

## QHY12 14.2mega pixel cooled APS size Color CCD camera

QHY12 is a compact and light weight one shot APS size CCD camera. With Super HAD technology and its two stage cooling system and the active cooling fan the dark noise of QHY12 is extremely low. The 5.12um\*5.12um pixel size is idea for very high resolution deep sky imaging. The 400g weight and 63mm diameter make QHY12 very suitable for Hyper Star Imaging. The QHY12 is based on QHYCCD's high speed and low readout CCD technology. It will produce high SNR imaging for deep sky imaging.



### QHY12 CCD camera spec

CCD sensor	SONY Super HAD CCD
CCD size	Typical 1.8inch(APS size)
Effective Image Area	24mm*16.4mm
Total pixel	4640*3160 (Note 1)
Effective pixel	4610*3080
Pixel size	5.12um*5.12um
CCD readout Type	2 field(1*1binning) Progressive Scan(2*2,4*4binning)
Full Well	32Ke-
Peak QE	55%@geen.46%@red and blue
Anti Blooming Gate	Yes,-100dB (Note 2)
Capture Download Speed	25sec(1*1binning) 12sec(2*2binning) 6sec(4*4binning)

Preview speed	6sec(1*1binning) 3sec(2*2binning) 2sec(4*4binning)	
Support Binning	1*1,2*2,4*4	
Dynamic Range	71dB	
Readout speed	600kpixel/s, 3Mpixel/s	
Readout Noise	Typical 8-10e-	
System Gain	0.5e-/ADU	
CDS	Yes	
ADC	16bit	
Cooling	Two stage TEC	
Fan	Build in Active Fan	
Maximum Delta T	45degree below ambient	
Temperature regular	Yes	
Power consumption(INPUT=12V)	Minimum(TEC OFF)	3.6Watt
	TEC=50%	13Watt
	Maximum(TEC=100%)	30Watte
Input voltage	DC12V(Input to DC201 adapter) Safe Range(11V-13.5V) <b>[Note 3]</b>	
Telescope Interface	M42/0.75 screw & 2inch T ring	
Maximum Center adjustment	+-0.5mm	
Maximum Tile adjustment	1Degree	
CCD sensor to front location surface(glass index of IR optic window included)	Apporx 20mm(without tile adjust ring) Apporx 23mm(with tile adjust ring)	
Weight(Camera body only, without DC201 and cables)	390g(without tile adjust ring) 425g(with tile adjust ring)	
Camera size	Diameter=63mm Length=120mm	
Guide port	Build in Optic isolated guide port RJ11 6pin(ST4 type) (Optional depend on software support)	
External removable Silicon gel tube	Yes	

**Note:**

- 1) This is the physical array value. The actual output image size depends on the software.
- 2) -100dB means the over exposure ratio without blooming is 100000times, when exceed this, blooming may occur(eg. Very bright star) . Blooming can be completely avoid by add extra mechanical shutter
- 3) If input voltage exceed 12V (eg. Using battery just charged). Check the "TEC protection" options in software.

## Mechanical Drawing

