



INDIAN INSTITUTE OF TECHNOLOGY BOMBAY

MATERIALS MANAGEMENT DIVISION

Powai, Mumbai - 400076

PR : 1000023498

Rfx : 6100000979

Technical Specification for Laser Free Confocal Attachment of High Throughput Cell Imaging System

- a) Confocality: Atleast 0.6 micrometer (full width at half maximum) with 1.4 NA oil objective.
- b) Optics should be based on combination of spinning disk with grid like patterns for structured illumination microscopy
- c) Spinning disk speed: 3,000 rpm or better
- d) Should include broad spectrum LED illumination with spectral coverage from UV to red region (16 LED based Light Engine) with remote operational control, wattage of >40 W and long life-time >10000 hours (coverage: 370-700 nm) and individual LED should be controlled for the imaging of very specific dyes in future.
- e) Should include a digital sCMOS camera with quantum efficiency of >80%, minimum effective number of pixels: 2048 x 2048, cell size 6.5-micron X 6.5-micron, effective area of 13.3 mm X 13.3 mm, readout speed of at least 100 fps (full resolution, standard scan, camera link).
- f) Compatible camera detector and light source port should be available within the Scanner.
- g) Band pass filter cubes for detection of fluorophores: DAPI, FITC/GFP, RFP/DsRed, Cy5 imaging should be supplied.
- h) Imaging software that can control camera, confocal unit, and XYZ stage as well as is customizable for additional configurations.
- i) SRRF SR Methodology plugin should be supplied along with the Offline workstation configuration below:
Intel Xenon processor having minimum 64 GB DDR4 RAM or better, GTX 1080(11 GB RAM) with driver 399.02 or lower for Nano SRRF Application, 4 TB SATA drive, Original 64bit Windows 10 OS, DVD RW, multimedia kit, 32" monitor, keyboard, optical mouse.
- j) System should be supplied with 1 Year Standard warranty.
- k) The system should be compatible with all the major vendors and provide additional adapters as required.