

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 μm pixels size, it is well suited to scientific applications in areas such as Astronomy and Physics.



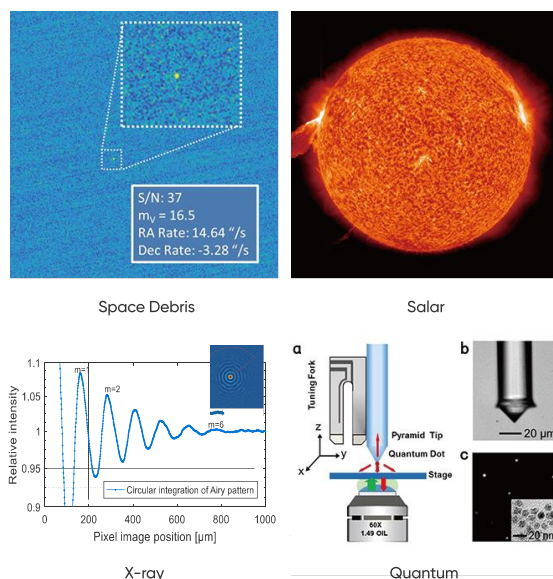
Key Features	6060	6060BSI	Benefits
Field of View	61.4 mm x 61.4 mm	61.4 mm x 61.4 mm	Very large field of view from 36 MP, 10 μm pixel size sensor.
Quantum Efficiency	72 % QE	95% QE	High photon collection efficiency for lower illumination intensity.
Frame Rate	44 fps	26.4 fps	Faster data rates than the 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

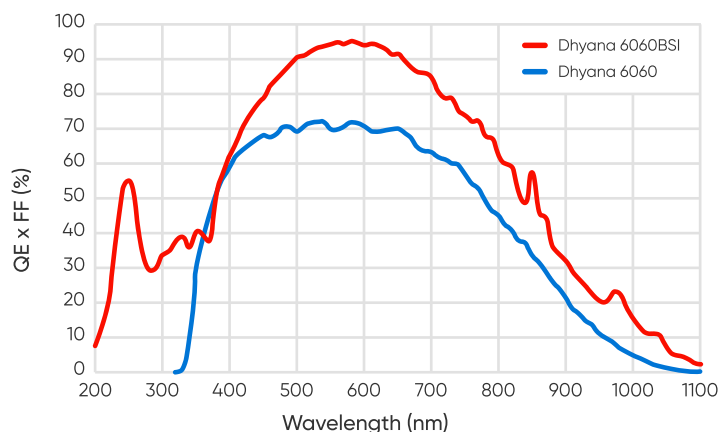
- Space Debris Detection
- Solar Astronomy
- X-ray Detection
- Quantum Optics

Noted Examples

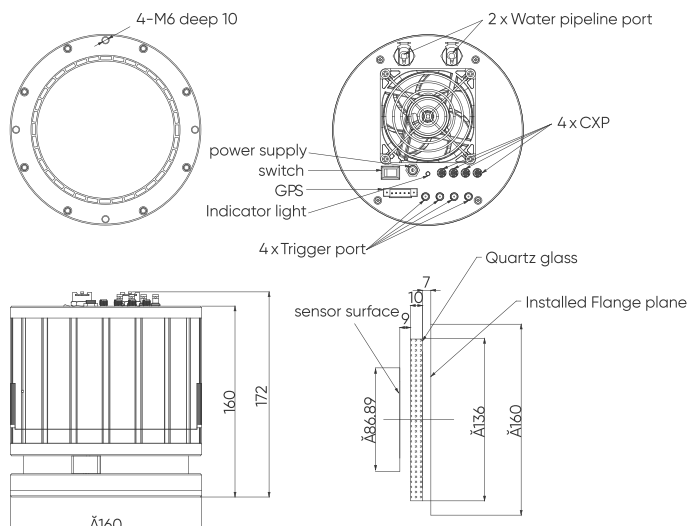
[1] Large-area sCMOS technology can be used in a wide range of applications previously limited by CCD technology.



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 Cooling, Liquid Cooling		
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	Mosaic 3.0, Sample Pro, MAXIMDL, LabVIEW, MATLAB, EPICS		
SDK	C / C++ / C# / Python		
Operating System	Windows, Linux		
Environment	Working: Temp. -35°C~40°C, HUM 0%~95%; Storage: Temp. -35°C~60°C, HUM 0%~95%		

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



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