Sirius Optics
Unit 1
26 Darnick Street
Underwood, Qld 4119

Opening Hours

10am-5:30pm Mon-Fri
9am-2pm Sat

Phone: 07 3423 2355
www.sirius-optics.com.au

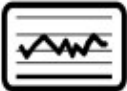# ZWO ASI290MM Monochrome Camera and Autoguider

AUD $519.00

Product Images

Short Description

The ASI290MM offers very good performance for astrophotography, with low read noise and high dynamic range

Description

CMOS	**1/3''**	**Resolution**	**ADC**	**QE**
Sensor IMX290	1/3'' 5.6*3.2mm	1936*1096	12bit	80%
Read Noise	**FPS**	**Full well**	**USB**	**Pixel Size**
1.0e	170	14600e	3.0	2.9µm

Camera Sensor

IMX290LQR, IMX291LQR

Diagonal 6.46 mm (Type 1/2.8) Square Pixel Array Mono CMOS Image Sensor

Back-Illuminated CMOS image Sensors with Improved Visible Light and Near Infrared Sensitivity that Support 1080p

Sony has developed the approx. 2.13M effective pixel back-illuminated CMOS image sensors IMX290LQR and IMX291LQR with improved sensitivity in the visible-light and near infrared light regions for industrial applications.
A new 2.9 µm-square unit pixel has been developed that combines a back-illuminated structure with technology for improving near infrared sensitivity to further enhance picture quality at low illumination, while at the same time realizing Full HD cameras for industrial applications. This realizes two or more times the sensitivity in the visible-light region and three or more times the sensitivity in the near infrared light region than that of the existing Sony product (IMX236LQJ).
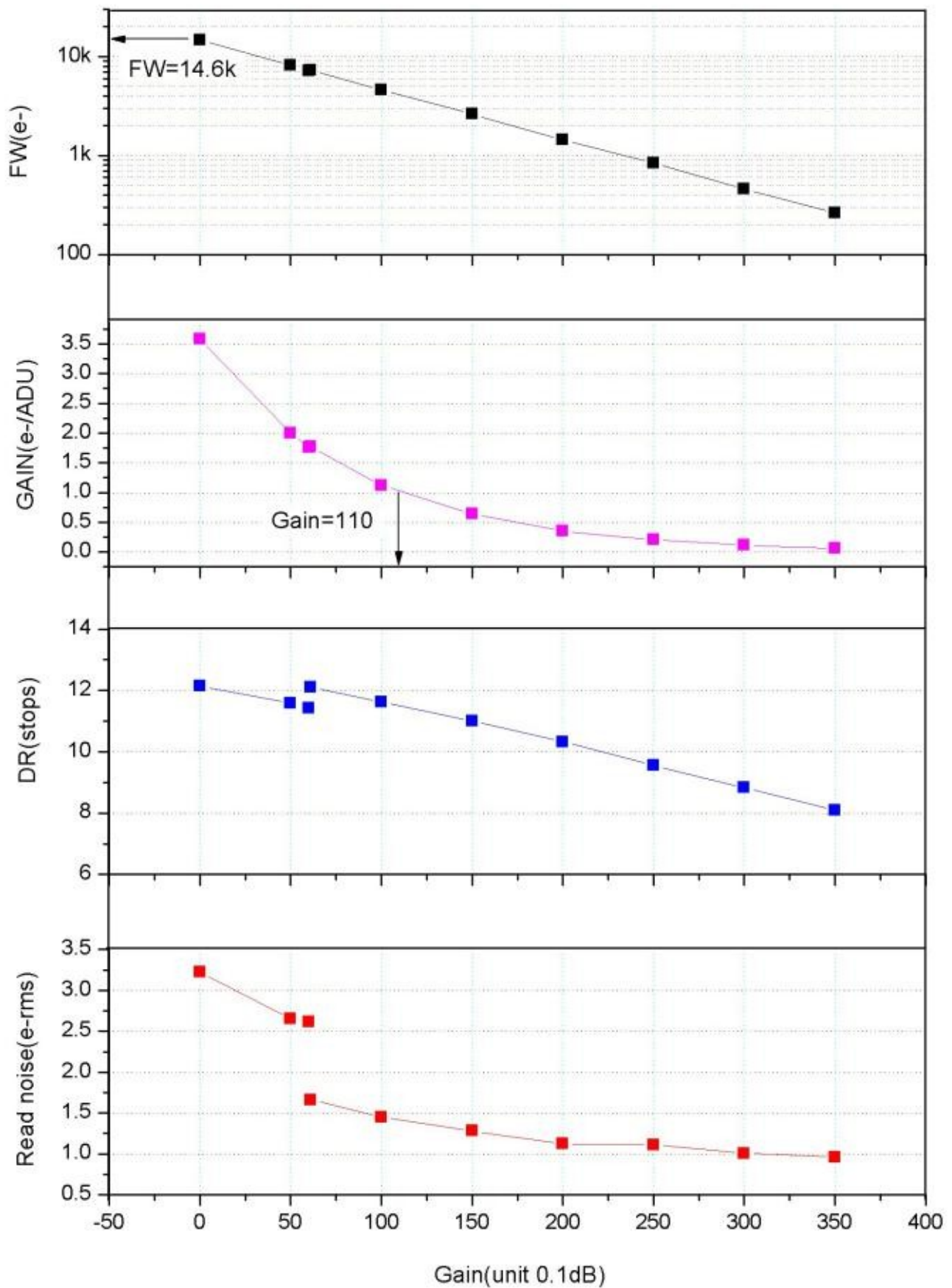
Astrophotography Performance

