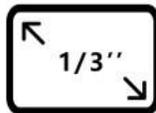


Product Description

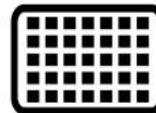
ASI290MM Mini camera integrates Sony **IMX290** 1/3" sensor (5.6 mm x 3.2 mm). It is ZWO first mini camera. This camera has **1936 x 1096 pixels**. The pixel size is 2.9 μm x 2.9 μm . This camera provides **12bit ADC** and its **QE peak is over 80%**.



Sensor
IMX290



1/3"
5.6*3.2mm



Resolution
1936*1096



ADC
12bit



Read Noise
1.0e



FPS
20.4



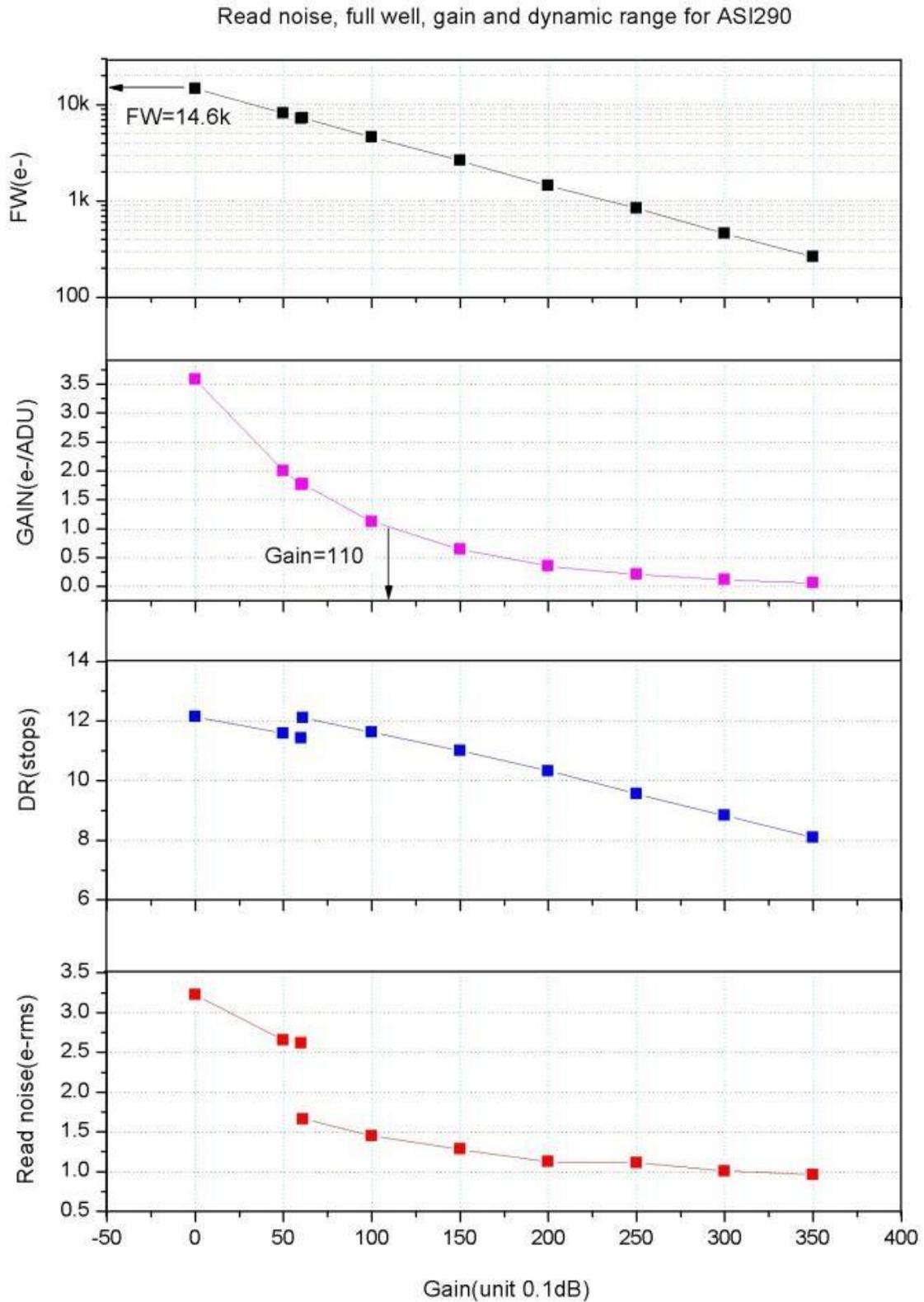
QE
80%



USB
2.0

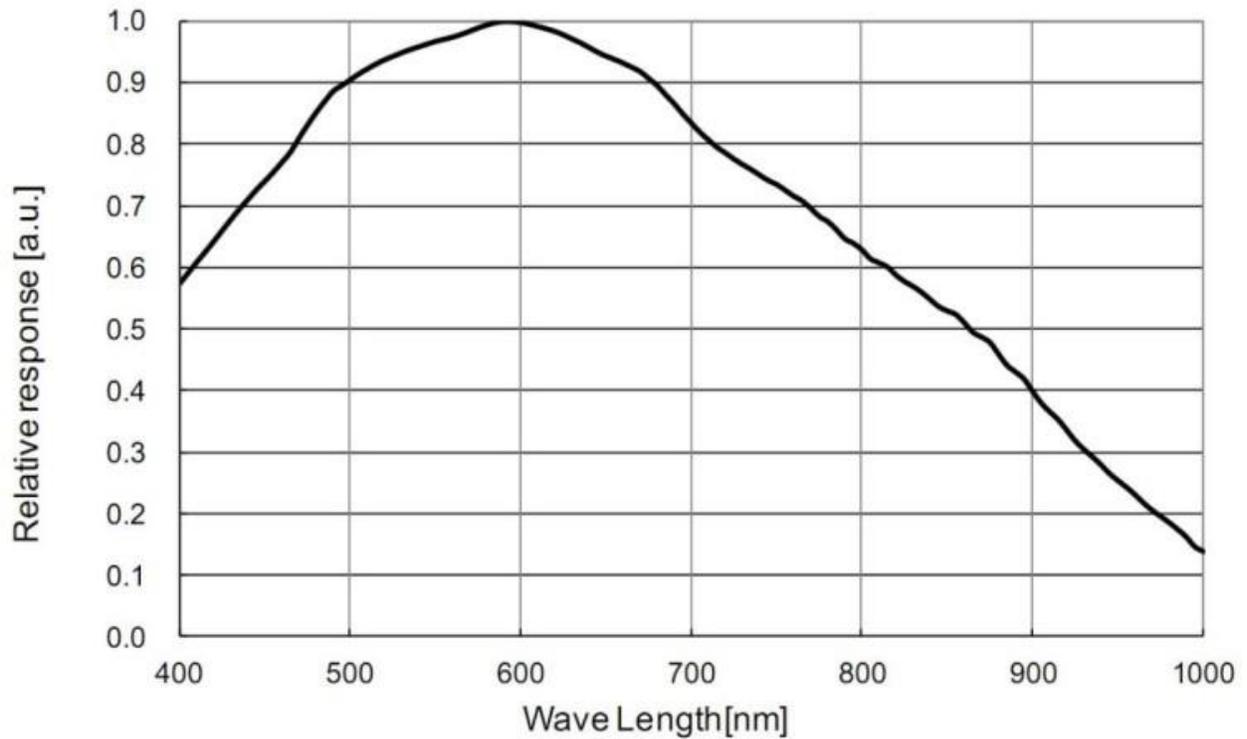
Astrophotography Performance

ASI290 mini camera offers you very good performance for planetary imaging and guiding. Low read noise, high dynamic range, QE peak >80%, AR protective window and much more.



High QE

Relative QE Curve, we estimate the Peak Value is about 80%.



290Mini vs. 290MM

Compared with ASI290MM camera, 290mini have smaller outlook, lighter weight, and it can reach focus at same position with eyepiece.



ASI290MM Mini



ASI290MC/MM

| | | |
|----------------|---------|---------|
| Diameter | 36mm | 62mm |
| Weight | 60g | 120g |
| Interface type | Type C | Type B |
| Speed | USB 2.0 | USB 3.0 |

