

## SPECIFICATION FOR UV – VISIBLE SPECTROMETER

Computer controlled & standalone UV-Vis Spectrophotometer system for advanced research work with real double beam ultra-high-speed scan with variable spectral resolution.

<b>Optical System</b>	: Czerny-Turner mount, Single monochromator Fully symmetrical double beam
<b>Light Source</b>	: Deuterium lamp & Halogen lamp Light source
<b>Wavelength Range</b>	: Should cover the range from 190 - 900nm
<b>Wavelength Accuracy</b>	: $\pm 0.2$ nm at 656.1 nm or better
<b>Wavelength Repeatability</b>	: $\pm 0.1$ nm or better
<b>Scanning Speed</b>	: 10 ~ 3000 nm/min (8000 nm/min in preview mode) or better
<b>Slew Speed</b>	: 12000nm/min or better
<b>Spectral Bandwidth</b>	: Variable spectral bandwidth with 0.2, 0.5, 1, 2, 4 nm or better
<b>Photometric Accuracy</b>	: $\pm 0.003$ Abs at 0.5 Abs or better
<b>Photometric Repeatability</b>	: $\pm 0.0005$ Abs at 0.5 Abs or better
<b>Stray Light</b>	: $\leq 1\%$ at 198nm, $\leq 0.03 \%$ at 220nm
<b>Baseline Flatness</b>	: $\pm 0.0006$ Abs or better
<b>RMS Noise</b>	: $\leq 0.0001$ Abs at 500 nm or better
<b>Warranty</b>	: 3 Years + 1 Year Non-Comprehensive AMC


### **SOFTWARE SPECIFICATIONS:**

The software should have Quantitation, Photometric, Spectrum, DNA/Protein Quantitation, Quantitation methods: Lowry, BCA, Biuret method, CBB, Bradford & UV method

Other standard functions should include: Enzyme activity calculation. Film Thickness measurement, color analysis software

### **Should supply the following items along with the instrument:**

1. Sipper system with flow cell holder with 5mm & 10mm path flow cell for flow through measurement - 1 Number.
2. Quartz Cuvettes, 10mm - 5 Pairs.
3. Suitable latest workstation with back up of 2 KVA uninterrupted power supply.



Dr. M.S. Ramachandra Rao  
Project Coordinator  
Department of Physics &  
Materials Science Research Centre, NIMTE  
Indian Institute of Technology Madras