



Indian Institute of Technology Kanpur

Environmental Engineering and Management

Department of Civil Engineering

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Enquiry No- CE/EEM/NC/ 2012/UV-VIS/ 3

Last Date: **November 2, 2012**

Sub: Call for quotation of UV- Visible Spectrophotometer

Sealed Quotation(s) are invited for purchase of 1 No. of UV- Visible Spectrophotometer.

Its technical Specifications are as follows-

1. Lamp source: Xenon Pulse

2. Wavelength:

- range 190-1100 nm,
- minimum accuracy ± 0.06 nm,
- minimum reproducibility ± 0.01 nm

3. Photometrics:

- minimum accuracy ± 0.00007 Abs using NIST 930E filters at 1 Abs;
- range ± 4 Abs;
- display ± 9.9999 Abs, ± 200 %T;
- reproducibility using NIST 930E filters at 465 nm, 2s SAT: max deviation at 1 Abs < 0.004 Abs; Standard deviation for 10 measurements < 0.0005 Abs
- reproducibility using NIST 930E filters at 546.1 nm, 2s SAT: max deviation at 0.5 Abs < 0.003 Abs; Standard deviation for 10 measurements < 0.003 Abs
- stability at 500 nm, 10s SAT, after 30 min warmup < 0.0004 Abs/h
- noise at 500 nm with 1s SAT at 0 Abs < 0.00002 Abs, at 1 Abs < 0.00012 Abs, at 2 Abs < 0.0011
- noise at 260 nm with 1s SAT at 0 Abs < 0.00002 Abs
- Baseline flatness: minimum 0.0004 in the range 200 to 850 nm after baseline correction

4. Operational:

- Fixed Spectral Bandwidth: minimum 1.5 nm
- Signal Averaging: 0.0125-999 s
- Maximum Scan Rate: 24000 nm/min or more
- Slew Rate: 24000 nm/min or more
- Data Interval: minimum 0.15 nm, maximum 5 nm.
- Data Collection Rate: minimum 80 data points/sec
- Repetitive Scanning: minimum 4800 data points per min, maximum 999 cycles
- Temperature Monitor should be available as an accessory and temperature probe should be inside the cuvette
- Minimum sample volume: 0.5 μ l

5. Immunity from room light or background light. There should be no interference in the data even if the lid is open.

6. The instrument should be able to operate in 5-40 °C temperature range and relative humidity of 50-80%

An instrument which fails to meet or certify any of the above criteria will not be considered.

Send quotation(s) latest by 4.00 pm of November 2, 2012 to the following address:

Dr. Vinod Tare
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Vinod Tare