INDIAN INSTITUTE OF TECHNOLOGY BOMBAY
MATERIALS MANAGEMENT DIVISION
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PR No. 1000031414 (Rfx No. 6100001342)

Detailed Technical Specifications for UV VIS NIR Spectrophotometer:

Sr. No.	Description	Specification (Minimum)
A. Spectrophotometer details		
01.	Integration Time Range	6ms - 10s
02.	Wavelength range	200nm - 1.1µm
03.	Optical Resolution	1 nm FWHM (typical)
04.	Detector	Back-thinned CCD image sensor
05.	Entrance Slit	25um standard It should be User-interchangeable slit allows quick changes to resolution and throughput allowing one spectrometer to perform multiple types of experiments such as absorbance and fluorescence.
06.	Wired Communications	Communication options include USB, Gigabit Ethernet, Wi-Fi, AP Wi-Fi and RS-232
07.	Dynamic range	12000:1 or more
08.	Input Fiber Connector	SMA 905
09.	Trigger Modes	4 Modes
10.	Scan Rate	4500 scans/second (varies by performance of operating computer and system)
11.	Signal to Noise Ratio	400:1
12.	Grating	Polymer based gratings is not acceptable
13.	Detector Collection Lens	Yes
14.	A/D Resolution	16 bits
15.	Onboard Memory	Buffer Depth up to 50000 spectra, Averaging up to 5000 spectra
16.	Operating Temperature	0 °C to 40 °C
17.	Portable Robust Design	Compact, rugged and lightweight for use in the lab or inremote applications
18.	Operating Humidity	0 to 90% RH non-condensing
19.	Thermal stability	+/-1.0 pixels over 5 °C – 35 °C

B. Light Source		
01.	Deuterium tungsten halogen Source, 190-2500nm. Stability of Light Source Output: ≤0.01%/hour @ 254 nm (deuterium) ≤0.01%/hour @ 254 nm (halogen) Cooling Fan	Wavelength Range: 190nm - 2.5µm Source: Deuterium &tungstenHalogen source Nominal Bulb Power: 20 W (deuterium), 26W (tungsten halogen) Typical Output Power: 217 µW (deuterium bulb), 295µW (tungsten halogen bulb) Shutter: Yes Fiber Connector: SMA 905 Power Requirements: 240 V 50/60 Hz Cools the interior of the DH-2000. Do not obstruct.
02.	Excitation/wavelength calibration Light source with power supply and suitable adapter	**275nm ,LED** 275nm LED UV Led for excitation with SMA connector LED 275 nm Power Dissipation 1 W Forward Current 100mA Maximum Current 130mA Thermal Resistance 15°C/W Operating Temperature Range -40 to +60 °C Storage Temperature Range -40 to +100 °C Wavelength range 265-285nm

C. Software		
01.	Software	Software should allow to design custom measurement procedures using a "visual schematic" view that should allow one to drag-and-drop spectrometers, transform functions and display nodes to automate unique post-processing workflow. System should have below features Absorption/Reference/Emission/PL software
	Lab view compatibility	Software should be compatible to lab view
D. Accessories		
01.	Optical fiber 300um	Wavelength Range: 200nm - 1.1µm Fiber Core Size: 300 µm Length:1 meter Jacket:: Silicone-coated steel monocoil Quantity :1
02	Optical fiber 600um	Wavelength Range:200nm - 1.1µm Fiber Core Size:600 µm Length:1 meter Jacket:Silicone-coated steel monocoil Quantity :1
03.	Cuvette Holder	1-cm path, 200-2000 nmHolders Collimating Lenses: Two 74-UV f/2 fused silica lenses (200-2000 nm)

		Filter Slot Specification: Accepts filters up to 6.35 mm (1/4") thickness Integrated Light Source: No Pathlength: 1 cm CUV-UV Cuvette Holder
04.	Universal Quartz Cuvette	Universal Quartz Cuvette, 1-cm path, 3.5 mL m Abs cuvette, 2 side clear cuvette Universal Quartz Cuvette, 1-cm path, 3.5 mL CV-Q-10 Universal Quartz Cuvette, 1-cm path, 3.5 mL Cuvettte 2 side clear Filling Volume: 3.5 mL Pathlength: 1 cm Wavelength Range: 170nm - 2.7µm Standard Quartz Cuvette

E. Others		
01.	Warranty	Standard warranty for one year
02.	Installation	Installation should be free of cost