.5	12	No	62/2.4	120/4.2	12.5	Yes	AR	Planetary, Lunar, Solar, EAA	*****	****	***	***	***	
ASI662MC	Color	Sony IMX662	6.4	1/2.8"	2.1	5.6 x 3.2	1920x1080	2.90	12	108	0.8	37.8	Yes	62/2.4	120/4.2	12.5	Yes	UV-IR	Planetary, Lunar, Solar, EAA	*****	****	***	***	***	
ASI385MC	Color	Sony IMX385	8.4	1/1.9"	2.1	7.3 x 4.1	1936x1096	3.75	12	120	0.7	18.7	No	62/2.4	120/4.2	12.5	Yes	AR	Planetary, Lunar, EAA	*****	****	***	***	***	
ASI678MC	Color	Sony IMX678	8.8	1/1.8"	8.3	7.7 x 4.3	3840x2160	2.00	12	48	0.6	11.3	Yes	62/2.4	120/4.2	12.5	Yes	UV-IR	Planetary, lunar, solar (at short focal ratio)	*****	****	***	***	***	
ASI178MM	Monochrome	Sony IMX178	8.9	1/1.8"	6.4	7.4 x 5.0	3096x2080	2.4	14	60	1.4	15	No	62/2.4	120/4.2	12.5	Yes	AR	Planetary, lunar, solar (at short focal ratio)	*****	****	***	***	***	
ASI178MC	Color	Sony IMX178	8.9	1/1.8"	6.4	7.4 x 5.0	3096x2080	2.40	14	60	1.4	15	No	62/2.4	120/4.2	12.5	Yes	UV-IR	Planetary, lunar, solar (at short focal ratio)	*****	****	***	***	***	
ASI482MC	Color	Sony IMX482	12.8	1/1.2"	2.1	11.1 x 6.3	1920x1080	5.80	12	82.5	1.8	51.5	No	62/2.4	133/4.7	17.5**	No	AR	Planetary, lunar, solar	*****	****	***	***	***	
ASI585MC	Color	Sony IMX585	12.9	1/1.2"	8.3	11.2 x 6.3	3840x2160	2.90	12	47	0.8	40	No	62/2.4	120/4.2	17.5**	No	AR	Planetary, lunar, solar	*****	****	***	***	***	
ASI174MM	Monochrome	Sony IMX174	13.3	1/1.2"	2.4	11.3 x 7.1	1936x1216	5.86	12	164	3.5	32	No	62/2.4	140/4.9	17.5**	No	AR	Lunar, Solar, planetary, EAA	*****	****	***	***	***	
ASI183MM	Monochrome	Sony IMX183	15.9	1"	20.2	13.2 x 8.8	5496x3672	2.4	12	19	1.6	15	No	62/2.4	120/4.2	17.5**	No	AR	Lunar, Solar	*****	****	***	***	***	
ASI183MC	Color	Sony IMX183	15.9	1"	20.2	13.2 x 8.8	5496x3672	2.4	12	19	1.6	15	No	62/2.4	120/4.2	17.5**	No	AR	Lunar, Solar, planetary, EAA	*****	****	***	***	***	
ASI432MM	Monochrome	Sony IMX432	17.6	1.1"	1.8	14.5 x 9.9	1608x1104	9.00	12	120	2.4	97	No	62/2.4	120/4.2	17.5**	No	AR	Solar, lunar (at long focal ratios)	***	****	***	***	***	
ASI1600MM	Monochrome	4/3" CMOS	22.2	4/3"	16.4	17.7 x 13.4	4656x3520	3.8	12	23	1.2	20	No	62/2.4	140/4.9	17.5**	No	AR	Lunar, solar, planetary, EAA	***	****	***	***	***	
ASI294MM	Monochrome	Sony IMX294	23.1	4/3"	11.7	19.1 x 13.0	4144x2822	4.63	14	16	1.3	66	No	62/2.4	120/4.2	17.5**	No	AR	Lunar, Solar, planetary, EAA	***	****	***	***	***	
ASI294MC	Color	Sony IMX294	23.1	4/3"	11.7	19.1 x 13.0	4144x2822	4.63	14	16	1.3	66	No	62/2.4	120/4.2	17.5**	No	AR	Lunar, Solar, planetary, EAA	***	****	***	***	***	
<b>DEEP-SKY 'PRO' CAMERAS (TEC COOLED)</b>																									
ASI533MM-Pro	Monochrome	Sony IMX533	16	1"	9.0	11.3 x 11.3	3008x3008	3.76	14	20	1.0	50	Yes	78/3.1	470/16.6	17.5**	No	AR	Square format	***	****	*****	***	n/a	
ASI533MC-Pro	Color	Sony IMX533	16	1"	9.0	11.3 x 11.3	3008x3008	3.76	14	20	1.0	50	Yes	78/3.1	470/16.6	17.5**	No	AR	Square format	***	****	*****	***	n/a	
