

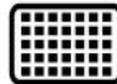
# ASI071MC Pro



Sensor  
IMX071



APS-C  
23.6\*15.6mm



Resolution  
4944\*3284



ADC  
14bit



Read Noise  
2.3e



Cooling Temp  
↓35°C



DDR3 Buffer  
256MB



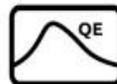
USB  
3.0



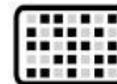
FPS  
10



Full well  
46000e



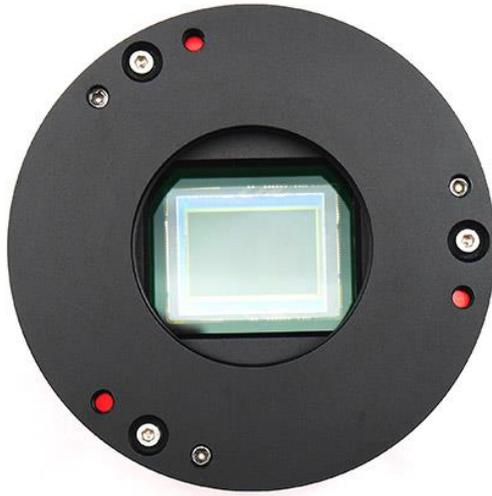
QE  
50%



Pixel Size  
4.78μm

## Camera Sensor

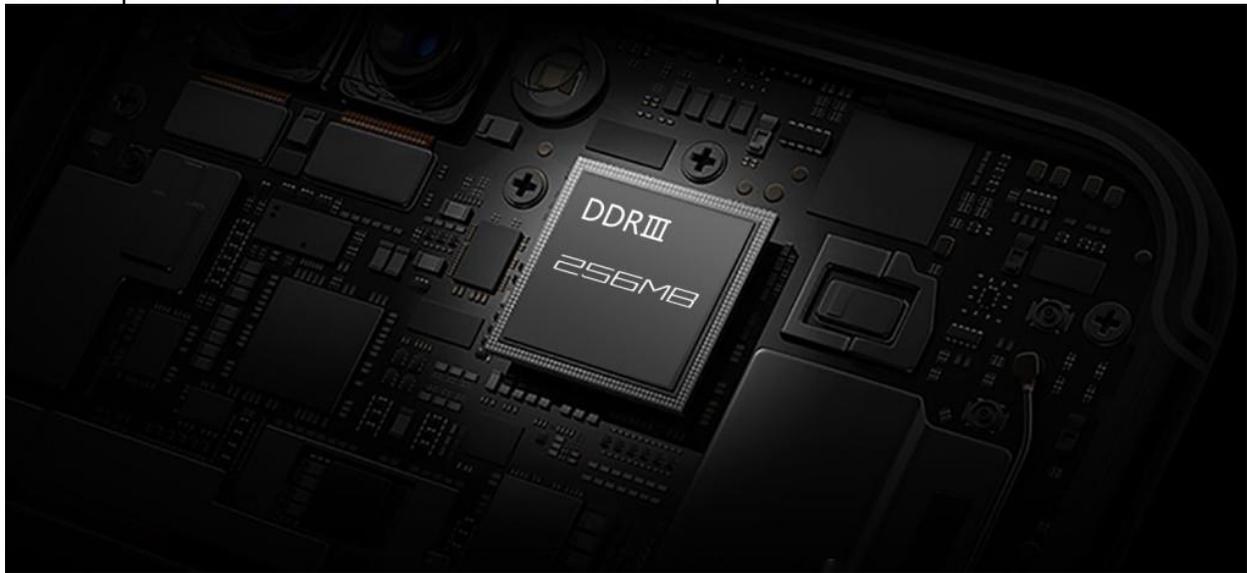
▶ **IMX071**



- Most famous sensor of Sony
- APS-C(1.8") Diagonal 28.4mm
- 16M Pixel (4944x3284)
- Very low read noise: 2.3e @24db gain 3.3e @lowest gain
- 14Bit ADC: provide real 14bit Dynamic range
- Electronic shutter: no vibration problem with mechanical shutter

## DDR Memory Buffer

ASI071MC Pro camera includes a 256MB DDR3 memory buffer to help improve data transfer reliability. Additionally, the use of a memory buffer minimizes amp-glow, which is caused by the slow transfer speeds when the camera is used with a USB 2.0 port.

