

ASI

Astronomical Cameras Product catalog



Camera Specification

	ASI094MC	ASI071MC	ASI1600MC/MM	ASI174MC/MM	ASI178MC/MM	ASI185MC	ASI290MC/MM	ASI224MC	ASI120MC-S/MM-S	ASI120MC/MM
Sensor	SONY IMX094	SONY IMX071	Panasonic MN34230	SONY IMX174	SONY IMX178	SONY IMX185	SONY IMX290	SONY IMX224	Aptina AR0130CS	Aptina AR0130CS
Resolution	36MP 7372X4924	16MP 4944X3284	16MP 4656X3520	2.3MP 1936X1216	6.4MP 3096X2080	2.3MP 1944X1224	2.1MP 1936X1096	1.2MP 1304X976	1.2MP 1280X960	1.2MP 1280X960
Pixel size	4.88µm	4.78µm	3.8µm	5.86µm	2.4µm	3.75µm	2.9µm	3.75µm	3.75µm	3.75µm
Sensor size	Full frame 36x24mm	APS-C 23.6x12.6mm	4/3" 17.7x13.4mm	1/1.2" 11.3x7.1mm	1/1.8" 7.4x5.0mm	1/1.9" 7.3x4.6mm	1/3" 5.6x3.2mm	1/3" 4.9x3.7mm	1/3" 4.8x3.6mm	1/3" 4.8x3.6mm
Diagonal	43.3mm	28.4mm	21.9mm	13.2mm	8.92mm	8.58mm	6.46mm	6.09mm	6.09mm	6.09mm
Exposure	64us~2000s	64us~2000s	32us~2000s	32us~2000s	32us~2000s	32us~2000s	32us~2000s	32us~2000s	32us~2000s	32us~2000s
Capture speed	4.75FPS	10FPS	23FPS	164FPS	60FPS	108FPS	170FPS	150FPS	60FPS	60FPS
Shutter	Rolling	Rolling	Rolling	Global	Rolling	Rolling	Rolling	Rolling	Rolling	Rolling
Read noise	1.7~3.0e	2.3~3.3e	1.2~3.6e	3.5~6.0e	1.4~2.2e	1.5~3.2e	1.0~3.2e	0.8~3.2e	4.0~6.6e	4.0~6.6e
QE peak	TBD	TBD	TBD	77%	TBD	TBD	TBD	TBD	75%	75%
Full well	52000e	46000e	20000e	32000e	15000e	22800e	14600e	19200e	13000e	13000e
ADC	14bit	14bit	12bit	12bit	14bit	12bit	12bit	12bit	12bit	12bit
Back focus	17.5mm	17.5mm	6.5mm	17.5mm	12.5mm	12.5mm	12.5mm	12.5mm	12.5mm	12.5mm
Interface	USB3.0/USB2.0	USB3.0/USB2.0	USB3.0/USB2.0	USB3.0/USB2.0	USB3.0/USB2.0	USB3.0/USB2.0	USB3.0/USB2.0	USB3.0/USB2.0	USB3.0/USB2.0	USB2.0

