

Technical Specification

Long Distance Microscope specifications

A long distance microscope(LDM) with a resolution of around 1 micron/px or less for observing ensuing liquid spray features from an injector at NCCRD, IIT Madras and at ISRO Propulsion Complex, Mahendragiri. The proposed lens will be a part of a laser diagnostic test facility that is being currently developed. Detailed specifications of the Long distance microscope are listed below.

Table. 1. Detailed specifications of the Long distance microscope

S/no	LDM Specification	Requirements
1	Focus range	15 cm to 35 cm or larger
2	Optical resolution	1.1 microns/px at 15 cm
3	Format	Diffraction Limited Field 12 mm diameter
4	Magnification at image plane	3.43 X to 8.13X larger
5	Field of View (2.3" format)	0.375 mm to 2.07 mm
7	Optional lens magnification	48X to 381X or more
8	Weight	Less than 2.5 kgs
9	Spectral response	330 nm to 2.3 microns

Additional specs

1. The lens should be made of BK-7/ Pyrex, and Magnesium-Fluoride.
2. The focus should be operated manually.
3. This lens should have a dual port with selectable beam splitter.
4. The target light adapter and eyepiece adaptor should be present as an integral part of the lens.
5. This lens should be compactable with pco.pixelfly usb ultra-compact 14 bit CCD camera.
6. An optional item to support the camera /sensor should be quoted separated.

Optional:

1. Quote for 1st year and 2nd year AMC beyond warranty.

Optional item may be considered for finalisation of L1 Vendor if the optional items are chosen for purchase.

Eligibility Criteria:

Note: The Long distance microscope intended to be purchased is for integration with an equipment to be supplied by IIT Madras to ISRO Propulsion Complex, Mahendragiri, Tirunelveli District, Tamil Nadu.

1. Supply should be made within 6 weeks of release of purchase order
2. Warranty service must be provided on-site at IIT Madras and ISRO Propulsion Complex, Mahendragiri, Tirunelveli District, Tamil Nadu for duration of warranty period.
3. Annual Maintenance contract should be applicable for ISRO Propulsion Complex, Mahendragiri, Tirunelveli District, Tamil Nadu
4. Vendors should provide continuous technical support and maintenance of equipment during warranty period.
5. The OEM or the vendor representing an OEM must have at least 3 years experience in manufacturing/marketing camera equipment.
6. 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. List of reputed end users inclusive of educational institutions in India (at least 3) to whom supplies made with client contact details should be furnished.
7. All equipment must be compatible with Indian electrical standards and codes.
8. Cost breakup for all modules included in the scope of supply is mandatory.
9. Non-OEM suppliers must submit a tender specific authorization from the OEM for supply to IIT Madras.
10. Vendors must provide detailed documentation for the equipment.
11. Vendors must provide training to our technical staff for using the equipment, free of cost.
12. Vendor must have permanent service representative stationed in India.

Bidders must submit this Technical Specification – Compliance sheet along with the bid (Self Certified)