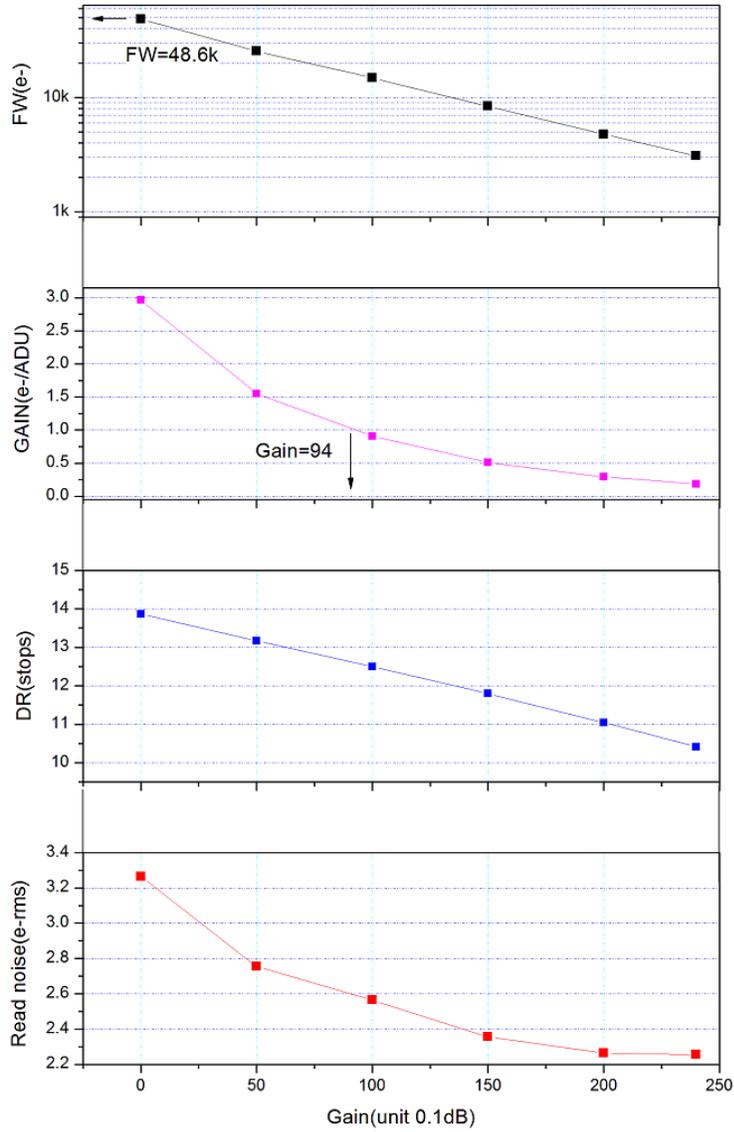


DDR memory buffer is the main difference between ASI "Cool" and "Pro" cameras.

# Astrophotography Performance

ASI071MC Pro offers very good performance for astrophotography. Low read noise, high dynamic range.

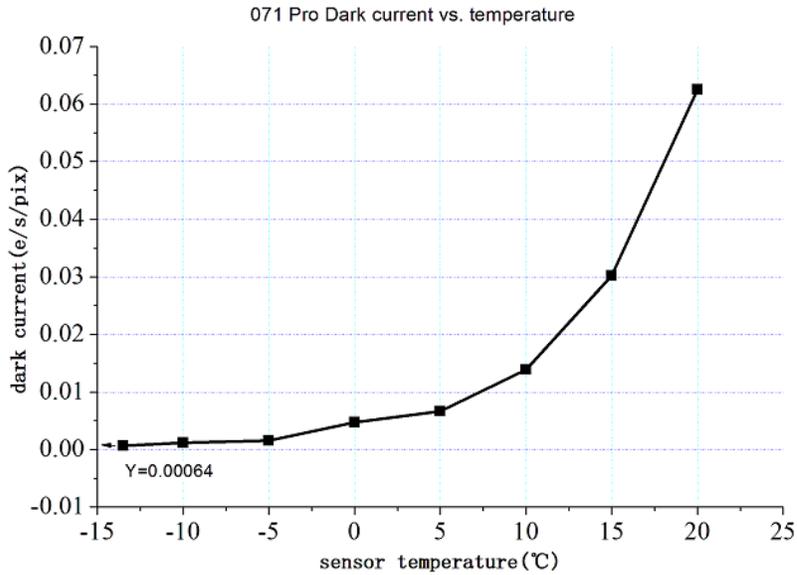
Read noise, full well, gain and dynamic range for ASI071 Pro