EFW Specification



Filter Specification

	LRGB	HSO
1.25"	✓	✓
31mm	✓	✓
36mm	✓	✓

Accessories

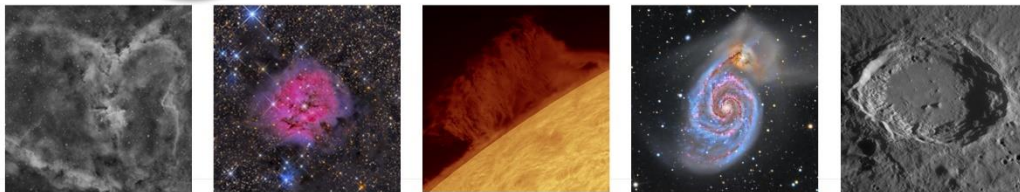


ASI174MC/MM

color or mono | cooled or uncooled

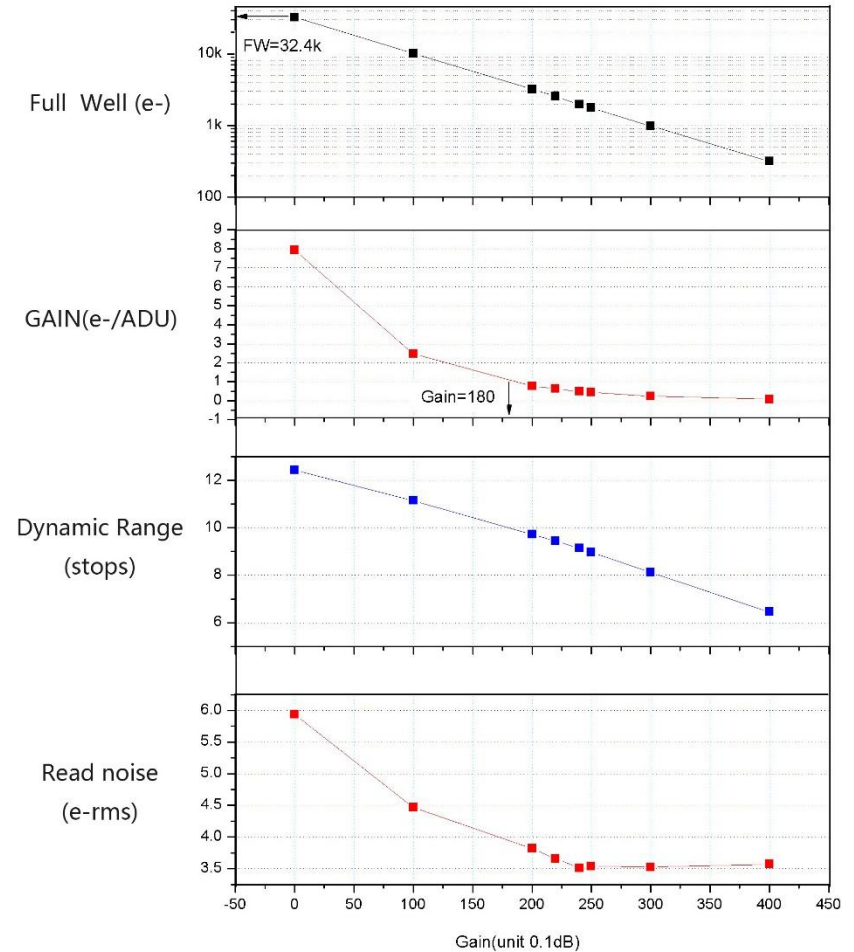


Sensor: 1/1.2" CMOS IMX174
Diagonal: 13.4mm
Resolution: 2.3Mega Pixels, 1936x1216
Pixel Size: 5.86µm
Max FPS at full resolution: 164FPS
Exposure Range: 32us to 300 sec. (uncooled)
 up to 2000 sec. (cooled)
Read Noise: 3.5e @ 24db gain
QE peak: 77%
Full well: 32.4ke
ADC: 12bit
Interface: USB3.0 or USB2.0
Cooling: 35°C-40°C below ambient
Cooler Power Consumption: 12V at 2A Max

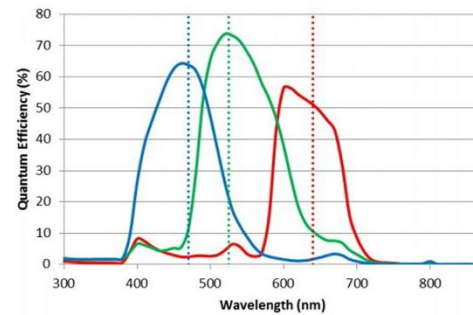


Start from **\$599** only

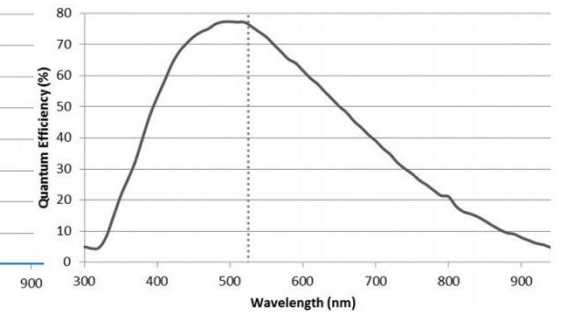
Read noise, full well, gain and dynamic range for ASI174



