

Dhyana 95 V2

The Dhyana 95 V2 delivers ultimate sensitivity achieving similar results to EMCCD camera technology without the concerns of signal drift, gain aging, multiplication gain noise (1.4x) and headaches of export control restrictions.^[1]



Key Features

200 nm -1100 nm

95% QE & Lowest Noise

11 μm x 11 μm Pixel Size

100 ke- Full-well Capacity

CameraLink & USB 3.0

Reliable and Stable Cooling

Benefits

Wide Spectral Response, supports UV, visible, and near-infrared imaging applications.

Higher SNR than EMCCD when the signal (photon) $> 3 \text{ e}^-$.^[2]

Large pixels capture 3x the light of standard 6.5 μm pixels to maximize photon detection.

High dynamic range for the measurement of bright and dim signals at the same time.

Use the flexibility of USB or if additional speed is required move to CameraLink.

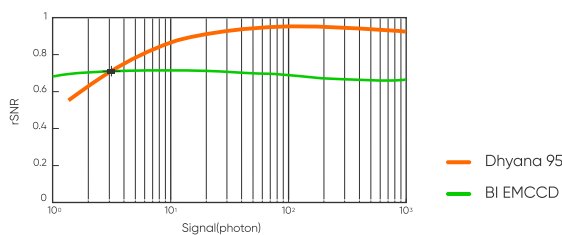
Effectively suppresses dark current and signal fluctuation, ensuring system stability.

Typical Applications

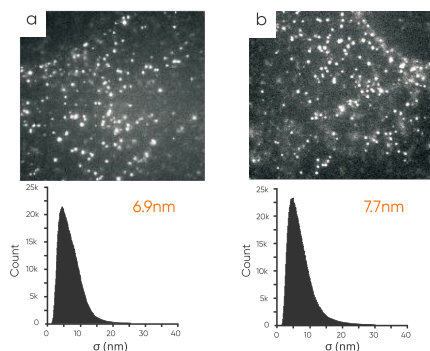
- Advanced Microscopy
- Spectral Imaging
- X-ray Imaging
- Astrophysical

Noted Examples

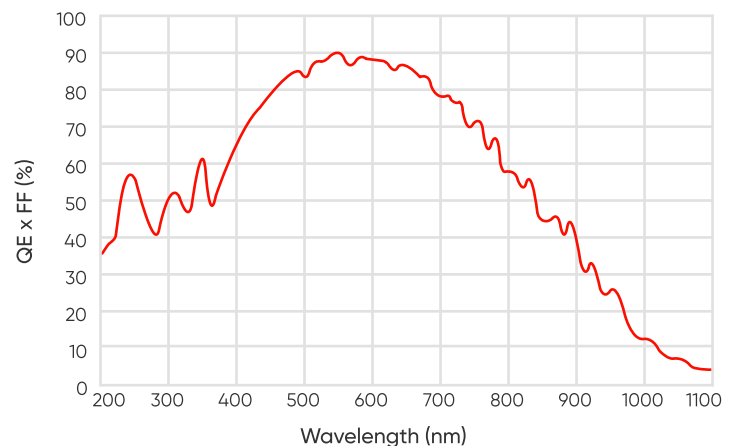
[1] Dhyana 95 V2 demonstrating higher localization accuracy than EMCCD in single-molecule localization experiments.



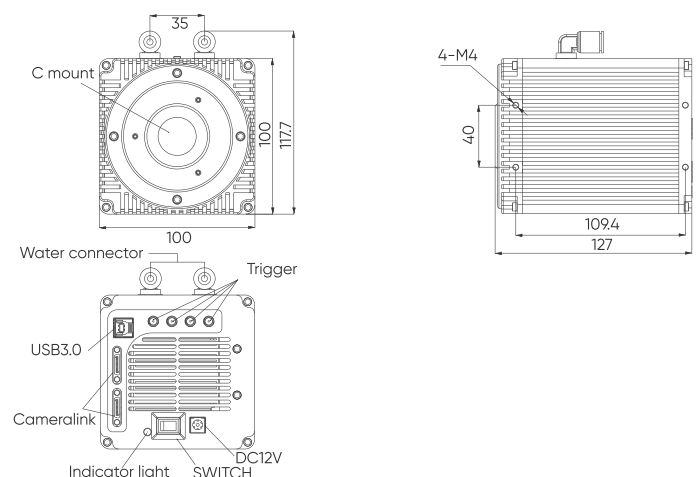
[2] The Higher SNR than EMCCD when the signal (photon) $> 3 \text{ e}^-$.



Quantum Efficiency



Dimensions (Unit: mm)



Specifications

Model	Dhyana 95 V2
Sensor Type	BSI sCMOS
Sensor Model	Gpixel GSENSE400BSI
Peak QE	95%@560 nm
Chrome	Mono
Array Diagonal	31.9 mm
Effective Area	22.5 mm x 22.5 mm
Resolution	2048 (H) x 2048 (V)
Pixel Size	11 μm x 11 μm
Full Well Capacity	Typical: 80 ke-@HDR, 100 ke-@STD
Dynamic Range	Typical: 90 dB
Frame Rate	24 fps@16 bit HDR, 48 fps@12 bit STD
Readout Noise	1.6 e- (Median), 1.7 e- (RMS)
Shutter Mode	Rolling
Exposure Time	21 μs ~10 s
DSNU	0.2 e-
PRNU	0.3%
Cooling Method	Air, Liquid
Cooling Temp.	45°C below ambient (Liquid cooling)
Dark Current	0.6 e-/pixel/s@-10°C
Binning	2 x 2, 4 x 4
ROI	Support
Timestamp Acc.	1 μs
Trigger Mode	Hardware, Software
Trigger Output	Exposure Start, Global Exposure, Readout End, High, Low, Trigger Ready
Trigger Interface	SMA
Data Interface	USB 3.0, CameraLink
Bit Depth	12 bit, 16 bit
Optical Interface	C-mount / F-mount
Power Supply	12 V / 8 A
Power Cons.	60 W
Dimensions	C-mount: 100 mm x 118 mm x 127 mm, F-mount: 100 mm x 118 mm x 157 mm
Weight	1613 g
Software	Mosaic, SamplePro, LabVIEW, MATLAB, Micro-Manager 2.0
SDK	C, C++, C#, Python
Operating System	Windows, Linux
Operating Environment	Working: Temp. 0°C~40°C, HUM 0%~85%, Storage: Temp. 0°C~60°C, HUM 0%~90%

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



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