ASI290MM offers very good performance for astrophotography. Low read noise, high dynamic range, QE peak about 80%, AR protective window and much more.

<
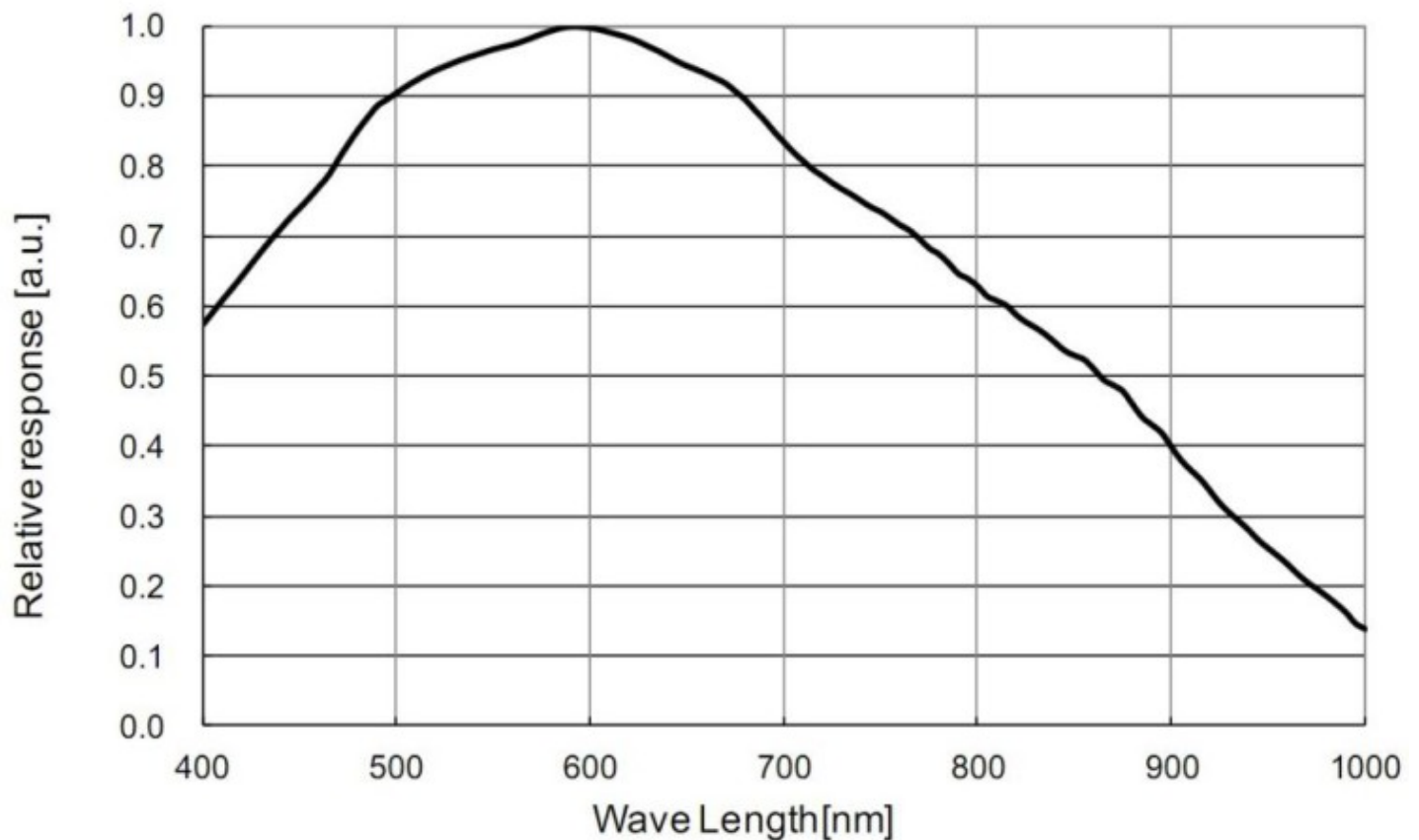="http://astronomy-imaging-camera.com/wp-content/uploads/290-rea

dnoise.jpg">

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

https://www.sirius-optics.com.au/zwo-asi290mm-monochrome-camera-and-autoguider.html

23 August 2025

High QE

Relative QE Curve, estimated Peak Value of about 80%.