QE of color cameras



QE of mono cameras



ASI178MC/MM

color or mono | cooled or uncooled

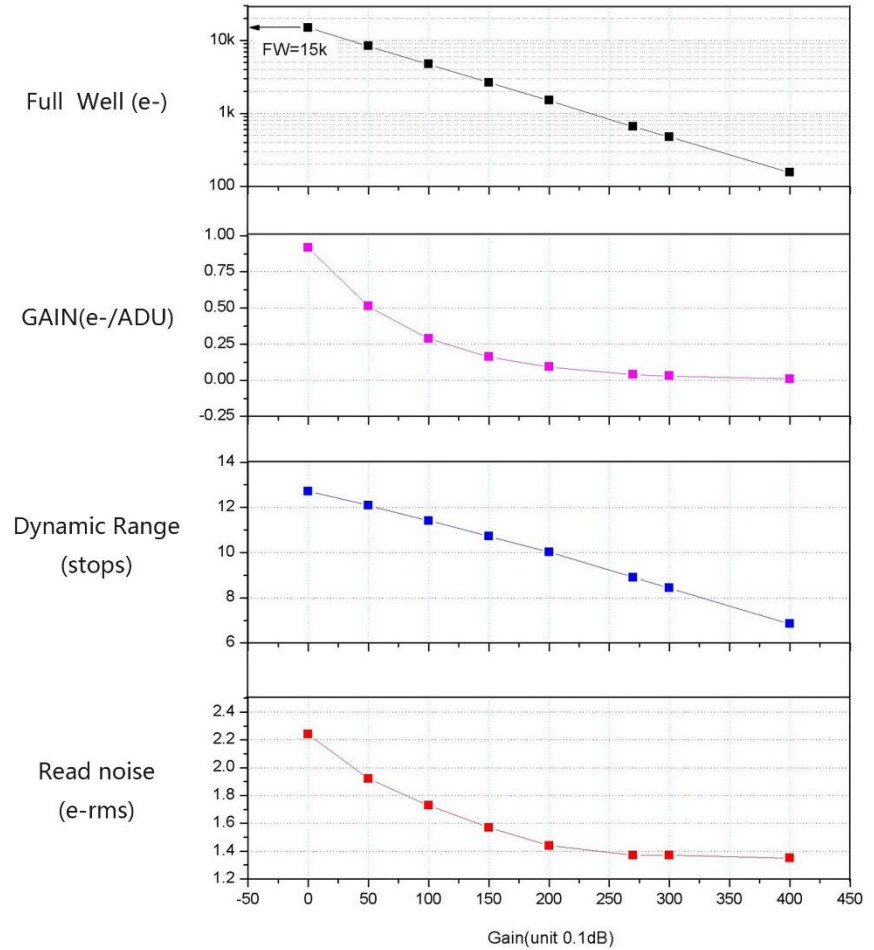


Sensor: 1/1.8" CMOS IMX178
Diagonal: 8.92mm
Resolution: 6.4Mega pixels, 3096x2080
Pixel Size: 2.4µm
Max FPS at full resolution: 60FPS
Exposure Range: 32us to 2000 sec.
Read Noise: 1.4e @27db gain
QE peak: TBD
Full well: 15ke
ADC: 14bit
Interface: USB3.0 or USB2.0
Cooling: 35°C-40°C below ambient
Cooler Power Consumption: 12V at 2A Max

