Annexure I

Technical Specifications for 'Optical Microscope'

1.0	Bidder Eligibility Criteria-	Complied / Not Complied	Reference Page No.
1	The bidder/OEM should have supplied at least 3 similar items to IITs, NITs, IISERs, CSIR Labs or other Govt. R&D organizations in the last 5 years, PO copies or installation certificates along with contact details of end user need to be submitted as the proof of supply. IIT Madras reserves its right to verify the claims submitted by the bidder and the feedback from the previous customers will be part of technical evaluation.		
2	The Bidder/OEM's service center should be in India to attend service related issues. Proof of facility location & contact details to be provided along with technical bid.		

2.0 Technical Requirements for Optical Microscope

General Specifications

Broadly, should be capable to achieve the following functions: bright field, dark field in reflected mode.

S.NO	Technical Specifications		Complied / Not Complied	Reference Page No
1	**Base unit**	Samples of maximum sample height of 30 mm and above should be possible to image. Coarse and fine focusing adjustment knobs, should preferably be on both sides.		
2	**Nosepieces**	Universal Quintuple Nosepiece with capability of, bright field, dark field imaging.		
3	**Illuminator:**	It should have bright LED illumination. There should be a provision to insert different color filters (VIBGYOR) in the incident optical path between the source to sample.		
4	**Eyepiece tubes:**	Trinocular Eyepeice Tube (with FOV 22 or higher) with erect image formation should be		

		provided.		
5	**Stages:**	Rectangular Mechanical Stage of Size 76 mm by 50 mm or higher with ESD protection.		
6	**Eyepieces:**	10X Eyepiece with diopter adjustment, F.O.V No 22 or higher		
7	**Objective lenses:**	Plan Fluor 5X, 10X 20X, 50X and 100X objectives for Bright Field/Dark Field imaging. Dark filed is needed only for 100x objectives.		
8	**Camera specification**	Colour CMOS sensor having 5.9 megapixels or more with live display mode and image. Bidders should quote all higher (more than 6) megapixel cameras as optional. Depending on the budget, appropriate one will be selected. Exposure time: 100 μ sec to 100 sec with 2.5x F-mount adapter 6fps (4908 x 3264 pixels), 45fps (1636 x 1088 pixels) With direct F mount adapter 19 fps (1608x1608 pixels), 45 fps (536 x 536 pixels) Image format JPG/TIFF/BMP etc. With all other camera accessories like cables, adapters.		
9	**Spares**	At least 3 extra Illuminators		
10	**Image analysis and camera control software**	Image analysis with camera control software should be capable of controlling the camera. It should do live measurement acquisition, conimage acquisition, Anotations, ND Viewer, Large Format, Report Generator, and Multi-Dimensional Capability. Software should be able to save the images in Tiff, JPG, BMP etc.		

		formats		
13	**LED Monitor with CPU**	A computer with i7 processor, 4USB ports, 1T hard disc and 16 GB RAM. UDB Keyboard, mouse, 22 inches or more LED monitor.		
14	**Optional**	Provide a filter slider with 7 holes in it.		
Other Terms and Conditional				
1	Warranty: include at least 2 year warranty for the system. Additional optional AMC terms for another two years to be quoted.			

(Note: It is mandatory for the bidders to submit a compliance statement for the aforementioned points in tabular format and required/necessary documents in the technical bid. Failure to comply with which bidders will be formally rejected)