

# Dhyana 6060

The Dhyana 6060 brings the speed and dynamic range to large format imaging missing from previous CCD technology.<sup>[1]</sup> With a massive 86 mm diameter, high quantum efficiency and 10-micron pixels size, it is well suited to scientific applications in areas such as Astronomy and Physics.



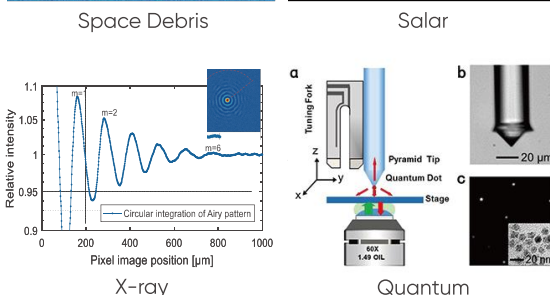
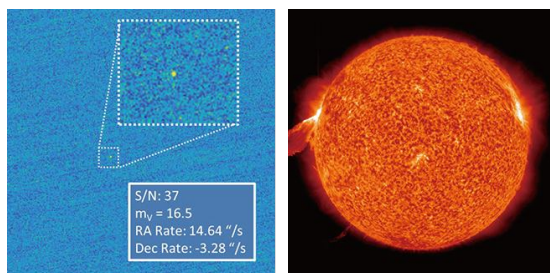
Key Features	6060	Benefits
Field of View	61.4 mm x 61.4 mm	Very large field of view from 36 MP, 10 $\mu$ m pixel size sensor.
Quantum Efficiency	72 % QE	High photon collection efficiency for lower illumination intensity.
Frame Rate	44 fps	Faster data rates than the previous CCD technology.
Full-well Capacity	123 ke-	High dynamic range for the measurement of bright and dim signals at the same time.
Cooling Method	Air & Liquid	Maintains low dark noise, minimizes vibration, and aids thermal stability.

## Typical Applications

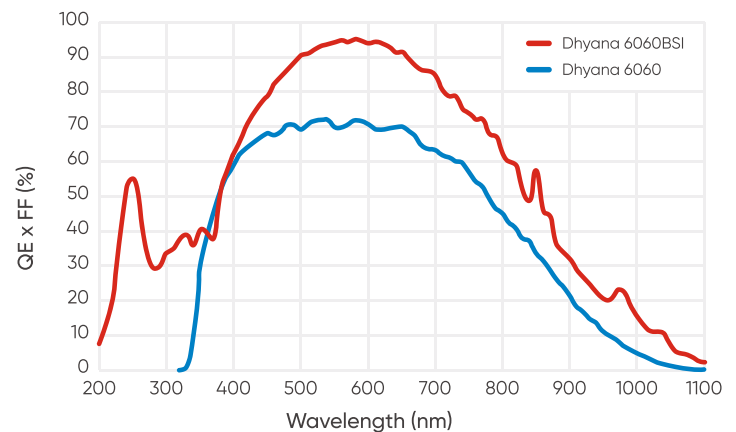
- Space Debris Detection
- Solar Astronomy
- X-ray Detection
- Quantum Optics

## Noted Examples

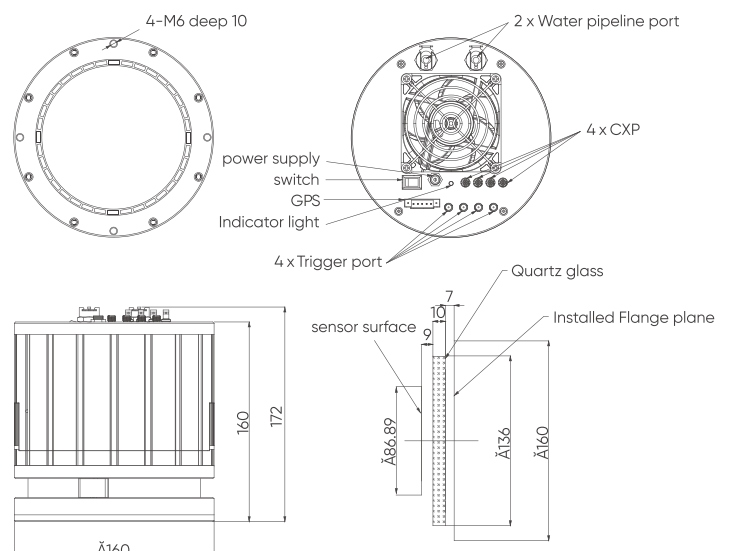
[1] Large sCMOS technology can be used in a wide range of applications previously limited by CCD technology.



## Quantum Efficiency



## Dimensions (Unit: mm)



# Specifications

Large Format sCMOS Camera

[www.tucsen.com](http://www.tucsen.com)

Model	Dhyana 6060
Sensor Type	FSI sCMOS
Sensor Model	Gpixel GSENSE6060
Peak QE	72 % @ 550 nm
Color/Mono	Mono
Array Diagonal	86.8 mm
Effective Area	61.4 mm x 61.4 mm
Resolution	6144 (H) x 6144 (V)
Pixel Size	10 $\mu\text{m}$ x 10 $\mu\text{m}$
Full-Well Capacity	Typ. : 123 ke-
Dynamic Range	Typ. : 91 dB
Frame Rate	44 fps @ 12-bit STD, 19 fps @ 16-bit HDR, 14 fps @ 14-bit STD
Readout Noise	Typ. : 3 e- (Median)
Shutter Type	Rolling
Exposure Time	7 $\mu\text{s}$ ~ 300 s
DSNU	1.5 e-
PRNU	0.2 %
Cooling Method	Air, Liquid
Max. Cooling	45 °C below ambient (Liquid)
Dark Current	Air: 0.25 e-/pixel/s, Liquid: 0.15 e-/pixel/s
Binning	2 x 2, 4 x 4
ROI	Support
Timestamp Accuracy	1 $\mu\text{s}$
GPS	Support
Trigger Mode	Hardware, Software
Output Trigger Signals	Exposure start, Global, Readout end, High level, Low level
Trigger Interface	SMA
Data Interface	CoaxPress 2.0
Data Bit Depth	12 bit, 14 bit, 16 bit
Optical Interface	User Customization
Power Supply	12 V / 10 A
Power Consumption	< 100 W
Dimensions	$\phi$ 160 mm x 164 mm
Weight	4 kg
Software	SamplePro , MAXIMDL , LabVIEW , MATLAB, EPICS
SDK	C , C++ , C# , Python
Operating System	Windows, Linux
Operating Environment	Working: Temp. -35~45 °C , HUM 0~95 % Storage: Temp. -35~60 °C , HUM 0~95 %