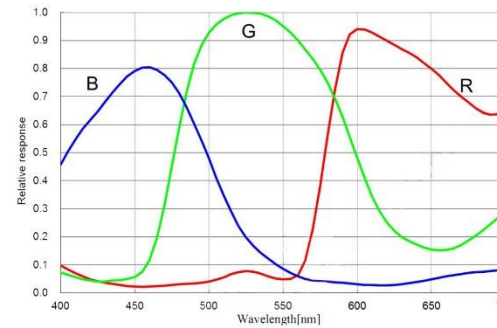


Start from **\$369** only

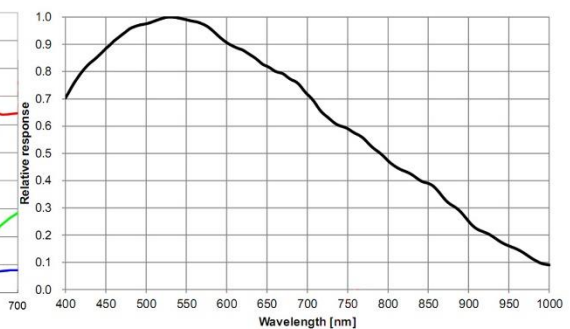
Read noise, full well, gain and dynamic range for ASI178



Relative QE of color cameras



Relative QE of mono cameras



ASI185MC

color | cooled or uncooled

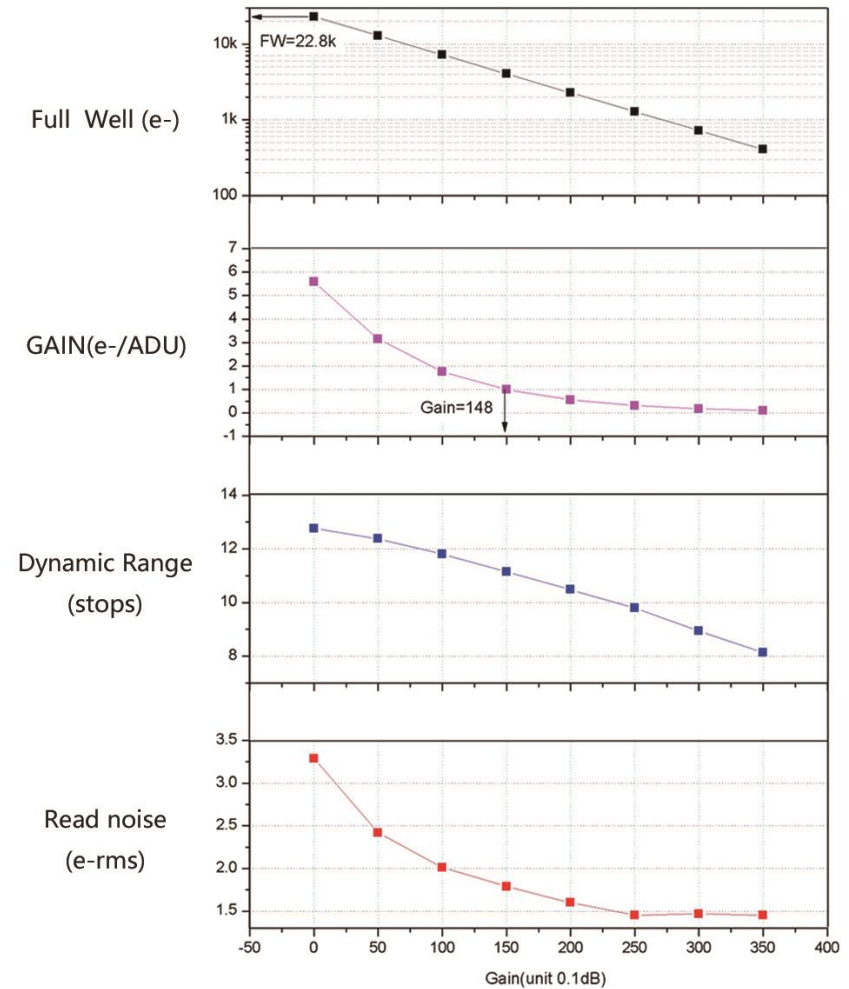


Sensor: 1/1.9" CMOS IMX185
Diagonal: 8.58mm
Resolution: 2.3Mega pixels, 1944x1224
Pixel Size: 3.75 μ m
Max FPS at full resolution: 108FPS
Exposure Range: 32us to 2000 sec.
Read Noise: 1.4e @24db gain
QE peak: TBD
Full well: 22.8ke
ADC: 12bit
Interface: USB3.0 or USB2.0
Cooling: 35°C-40°C below ambient