## Dark Current

the Dark Current of ASI071MC Pro is better controlled than before with the help of DDR buffer and new improvement of hardware design

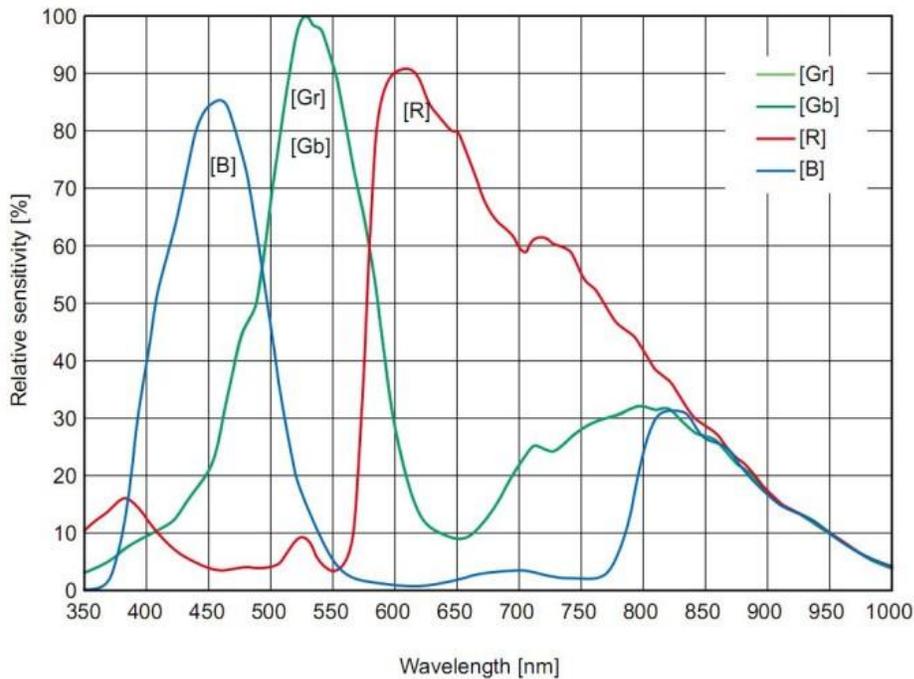
Please check this 300s dark frame free of amp-glow:[Here](#)



## QE Curve

We suppose the QE peak value is more than 50%.

Relative QE curve



## Unique Tilt Adapter

ASI071 Pro includes unique tilt adapter. Say goodbye to tilt problems forever !



## USB 3.0 Port & USB2.0 HUB

**USB 3.0 Port:** Provide 5Gb bandwidth to make it possible for ASI071MC Pro to run at 10 fps (14bit, normal mode) at full resolution(16Mega).

**USB 2.0 HUB:** Can connect with various accessories, including a filter wheel, guide camera or electronic focuser, allowing you to manage your cables better. There are two short 0.5m USB2.0 cables included with the ASI071 Pro. The hub is powered by the external power supply if you connect one.



### **New mechanical design and Anti-Dew Heater**

The ASI071MC-PRO camera comes with a completely upgraded anti-dew and mechanical body. The diameter of the camera body is increased to 86mm (ASI071MC-Cool is 78mm).

**▶ 6 screws seal the chamber**

This new structure seal the CMOS chamber better.

