



# INDIAN INSTITUTE OF TECHNOLOGY BOMBAY

MATERIALS MANAGEMENT DIVISION

Powai, Mumbai 400076.

**For Reference No.1000016348 (Rfx No.6100000545)**

## TECHNICAL SPECIFICATION FOR DOUBLE BEAM UV VISIBLE SPECTROPHOTOMETER

Sr. No.	Parameter	Description	
1	Wavelength Range	Atleast 190-900 nm	
2	Source	Deuterium and Tungsten or Xenon flash lamp	
3	Monochromator	1200lines/mm, Czerny- Turner  with 0.2 m focal Length	
4	Detector	Si diodes/ PMT detector for Sample and Reference	
5	Maximum Slew Rate	8000 nm/min – 20000 nm/min	
6	Photometric System	True Double Beam	
7	Photometric Range	-4 to +4	
8	Absorbance Range	$\pm 4 A$	
9	Stray Light	At 220 nm (NaI)	< 0.02 %T
		At 340 nm (NaNO <sub>2</sub> )	< 0.02 %T
		At 200 nm (KCl)	<1 %T
10	Spectral Bandwidth	0.5,1,2,5,20 nm Variable	
11	Data Interval	0.05, 0.1, 0.5, 1, 2 nm	
12	Wavelength accuracy D2 Peak, 656.1 nm	$\pm 0.1$ nm	
13	Wavelength reproducibility	$\pm 0.1$ nm	
14	Photometric accuracy	$\pm 0.004 A$	
15	Photometric reproducibility	< 0.001 A	



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16	Photometric drift	<0.0003 A/hour
17	Photometric noise	< 0.00005 A @ 700 nm
18	Scan speed	Variable 1 to 3000 nm/min
19	Interface	USB Connectivity
20	Cuvettes	3.5 ml 1 set
21	Environmental Requirement	Temperature: 15- 35° C and Humidity: 30-80% Non- condensing
22	Software	<p><b>1.</b> System compatible original Licensed Software should be quoted with following capabilities :-</p> <p>a. Software should measure Absorbance, Transmittance and Reflectance at the full or selected Wavelength with real-time spectral displays and live instrument and accessory status bar.</p> <p>b. Software should have facility to export data to Clip board, CSV file, Excel file, BMP file, ASCII file, JCAMP file Zoom In / Out, Add / Edit Labels.</p> <p>c. Software should have</p>



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		facility for fully integrated Scan, Kinetic, and Wavelength program data collection mode.
23	Accessory	Advanced transmission accessory
24	Consumable	1 set of Deuterium and Tungsten lamp/ Xenon flash lamp should be quoted