Dhyana 6060BSI

The Dhyana 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.

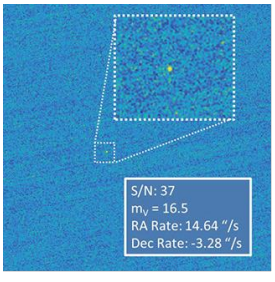
Key Features	6060BSI	Benefits
Field of View	61.4 mm x 61.4 mm	Very large field of view from 36 MP, 10 µm pixel size sensor.
Quantum Efficiency	95% QE	High photon collection efficiency for lower illumination intensity.
Frame Rate	26.4 fps	Faster data rates than the previous CCD technology.
Full-well Capacity	102 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

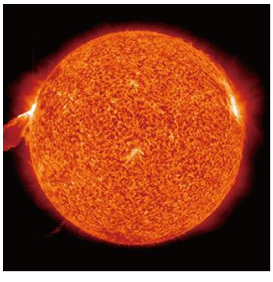
- Space Debris Detection
- Solar Astronomy
- X-ray Detection
- Quantum Optics

Noted Examples

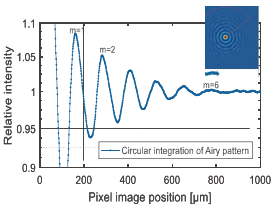
[1] Large sCMOS technology can be used in a wide range of applications previously limited by CCD technology.



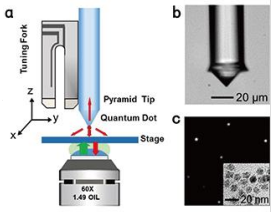
Space Debris



Salar

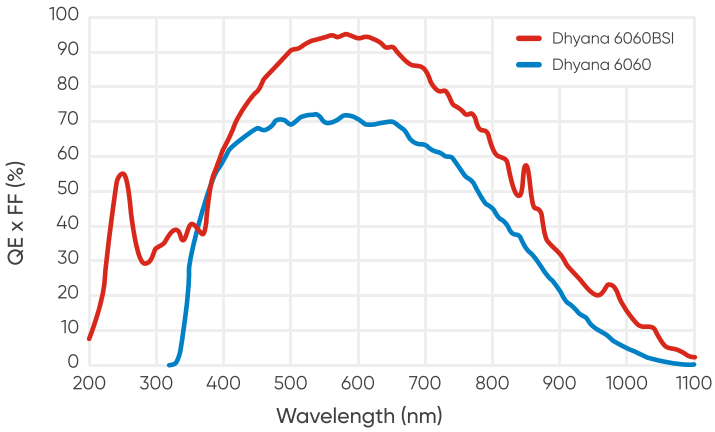


X-ray

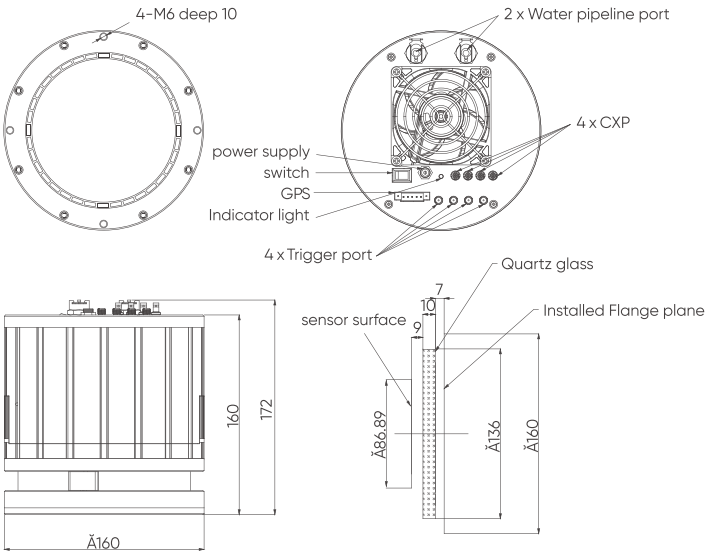


Quantum

Quantum Efficiency



Dimensions (Unit: mm)



Specifications

Large Format sCMOS Camera

www.tucsen.com

Model	Dhyana 6060BSI
Sensor Type	BSI sCMOS
Sensor Model	Gpixel GSENSE6060BSI
Peak QE	95 % @ 580 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 μm x 10 μm
Full-Well Capacity	Typ. : 102 ke-
Dynamic Range	Typ. : 90 dB
Frame Rate	26.4 fps @ 12-bit STD, 11.3 fps @ 16-bit HDR, 8.6 fps @ 14-bit STD
Readout Noise	Typ. : 3 e- (Median)
Shutter Type	Rolling
Exposure Time	12 μs ~ 300 s
DSNU	1.5 e-
PRNU	0.2 %
Cooling Method	Air, Liquid
Max. Cooling	45 ℃ 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 μs
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	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. -35~45 ℃ , HUM 0~95 % Storage: Temp. -35~60 ℃ , HUM 0~95 %