## ASI071MC Pro



## ASI071MC-COOL



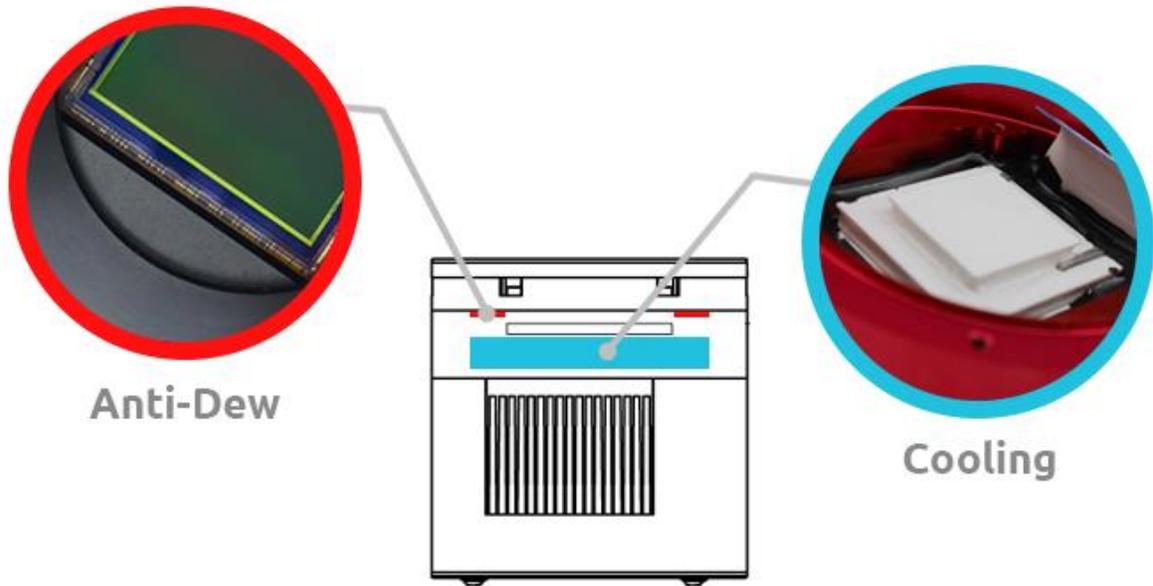
### ▶ anti-dew and cooling system

ASI071MC Pro has a two-stage TEC cooling system that allows deep cooling (35°C-40°C below ambient). You will need an external power supply to power the cooler. An AC-DC power adapter is not included in this package, however you can order one from [here](#).

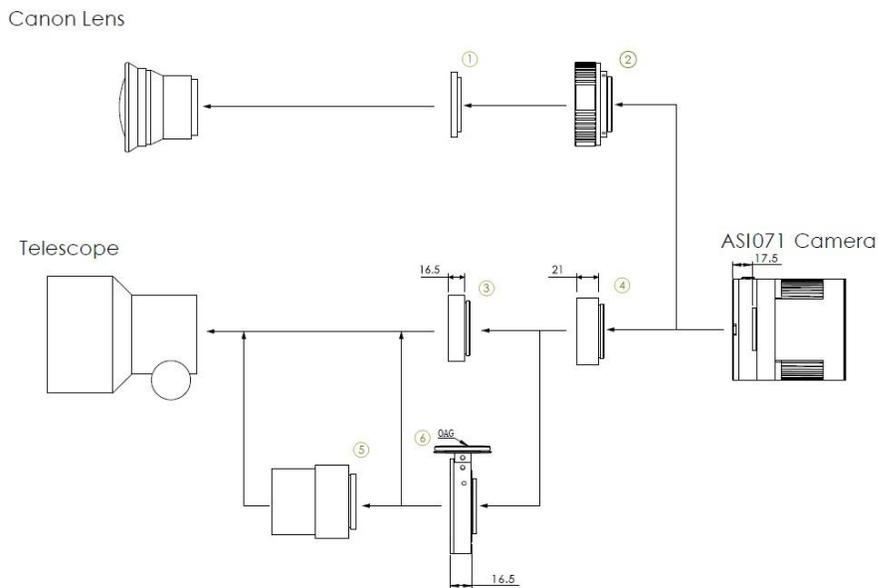
We recommend using a 12V/3-5A or more DC adapter for cooler power supply (2.1x5.5, center positive).

Using a battery with 9-15V is also suitable for the cooler power supply.

The anti-dew heater will heat the AR protect window to avoid any dew problems. The heat anti-dew heater power is around 3.6W and can be turn off in software to save power.

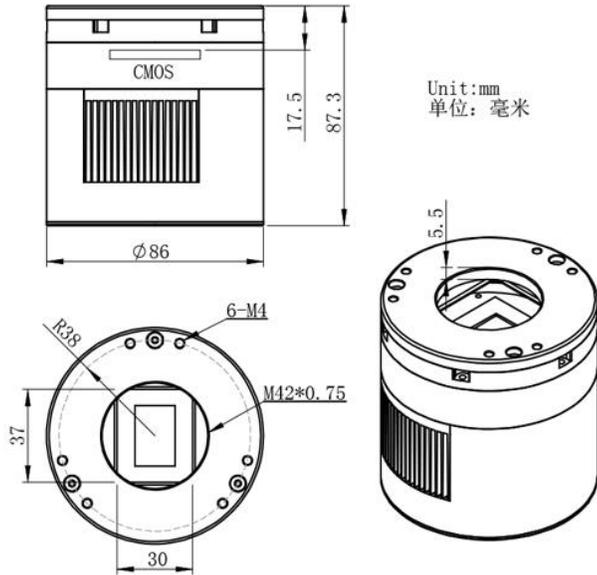


## Connecting Diagram



1. 2" Filter (optional)
2. EOS-T2 adapter
3. M42 to M48 extender 16.5mm
4. M42 extender 21mm
5. Focal reducer
6. OAG