< ="http://astronomy-imaging-camera.com/wp-content/uploads/ASI290MM-QE.jpg">
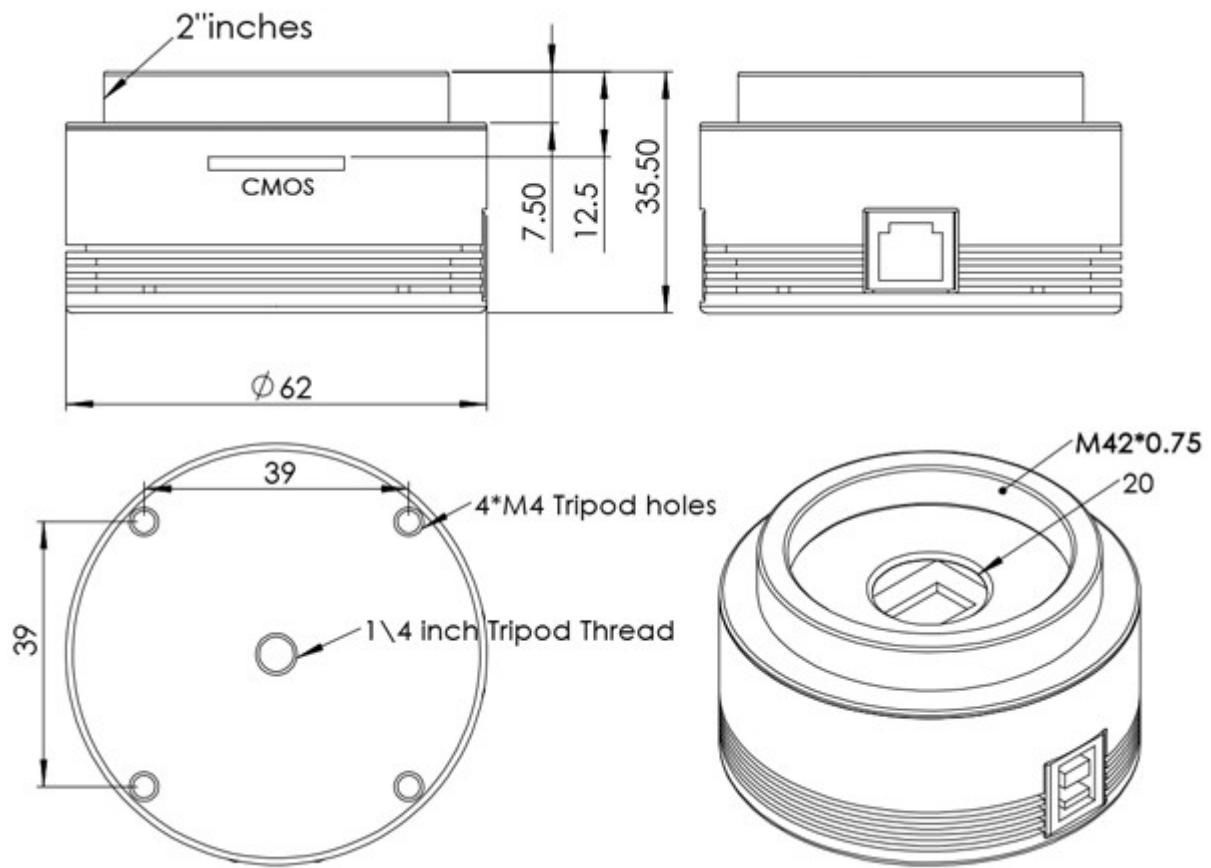

USB 3.0 Port & ST4 Port

USB 3.0 Port: can provide 5Gb bandwidth to let ASI290 run at 82.2fps (12bit, normal mode) or 170 fps (10bit, high speed mode) at full resolution(2.1Mega).

ST4 Port: can be used connect with auto guider port of mount, for guiding.

Mechanical Diagram

< ="https://astronomy-imaging-camera.com/wp-content/uploads/asi385MC-Mechanical-Drawing.jpg">

Unit:mm

2"inches

CMOS

7.50

12.5

35.50

⌀62

M42*0.75

20

39

39

4*M4 Tripod holes

1\4 inch Tripod Thread

https://www.sirius-optics.com.au/zwo-asi290mm-monochrome-camera-and-autoguider.html

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Specifications

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: 12.5mm
Shutter Type: Rolling Shutter
Protect window: AR coated window
Operating System Compatibility: Mac, Windows, Linux
Interface: USB3.0/USB2.0
Bit rate: 12bit output(12bit ADC)
Adaptor: 2″ / 1.25″ / M42X0.75
Dimension: φ62mm X 36mm
Weight: 120g or 4.2 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

USB3.0 MAX FPS(12bit/10bit)
1936×1096: 82.2/170
1280×960: 93.6/193.9
640×480: 184/381.2
320×240: 355.9/737.5
2X2Bin :968×548: 82.2/170

More resolutions can be user defined

https://www.sirius-optics.com.au/zwo-asi290mm-monochrome-camera-and-autoguider.html

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