



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

PR: 1000017917

Rfx: 6100000931

Technical Specifications

UV-VIS- NIR with Diffuse Reflectance Spectrophotometer :

1. Wavelength Range and Spectral Bandwidth : 185nm–3300nm:
2. Resolution of 0.1 nm
3. Wavelength accuracy of UV/VIS region +/- 0.2 nm; NIR region : +/- 0.8 nm and repeatability of UV/VIS region : +/- 0.08 nm NIR region : +/- 0.32 nm
4. Wavelength scanning speed of UV/VIS region approx. 18000 nm/min. NIR region approx. 700000 nm/min in wavelength scanning UV/VIS region Max. About 4500 nm/min. NIR PMT/InGa As region Max. about 9000 nm/min. NIR Pbs region. Max. About 4000 nm/min (excludes time required for switching)
5. Automatic light source switching synchronized with wavelength
6. Double beam Photometric system
7. 50W halogen lamp (minimum of 2000 hr Life)
8. Grating – grating type double monochromator Concave diffraction monochromator.
9. Main monochromator. Aberration correction type Czerny Turner monochromator. Diffraction gratings are high performance blazed holographic gratings
10. Detector:UV/VIS region. PhotomultiplierR-928 NIR region. In
11. GaAs photodiode/cooled PbS optical conductive element Sample Compartment : Inside dimensions 150 W x 260, D x 140 H (mm)
12. Temperature: 15 Deg.C – 35 Deg.C
13. Ambient Humidity: 35-80% (no condensation, less than 70% at temp. above 30° C 70% at temp. above 30°C
14. UV 10mm Cell GS Kit
15. Thermoelectric Single-Cell Holder
16. Peltier Accessory (Rapid Peltier temperature controlled single sample holder ~ - 0 degree C to ~ +105 degree C, with stir and stir bar, water circulator and

software driver)

17. Powdered Sample Holder for Integrating Sphere
18. Super Micro Black Cell (50-400 uL)
19. Film Holder.
20. Diffusive reflectance accessory for carrying out analysis on powdered, solid or gel samples in the wavelength range preferably 220-900 nm: The accessory should have features like Automatic recognition, system suitability checks, automatic optimization, zero alignment, zero set-up, plug-in module design: (i) Integrating Sphere Attachment 60mm and above diameter and is ISO compliant (ii) multi-purpose sample holders for different samples, KBr powder etc.
21. Computer (minimum of i5, 8G RAM, 1TB Hard drive, and 22-inch monitor) and appropriate software for running the instrument.
22. Appropriate software for running the UV-vis NIR instrument.
23. Instrument should be supplied 3 years of comprehensive warranty from date of installation, commissioning and acceptance of equipment.