## Mechanical Diagram



## What is in the box?

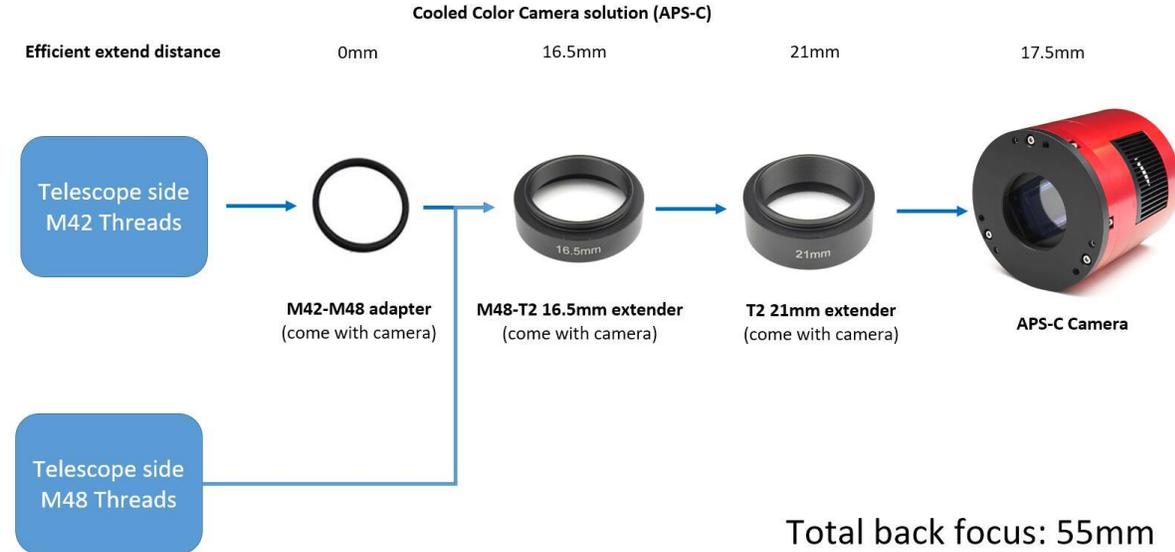
ASI071MC Pro box includes all necessary cables, adapters, and manuals.



Notice : Cooled cameras need a 12v power adapter, If you don't have one, please click this link to buy a 12V power adapter. There are 4 different standard for different century, please choose it carefully.

<https://astronomy-imaging-camera.com/product/acdc-adapter-12v-5a-for-cooled-cameras>

## The best solution of 55mm back focus length



Read more: <https://astronomy-imaging-camera.com/tutorials/best-back-focus-length-solutions-55mm.html>

## 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/>

Before first usage of this product read [manuals](#) and install correct [drivers and software](#).

## Specification

Sensor: SONY IMX071 CMOS  
Diagonal: 28.4mm  
Resolution: 16Mega Pixels 4944X3284  
Pixel Size: 4.78µm  
Bayer Pattern: RGGG  
Max FPS at full resolution :10FPS  
Shutter:Rolling shutter  
Exposure Range: 64µs-2000s  
ROI: Supported  
Read Noise: 2.3e @24db gain  
QE peak: TBD  
Full well: 46ke  
ADC:14bit  
DDRIII Buffer: 256MB

Interface: USB3.0/USB2.0  
Adaptor: M42X0.75  
Protect window:AR window  
Dimensions: 86mm Diameter  
Weight: 640g  
Back Focus Distance: 17.5mm  
Cooling: Regulated Two Stage TEC  
Delta T: 35°C-40°C below ambient  
Cooler Power consumption: 12V at 3A Max  
Working Temperature: -5°C—45°C  
Storage Temperature: -20°C—60°C  
Working Relative Humidity: 20%—80%  
Storage Relative Humidity: 20%—95%  
Supported resolution  
14Bit ADC  
4944x3284 10fps  
1920x1200 28fps  
1280x1080 33fps  
640x480 70fps  
320x240 134fps