Dhyana 6060 / 6060BSI

The Dhyana 6060 / 6060BSI brings the speed and dynamic range to large format imaging missing from previous CCD technology.[1] 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.

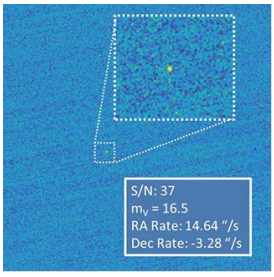
Key Features	6060	6060BSI	Benefits
Field of View	61.4 mm x 61.4 mm	61.4 mm x 61.4 mm	Very large field of view from 36 MP, 10 μm pixel size sensor.
Quantum Efficiency	72 % QE	95% QE	High photon collection efficiency for lower illumination intensity.
Frame Rate	44 fps	26.4 fps	Faster data rates than the previous CCD technology.
Full-well Capacity	123 ke-	102 ke-	High dynamic range for the measurement of bright and dim signals at the same time.
Cooling Method	Air & Liquid	Air & Liquid	Maintains low dark noise, minimizes vibration, and aids thermal stability.

Typical Applications

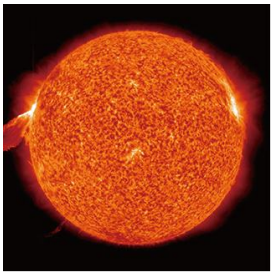
- Space Debris Detection
- Solar Astronomy
- X-ray Detection
- Quantum Optics

Noted Examples

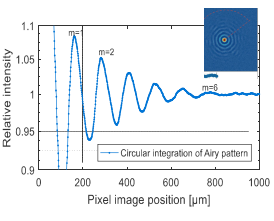
[1] Large sCMOS technology can be used in a wide range of applications previously limited by CCD technology.



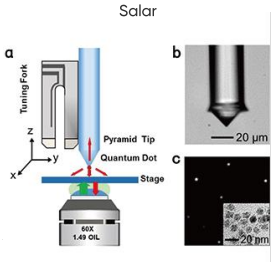
Space Debris



Salar

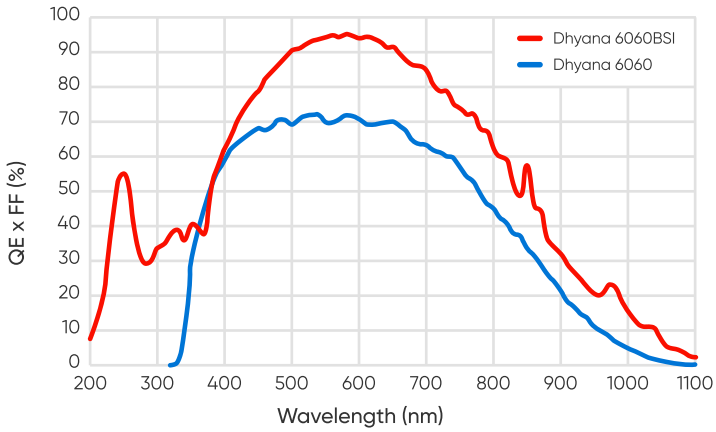


X-ray

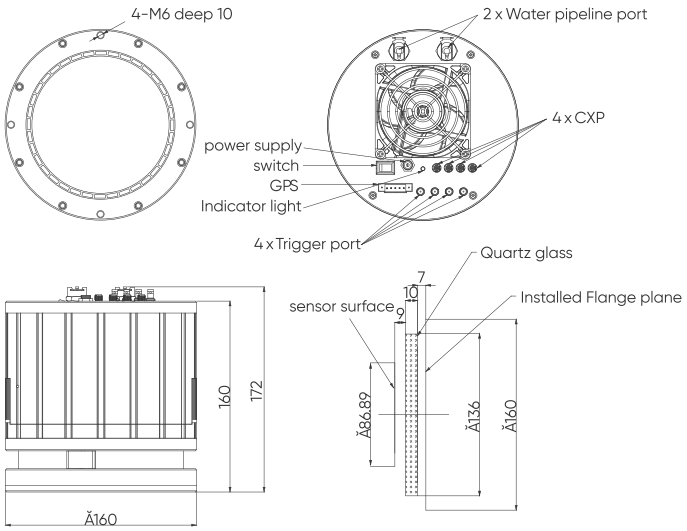


Quantum

Quantum Efficiency



Dimensions (Unit: mm)



Specifications

Model	Dhyana 6060	Dhyana 6060BSI
Sensor Type	FSI sCMOS	BSI sCMOS
Sensor Model	Gpixel GSENSE6060	Gpixel GSENSE6060BSI
Peak QE	72%@550 nm	95%@580 nm
Chrome	Mono	
Array Diagonal	86.8 mm	
Effective Area	61.4 mm x 61.4 mm	
Resolution	6144 (H) x 6144 (V)	
Pixel Size	10 μm x 10 μm	
Full Well Capacity	Typical: 123 ke-	Typical: 102 ke-
Dynamic Range	Typical: 91 dB	Typical: 90 dB
Frame Rate	44 fps@12-bit STD, 19 fps@16-bit HDR 14 fps@14-bit STD	26.4 fps@12-bit STD, 11.3 fps@16-bit HDR 8.6 fps@14-bit STD
Readout Noise	Typical: 3 e- (Median)	
Shutter Mode	Rolling	
Exposure Time	7 μs~300 s	12 μs~300 s
DSNU	1.5 e-	
PRNU	0.2%	
Cooling Method	Air, Liquid	
Cooling Temp.	45°C below ambient (Liquid cooling)	
Dark Current	Air: 0.25 e-/pixel/s, Liquid: 0.15 e-/pixel/s	
Binning	2 x 2, 4 x 4	
ROI	Support	
Timestamp Acc.	1 μs	
GPS	Support	
Trigger Mode	Hardware, Software	
Trigger Output	Exposure Start, Global Exposure, Readout End, High, Low	
Trigger Interface	SMA	
Data Interface	CoaxPress 2.0	
Bit Depth	12 bit, 14 bit, 16 bit	
Optical Interface	User Customization	
Power Supply	12 V / 10 A	
Power Cons.	＜ 100 W	
Dimensions	ϕ 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°C~40°C, HUM 0%~95% Storage: Temp. -35°C~60°C, HUM 0%~95%	

*Specifications in this manuat are subject to changes without prior notice.