

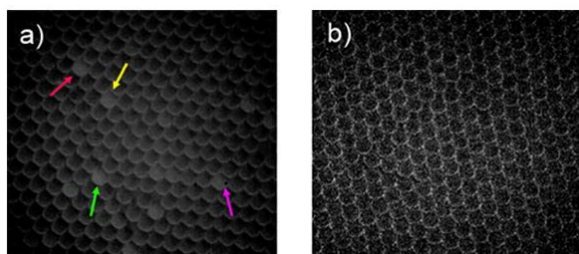
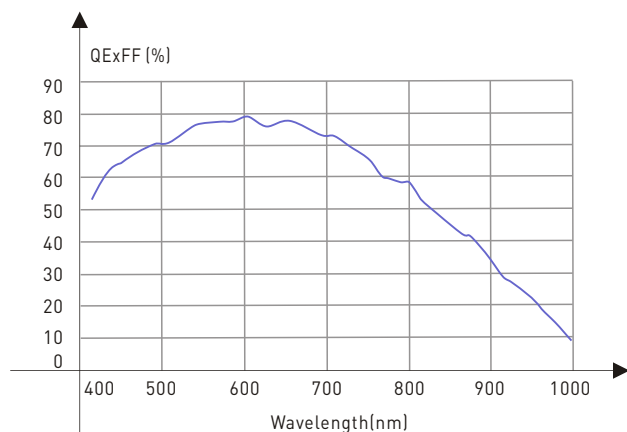
6.5 μ m Pixel Size sCMOS Camera

Dhyana 400D



The Dhyana 400D is equipped with a brand new 1.2 inch scientific CMOS sensor, which provides 80% quantum efficiency at 600nm. The 1.2 inch sensor size and 6.5 μ m x 6.5 μ m pixel size are more suitable for microscopy standard C-mount imaging.

When compared to other existing scientific CMOS camera products, Dhyana 400D has a hardware 2x2 binning function which gives it superior sensitivity for low light imaging. Dhyana 400D has advantages of FOV, extremely low noise, high dynamic range, and high frame rate, in addition, the Dhyana 400D is also available with a color sensor.



Single-molecule Fluorescence Images:
(a) Dhyana 400D (b) Cooled CCD

Model	Dhyana 400D
Sensor size	1.2"
Sensor model	G2020e(sCMOS)
Color/monochrome	Monochrome
Quantum efficiency	80%@600nm
Effective no. of pixels	2048(H) x 2048(V)
Pixel size	6.5 x 6.5(μ m)
Effective area	13.3 x 13.3(mm)
Full well capacity	30,000e-
Frame rate	35fps@full resolution
Readout noise	2e-
Shutter type	Rolling shutter
Exposure mode	Manual
Exposure time	0.013ms-10s
Cooling method	Peltier cooling
Cooling temperature	Forced air[Ambient at +25°C]-10°C
Dark current	0.6 electrons/pixel/s[0°C][typ.] 0.35 electrons/pixel/s [-10°C][typ.]
Dynamic range	85dB
Binning	2 x 2
Sub-array	Available
External trigger mode	Standard/Synchronous/Global trigger
Trigger delay function	0-10,000s
Trigger output	3 programmable timing outputs[Exposure/Global/readout signal]
External trigger routing	SMA
Digital interface	USB3.0
SDK	Support
Bit depth	16 bit
Lens mount	C-mount
Power supply	12V/8A
Power consumption	50W
Camera size	120 x 119 x 121(mm)
Parameter settings	White balance, Exposure, Contrast, Gamma,3D denoise, Saturation, Flat fielding,
PC software	Mosaic/LabVIEW/Matlab/Micromanager
Compatible system	Windows/Linux is supported , Mac is under development
Operating temperature	0-40 °C
Operating humidity	10%-85% RH