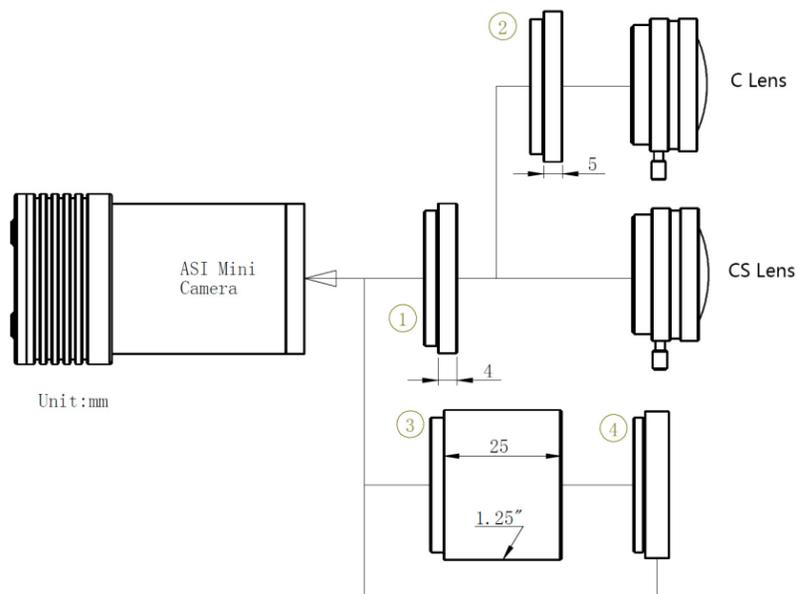
USB2.0 Port & ST4 Port

USB 2.0 Port: Mini camera has one USB2.0 type C port. Type C port is very popular in mobile phones, it will not care about positive side and negative side of the adapter.

ST4 Port: Can connect mini camera direct connect to auto guide port of mount.

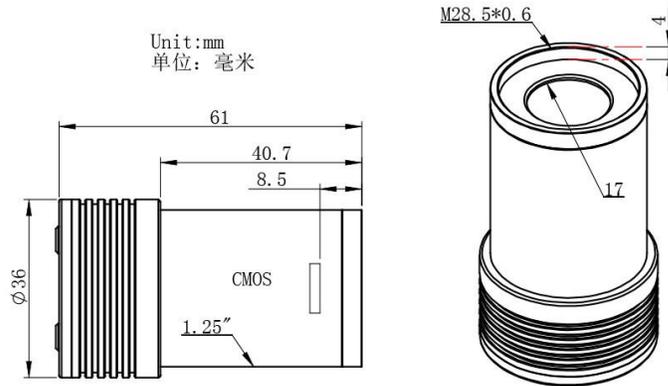


Connecting Drawing



1. M28.5-CS adapter
2. CS-C adapter
3. 1.25" extender
4. 1.25" filter

Mechanical Drawing



What is in the box?

ASI mini camera box includes all necessary cables, adapters, and manuals.



1.25" cover



camera body



quick guide



0.5m USB2.0 cable



2m USB2.0 cable



ST4 cable



M28.5-CS adapter



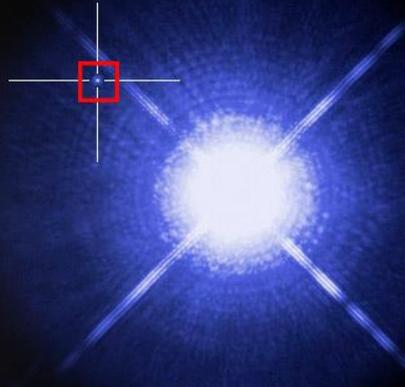
1.25" extender

Drivers and Softwares:

Our website has newest camera drivers and many DSO and Planetary capture softwares. Please make sure the newest driver and software has been installed before you start shooting:

<https://astronomy-imaging-camera.com/software/>

ASI Mini Camera



ASI174 and ASI290 mini camera have very beautiful outlooks, small size, lighter weight, this is not a big deal.

We should consider much more...

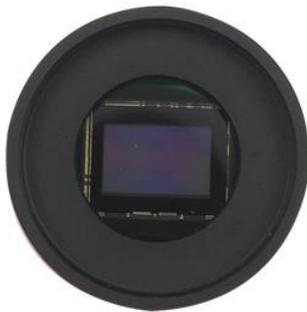
How shall we choose a good guide camera?

Many people may say : must be small, suitable for different equipments(guide scope, OAG), stable working.

Yes, I think thoes are basic demands for a good guide camera, and ASI mini camera can do them well.

So, what else we do care in the deep of our mind?

I think there will be three potential requests: **high sensitivity, precisely guiding, big FOV.**



