



INDIAN INSTITUTE OF TECHNOLOGY BOMBAY
MATERIALS MANAGEMENT DIVISION
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Technical Specification for sCMOS Camera/Detector:

1. Back illuminated sensor with high detection efficiency between 400-800 nm (visible range).
2. Quantum Efficiency: > 94 % between 500-650 nm
3. Pixel size between 6.5 x 6.5 μm
4. Active pixels range 2048 x 2048
5. Effective sensor area 13.3 x 13.3 mm
6. Frame Rate: At full frame resolution 42 fps or more
7. Readout noise: <1.5 electrons (rms).
8. Dark current: 0.5 electrons/pixel/sec or less
9. Full well capacity: 45,000 electrons or more
10. Dynamic range: 25,000:1 or more
11. It should have both rolling and global shutter triggering capabilities.
12. 16 bit and 12 bit image data collection output in stacked TIFF format
13. Cooling: -15 $^{\circ}\text{C}$ - 25 $^{\circ}\text{C}$, TE/air cooled
14. The camera should be able to perform real-time ROI on the sensor.
15. C-mount Coupler for attachment to optical microscope.
16. Fast data transfer cable/PC interface (preferably USB 3.0 or better) to efficiently collect large data sets to be included.
17. Data acquisition and basic image analysis software to be included free of charge.
18. Output should be compatible with third party data-analysis software, such as micro-manager.
19. Warranty - **One** years from the date of successful installation/commissioning of equipment.