Cooler Power Consumption: 12V at 2A Max

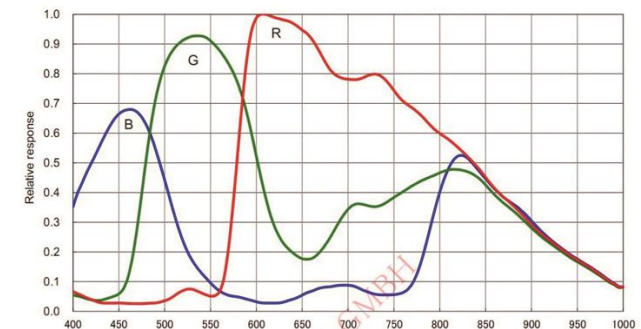


Start from **\$329** only

Read noise, full well, gain and dynamic range for ASI185



Relative QE of color cameras



ASI290MC/MM

color or mono | cooled or uncooled



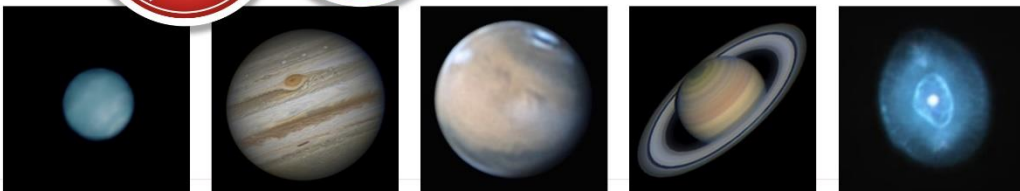
Sensor: 1/3" CMOS IMX290/IMX291
Diagonal: 6.46mm
Resolution: 2.13Mega pixels, 1936x1096
Pixel Size: 2.9µm
Max FPS at full resolution: 170FPS
Exposure Range: 32µs to 2000 sec.
Read Noise: 1.0e @30db gain
QE peak: TBD
Full well: 14.6ke
ADC: 12bit
Interface: USB3.0 or USB2.0
Cooling: 35°C-40°C below ambient
Cooler Power Consumption: 12V at 2A Max



