



**INDIAN INSTITUTE OF TECHNOLOGY BOMBAY**  
**MATERIALS MANAGEMENT DIVISION**  
Powai, Mumbai 400076.

Ref. PR No. 1000044187

Rfx. No. 6100001987

**Technical Specifications for Spectrofluorometer -1 No.**

<b>Sr. No</b>	<b>Item Description</b>	<b>Detailed Technical Specification</b>	<b>Technical Compliance (Yes / No)</b>	<b>Additional Information (if any)</b>
1	<b>Source</b> CW ozone-free xenon arc lamp	350 W		
2	<b>Monochromators</b> Czerny-Turner design with plane gratings for optimized focus at all wavelengths and minimum stray light	Required		
3	<b>Excitation Grating</b> blazed at 330 nm	1200 groove/mm		
4	<b>Emission Grating</b> blazed at 500 nm	1200 groove/mm		
5	<b>Bandpass</b>	0 to 30 nm, continuously adjustable		
6	<b>Wavelength Accuracy</b>	± 0.5 nm or better		
7	<b>Integration Time</b>	1 ms to 160 s		
8	<b>Base Detector</b> Photomultiplier R928P,	185 to 900 nm, air-cooled and stabilized		
9	<b>Reference Detector</b> UV-enhanced silicon photodiode	Required		
10	<b>Standard Filter Holders for Excitation and Emission Path</b> 2" square filters can be added for any specific use	Required		
11	<b>Sensitivity</b>	10,000:1		
12	<b>Steady State Reaction Kinetics Acquisition Rate</b>	1 KHz to 0.02 Hz		
13	<b>Integrating Spheres for PLQY</b>	external 150 mm sphere with 2 quantities		

	Easy, quick change of either internal 80 mm diameter sphere, or external 150 mm sphere			
14	<b>Filter holder with Filters included</b>	Required		
15	<b>Quartz cell</b>	6		
16	<b>Solid Sample Holder</b>	2		
17	<b>Thin Film Temperature dependent measurement assembly preferably</b>	77 k to 523 k.		
18	<b>Software</b> Software for the control of the instrument and data analyses with configured computer+ Monitor	Required		
19	<b>Training</b> The quote should include cost of installation, acceptance tests, demonstrating performance, and operational training of 5 people.	Required		
20	<b>Other requirements</b>  Availability of spare parts: The vendor has to guarantee that all the spares for the offered spectrofluorometer and attachments will be available for at least the next 10-15 years.  Pre-installation requirement (electrical, humidity and gas, etc.) Should be mentioned along with the offer.	Required		
21	<b>Power Supply + 6 KVA UPS</b> Suitable UPS (true sinewave; online, one phaseout) for 1 hour of back up should be provided. All equipment should operate with 220 V, 50 Hz power supply.	Required		
22	<b>Documentation</b> Complete product manual must be provided, that covers the operation, basic troubleshooting, calibration procedure, and maintenance.	Required		
23	<b>Warranty</b> A warranty of 5 years is mandatory	Required		