ASI174mini

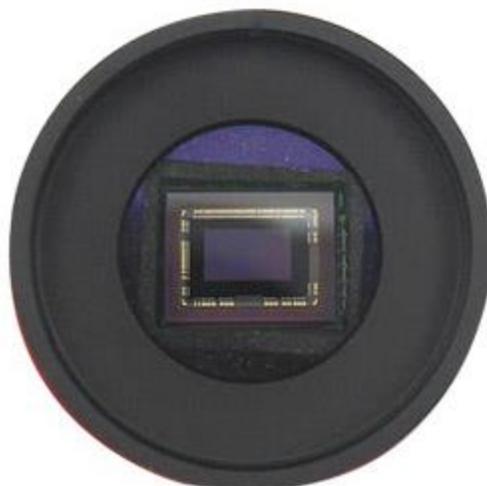


ASI290mini

High Sensitivity

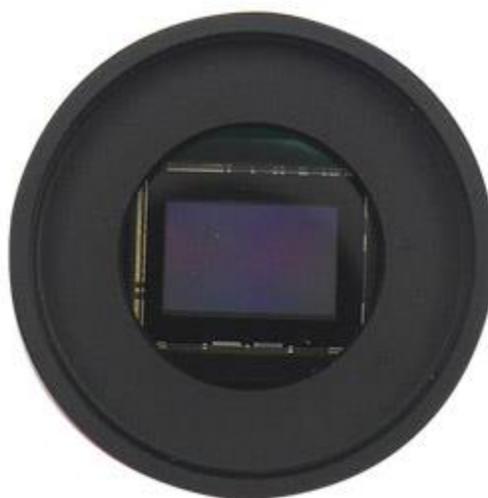
Sensitivity is the first thing we considered. it is very important to look for a guide star. So, at beginning, we were considering using mono sensor to design our guide camera only. Because mono sensor has much higher sensitivity than color ones. After that, we carefully compared the sensitivity of our sensors. At last, we decide to use 290 and 174 mono sensor. As we know, 290 and 174 mono sensors have about 80% QE peak, can detect more stars in view. Also, we can shorten the exposure time in guiding.

Precisely Guiding



ASI290 mini is designed for precisely guiding. 2.9um pixel size can give you a higher arcsec/pixel than 224 or 120 cameras. Which means in same guide scope, 290mini can detect slighter movement of stars. ASI290 mini can improve about 30% guide precision than 120mm.

Big FOV



ASI174 mini is designed for Big FOV guiding. This is very useful in OAG to looking for a guide star. When you use OAG guider working with Ritchey-Chretien or Schmit-Cassegrain telescope, the hardest part is to look for a guide star. ASI174 mini have 1/1.2" big sensor which means you can have 4 times bigger Fov than 120mm.

Smiling Face

The back of ASI mini camera is like a smiling face, it's mouth is Type C USB port, which is widely used in mobile phones. And it's nose is ST4 port, for guiding. Every time, you use mini camera, there always will be a smiley face stay with you in the dark nights.



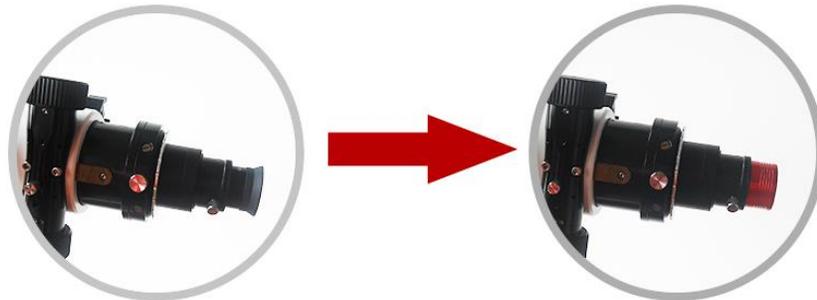
ASI174mini



ASI290mini

Focus like a eyepiece

ASI mini camera can focus at same position as eyepiece. You can focus with a eyepiece, and put ASI mini camera into 1.25" holder.



Work with OAG

Mini camera is very suitable for OAG, it can have much bigger focus range than normal ASI cameras. Never to worry about that guide camera cannot focus with main camera at same time.



Work with CS adapter and CS lens



Work with 1.25" extender



Sensor: 1/2.8" CMOS IMX290/IMX291
Resolution: 2.1Mega Pixels 1936×1096
Pixel Size: 2.9μm
Exposure Range: 32μs-2000s
ROI: Supported
ST4 Guider Port: Yes
Focus Distance to Sensor: 8.5mm
Shutter Type: Rolling Shutter
Protect window: AR coated window
Operating System Compatibility: Mac, Windows, Linux
Interface: USB2.0
Bit rate: 12bit output(12bit ADC)
Adaptor: 1.25" / M28.5X0.6
Dimension: φ36mm X 61mm
Weight: 60g or 3.1 ounces (without lens)
Working Temperature: -5°C—45°C
Storage Temperature: -20°C—60°C
Working Relative Humidity: 20%—80%
Storage Relative Humidity: 20%—95%
Supported resolution

USB2.0 MAX FPS

1936×1096: 20.4

1280×960: 35.3

640×480: 141.5

320×240: 355.9

2X2Bin :968×548: 20.4

More resolutions can be user defined