1e
read noise

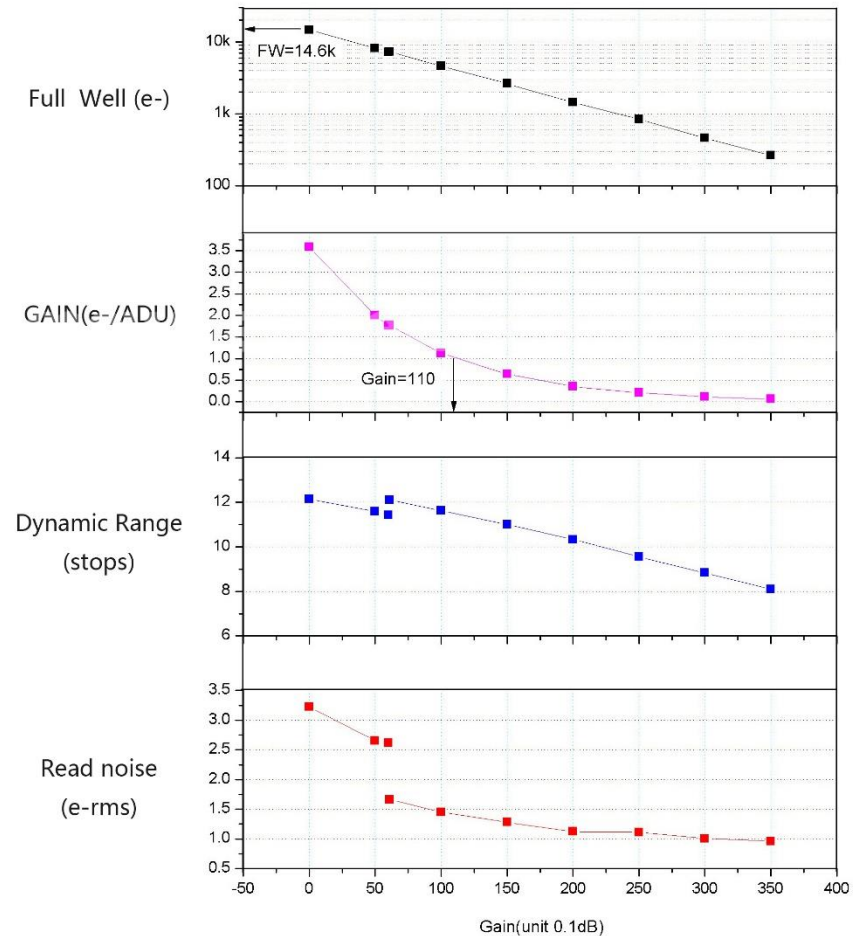
Best
Planetary
imaging
Mono Cam

HOT NEW
camera

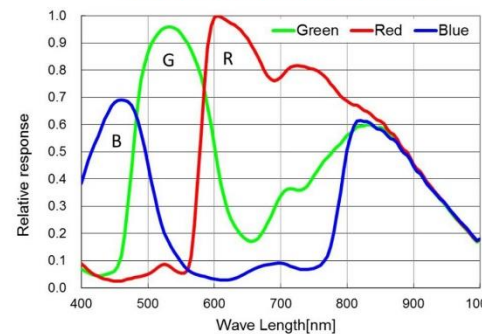


Start from **\$349** only

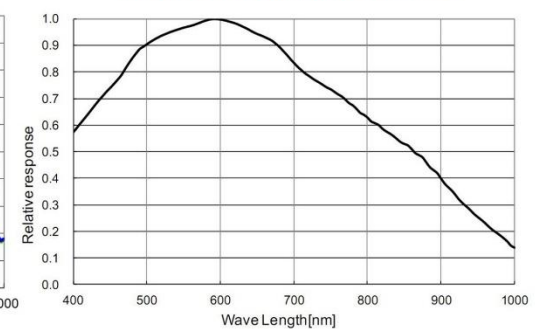
Read noise, full well, gain and dynamic range for ASI290



