



**TRANSPORTATION ENGINEERING LABORATORY**  
**DEPARTMENT OF CIVIL ENGINEERING**  
**INDIAN INSTITUTE OF TECHNOLOGY KANPUR**  
**KANPUR – 208016, INDIA**



**Enquiry No – CE/TE/LASER/01/2018-19**

**Date: 06/07/2018**

**Sub: Sealed quotations (Technical and Financial bids separately) are invited for a 1-D triangulation based laser displacement sensor (laser head and controller) of the following specifications given below before 27/07/2018.**

Triangulation angle	30° or less at the center of its range
Reference distance	50mm or more
Measurement range	±10mm or more (Z-axis)
Repeatability / Resolution (in Z-axis)	5µm or less
Laser sampling speed	0.5kHz or more
Circular dot size at center of range	100µm or less

**Important Notes:**

- The target whose heights will be measured is a road surface i.e. target is opaque.
- The triangulation laser displacement sensor should have the capability of continuous sampling.
- Time interval of the data capture can be adjusted i.e. adjustable sampling time interval (please mention in the specification).
- Calibration certificate must be provided by the manufacturer. There should be a function / method available so that the sensor gives calibrated reading each time it is in used to collect data.
- Laser safety class should be adhered.
- Interface should have metric index units.
- All other accessories needed along with the laser sensor for complete operation of the instrument (like USB convertor, Ethernet connector, Universal power supply) should be specified also.
- This sensor will be used along with a motorized translation stage to make measurement along a line. Hence, sensor should be compatible with a motorized translation stage. These features of the laser sensor will be favoured; light weight that can be carried by the translation stage, sensor suited to make measurements of target which has non-uniform surface reflectivity, easy configuration with PC, can be mounted on a translation stage.
- The sensor should be capable of working for, say, 10 to 15 minutes at a stretch and multiple times over a period of, say, 3-4 hours on a daily basis.

**Terms and conditions:**

1. All quotation must reach in a sealed and signed envelope by July 27, 5:00pm.
2. If the Financial Bid is included in the Technical Bid, then the quotation will be rejected.
3. Please respond to specific details as asked for in tender document. If it is found that specifications given in tender is copied and placed in submitted technical bid, the quotation will be considered incomplete and will not be considered any further.
4. Participating firms should submit proof of the documentation as authorized vendor for the product and be eligible to provide the warranty.
5. Vendors should demonstrate the details of a minimum of 3 internationally reputed academic/ research institutions where the quoted equipment has been supplied in the last two years. Contact information (telephone numbers) of the lab-in-charge/faculty-in-charge of these institutions should also be furnished.
6. Quotation must be valid for at least 60 days and maximum delivery period will be 4 weeks. Extension of delivery period is not allowed.
7. Equipment should have a minimum warranty of three years. Warranty should be properly mentioned in your quotation.
8. All prices quoted must be inclusive of all taxes, duties, levies etc. and inclusive of delivery at IIT Kanpur.
9. Account for academic category discount as applicable.
10. Specifications mentioned above are minimum specifications. Vendors may provide quotation for products with better specifications as well.
11. Submit complete details of the product including brochure, manuals etc. with the quotation.
12. Any firms with poor track record of installation services and lapses on warranty claims within IIT Kanpur will be rejected out rightly.
13. The firms may also quote for optional accessories which will extend the capability or ease of use of the equipment.
14. The Institute reserves the right for accepting and rejecting any quotations without assigning any reason thereof. **Also, the Institute reserves the right to reject or accept all or any of the offers made above.**
15. Payment term
  - For Rupees payment 90% on delivery & 10% after delivery, installation and satisfactory performance.

**The quotations should be addressed to and reach Professor-in-Charge, Transportation Engineering Laboratory at the address mentioned below latest by July 27, 2018, 5pm.** In case of any queries please contact, Mr. Saurabh Srivastava at [saurisri@iitk.ac.in](mailto:saurisri@iitk.ac.in)

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