ASI183MM-Pro	Monochrome	Sony IMX183	15.9	1"	20.2	13.2 x 8.8	5496x3672	2.40	12	19	1.6	15	No	78/3.1	410/14.5	17.5**	No	AR		***	****	*****	***	n/a	
ASI183MC-Pro	Color	Sony IMX183	15.9	1"	20.2	13.2 x 8.8	5496x3672	2.40	12	19	1.6	15	No	78/3.1	410/14.5	17.5**	No	AR		***	****	*****	***	n/a	
ASI183GT	Monochrome	Sony IMX183	15.9	1"	20.2	13.2 x 8.8	5496x3672	2.40	12	19	1.6	15	No	110/4.3 square	800/28.2	26.5	No	AR	Integrated filter wheel	***	****	*****	**	n/a	
ASI1600MM-Pro	Monochrome	4/3" CMOS	22.2	4/3"	16.4	17.7 x 13.4	4656x3520	3.80	12	23	1.2	20	No	78/3.1	410/14.5	17.5**	No	AR		***	****	*****	***	n/a	
ASI1600GT	Monochrome	4/3" CMOS	22.2	4/3"	16.4	17.7 x 13.4	4656x3520	3.80	12	23	1.2	20	No	110/4.3 square	800/28.2	26.5	No	AR	Integrated filter wheel	***	****	*****	**	n/a	
ASI294MM-Pro	Monochrome	Sony IMX294	23.1	4/3"	11.7	19.1 x 13.0	4144x2822	4.63	14	16	1.3	66	No	78/3.1	410/14.5	17.5**	No	AR		***	****	*****	***	n/a	
ASI294MC-Pro	Color	Sony IMX294	23.1	4/3"	11.7	19.1 x 13.0	4144x2822	4.63	14	16	1.3	66	No	78/3.1	410/14.5	17.5**	No	AR		***	****	*****	***	n/a	
ASI071MC-Pro	Color	Sony IMX071	28.3	APS-C	16.2	23.6 x 15.6	4944x3284	4.78	14	10	2.3	46	No	86/3.4	640/22.6	17.5	No	AR	APS-C sensor	**	***	*****	**	n/a	
ASI2600MM-Pro	Monochrome	Sony IMX571	28.3	APS-C	26.0	23.5 x 15.7	6248x4176	3.76	16	3.5	1.0	50	Yes	90/3.5	700/24.7	17.5	No	UV-IR	APS-C sensor	**	***	*****	**	n/a	
ASI2600MC-Pro	Color	Sony IMX571	28.3	APS-C	26.0	23.5 x 15.7	6248x4176	3.76	16	3.5	1.0	50	Yes	90/3.5	700/24.7	17.5	No	UV-IR	APS-C sensor	**	***	*****	**	n/a	
ASI2400MC-Pro	Color	Sony IMX410	43.3	Full Frame	24.5	36 x 24	6072x4042	5.94	14	8	1.1	100	Yes	90/3.5	700/24.7	17.5	No	AR	Full-frame sensor	**	***	*****	**	n/a	
ASI6200MM-Pro	Monochrome	Sony IMX455	43.3	Full Frame	61.2	36 x 24	9576x6388	3.76	16	2	1.2	51.4	Yes	90/3.5	700/24.7	17.5	No	AR	Full-frame sensor	**	***	*****	**	n/a	
ASI6200MC-Pro	Color	Sony IMX455	43.3	Full Frame	61.2	36 x 24	9576x6388	3.76	16	2	1.2	51.4	Yes	90/3.5	700/24.7	17.5	No	UV-IR	Full-frame sensor	**	***	*****	**	n/a	
<b>AUTOGUIDING 'MINI' CAMERAS (UNCOOLED)</b>																									
ASI120MM-Mini	Monochrome	ONS AR0130CS	6	1/3"	1.2	4.8 x 3.6	1280x960	3.75	12	35	4.0	13	No	60/2.1	8.5	AR	No	AR	Autoguiding	n/a	n/a	n/a	n/a	n/a	
ASI290MM-Mini	Monochrome	Sony IMX290	6.4	1/3"	2.1	5.6 x 3.2	1936x1096	2.90	12	20	1.0	14.6	No	60/2.1	8.5	AR	No	AR	Autoguiding	n/a	n/a	n/a	n/a	n/a	
ASI174MM-Mini	Monochrome	Sony IMX174	13.3	1/1.2"	2.4	11.3 x 7.1	1936x1216	5.86	12	18	3.5	32	No	60/2.1	8.5	AR	No	AR	Autoguiding	n/a	n/a	n/a	n/a	n/a	

\* All ZWO planetary/solar system cameras feature a 1/4"-20 mounting hole on the back of the camera body  
 \*\* Back focus marked (\*\*) includes the 2" nosepiece. Without the nosepiece, the back focus distance is 6.5mm.