Relative QE of color cameras



Relative QE of mono cameras



ASI224MC

color | cooled or uncooled

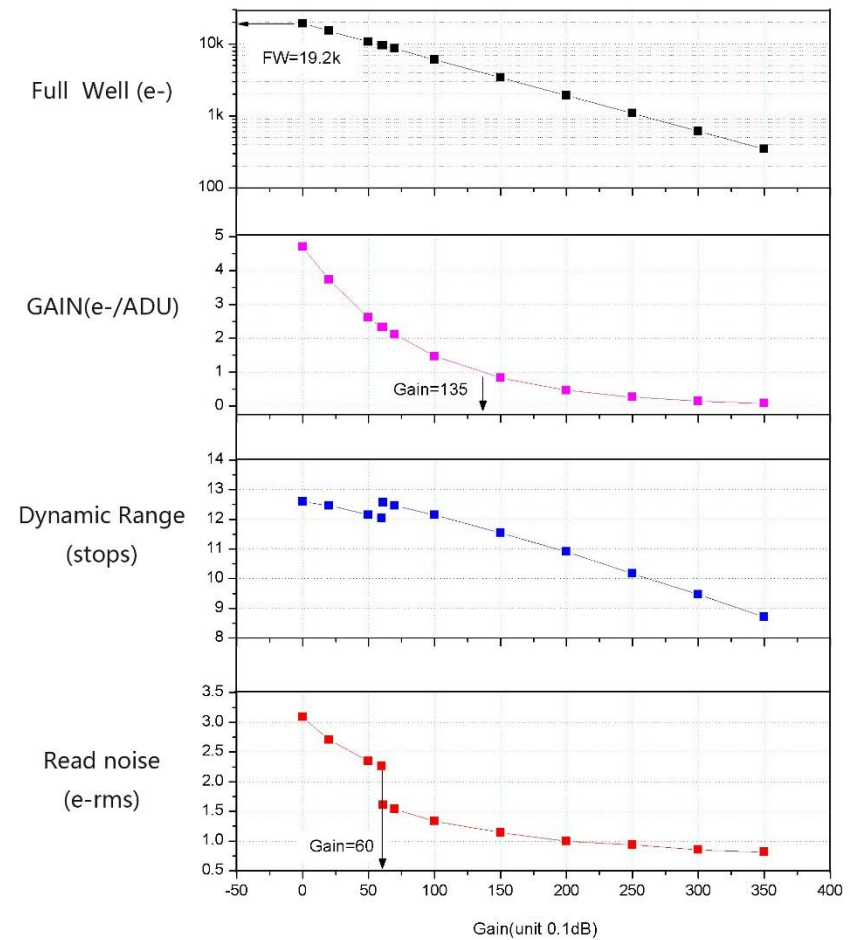


Sensor: 1/3" CMOS IMX224/IMX225
Diagonal: 6.09mm
Resolution: 1.27Mega pixels, 1304x976
Pixel Size: 3.75µm
Max FPS at full resolution: 150FPS
Exposure Range: 32µs to 2000 sec.
Read Noise: 0.8e @30db gain
QE peak: TBD
Full well: 20ke
ADC: 12bit
Interface: USB3.0 or USB2.0
Cooling: 35°C-40°C below ambient
Cooler Power Consumption: 12V at 2A Max

