

Annexure-1

TECHNICAL SPECIFICATIONS FOR UPRIGHT OPTICAL MICROSCOPE

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| Microscope Type and Scope | Upright optical Metallurgical microscope Application and requirement for Open surface microfluidics |
| Microscope Frame | <ul style="list-style-type: none">• Microscope Frame for Reflected light illumination with camera port• Suitable C-Mount adapter 0.63x to fix the camera to the Trinocular tube |
| Focus | <ul style="list-style-type: none">• Manual, Coaxial Coarse and Fine focus Mechanism.• |
| Reflected light illuminator suitable for | <ul style="list-style-type: none">• For BF/DF upgradable with Pol and DIC accessories• Manual AS and FS settings• Reflected light illumination tube With Slot for Polariser and Analyser filter slider• LED light source reflected light |
| Observation Tube | <ul style="list-style-type: none">• Trinocular Observation tube inclination angle 30°• Eyepiece Pair: Wide field 10x with F.N 22 |
| Light source | <ul style="list-style-type: none">• LED Light source for Reflected light illumination suitable for BF/DF/POL/DIC Observation• White LED : 5700K• Average life time : Approx. 25,000hr or better |
| Revolving nose piece | <ul style="list-style-type: none">• quintuple revolving nosepiece with slot for DIC suitable for BF/DF/POL/DIC |
| Objectives | <ul style="list-style-type: none">• M Plan Semi apochromatic grade objectives 5X/0.15 WD >10 mm• M Plan Semi apochromatic grade objectives 10X/0.3 WD > 5 mm• M Plan Semi apochromatic grade objectives 20X/0.45 WD > 5 mm• M Plan Semi apochromatic grade objectives 50X/0.80 WD >10 mm• M Plan Semi apochromatic grade objectives 100X/0.9 WD 1 mm; WD > 10 mm (optional) |
| Mechanical stage | <ul style="list-style-type: none">• Mechanical Stage with Right handle• Movable range 75 (X) mm x 50 (Y) mm with stage plate |
| Digital color microscope camera | <ul style="list-style-type: none">• Single Chip Digital Color Microscope camera Minimum 5 Mega Pixel CCD• Sensor size -2/3 inch color CCD• A/D converter- 12bit• Exposure time -50 μs—8 s• 30 frames per second (resolution 1920 x 1080)• Pixel size 3.45 μm x 3.45 μm• USB 3.0 Connectivity |

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| Basic measurement software | <ul style="list-style-type: none"> • Basic image and movie acquisition (Avi format) • Annotations, layer management, scale bar, cross hair, info stamp display, and image filters • Digital reticle/grid, line profile display • Basic interactive measurement (distance, angles, rectangles, circles, ellipses, polygons, circle-to-circle distance, angle ruler, and line ruler) and data export to MS Excel • Report creation (MS Word, and MS Excel formats) • The Microscope ,Camera and Software should be of the same make. |
| Compatible Operating System | Windows 8, 10 or higher |
| Power Requirements | 230V/50Hz (As per Indian Power standard) |
| Warranty | Minimum One year Two year AMC (optional) |
| Delivery and installation | At CFD Center, IIT Madras, Chennai- 600036 |

TERMS AND CONDITIONS

1. Warranty service must be provided onsite at IIT, Madras for duration of warranty period for one year and two year AMC – Annual Maintenance Contract (optional).
2. Vendors should provide continuous technical support and maintenance of equipment during warranty period.
3. Vendors must have sufficient experience in supplying equipment to reputed organisations for research purpose. Experience of the end users will also be used as a criterion for the selection of bids that meet technical requirements.
4. List of reputed end users (at least 6) to whom supplies made should be furnished.
5. Vendors must provide detailed documentation for the equipment.
6. Vendors must provide training to our technical staff for using the equipment, free of cost.