

Detailed Specifications of Global/Open Tender Notice No: 14/2014

S. NO	TENDER NO.	BRIEF DETAILS OF ITEM(S)	PAGE NOS.
1.	14-VII/RK(2462)14-PB/ T-108	Raman Lidar	2-3

CSIR-NPL intends to procure a compact Raman Lidar capable of working in the Himalayan Environment in all weather conditions and capable of Day & Night operation.		
Essential Specifications		
Transmitter	Source :	Nd : YAG Laser
	Wavelength	355 nm
	Output pulse energy	> 2mJ per pulse
	Pulse width	3-10 ns
	Pulse repetition frequency (PRF)	20 Hz – 1 kHz
Receiver	Detection	(a). Parallel and cross polarized channels at 355 nm wavelength for depolarization measurement, it should have capability for both analog and photon counting detections. (b). Nitrogen Raman Channel at 387 nm with analog and photon counting detections
	Telescope Type	Cassegrain/ refractive system
	Diameter	≥ 15 cm
	Field of view	< 1 m Rad
	Measurement height	Up to 15 km under clear sky conditions
	Range resolution	15 m to 60 m (selectable)
Lidar housing	Water proof, dust proof casing and capable of working in Himalayan environment.	
Operating temperature and relative humidity	Temperature Range	-20°C to +45 °C or better
	Relative humidity	15%-100 %
Electrical specifications	Operating Voltage	220± 10% V A.C 50 Hz.
Data acquisition system and software :	Fully computer controlled, workstation for control and processing the lidar data having the capacity to store the data for one month (with operational frequency of minimum 8 hours per day). Software for offline processing of data for all channels. To be used in other computers. Signal calibration and filtering of noise. Visualization of time height display. Capability for deriving depolarization, backscatter/ extinction coefficient, Lidar ratio, aerosol optical depth, planetary boundary layer measurement, cloud / dust base and layer height determination. Provision for downloading the acquired data through data transmission mechanism using GPRS/LAN/broad band from remote location to NPL or system should provide industrial output (4 to 20 mA) for integration with the existing CAAMS system at the monitoring site for data transmission to NPL.	
Warranty	One year	
Installation	To be done by Vendor/Supplier	
Training	Training for 2 persons at site for 3 days	
Optional Specifications		
<ul style="list-style-type: none">Extended warranty for one year.Necessary spares/critical parts and consumables for 3 years (to be quoted item-wise).AMC at site for 2 years (after the completion of warranty period).		