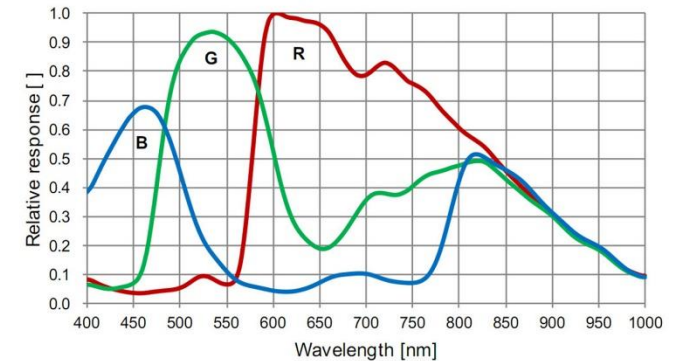


Start from **\$299** only

Read noise, full well, gain and dynamic range for ASI224



Relative QE of color cameras



ASI120MC/MM

color or mono | USB2.0 or USB3.0



Lunar, Solar and planetary imaging

Best BEGINNERS camera

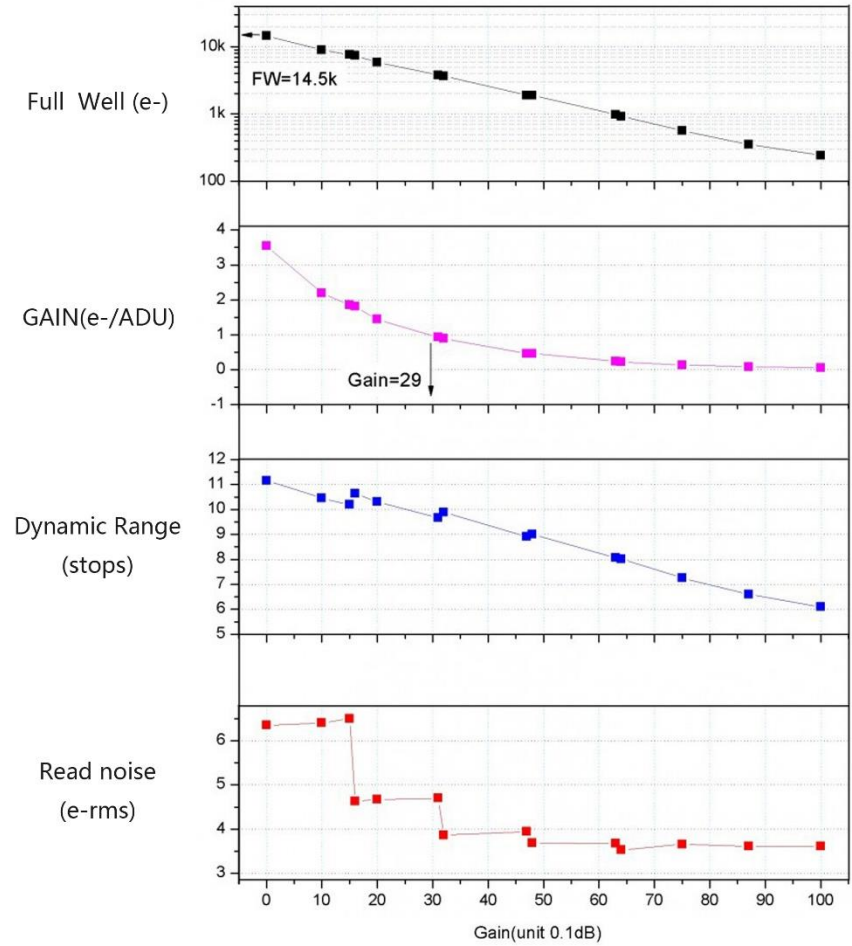
HOT PRODUCT 2014 SKY & TELESCOPE

Sensor: 1/3" CMOS AR0130CS
Diagonal: 6.09mm
Resolution: 1.2Mega pixels, 1280x960
Pixel Size: 3.75µm
Max FPS at full resolution: 35FPS@USB2.0
60FPS@USB3.0
Exposure Range: 32us to 2000s
Read Noise: 3.5e @ 4X gain
QE peak: 75%
Full well: 14.5ke
ADC: 12bit
Interface: USB3.0 or USB2.0

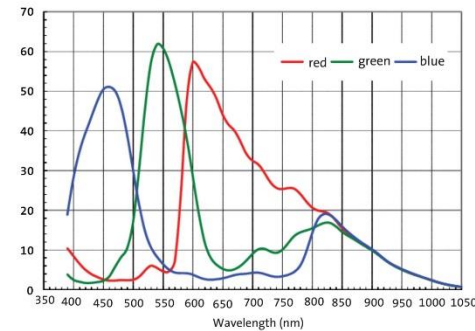


Start from **\$169** only

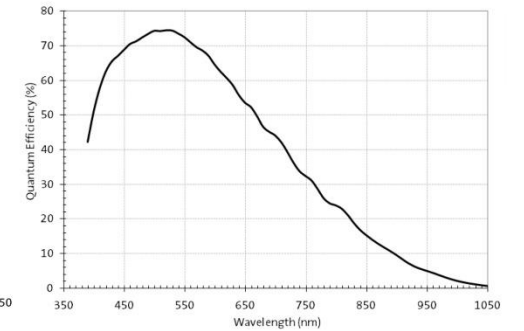
Read noise, full well, gain and dynamic range for ASI120



QE of color cameras



QE of mono cameras





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