UV-Vis spectrophotometer UV3000

Features

- Superior stability: The dual-beam optical system performs monitoring during data acquisition to guarantee high precision and long-term stability of the instrument.
- Automatic 6-cell holder: Accommodates 6 samples at one time, greatly improving measurement and analysis efficiency.
- Ultra-low stray light: Ensures detection accuracy.
- Concise and intuitive operation interface: Greatly reduces user learning time.
- USB data output port for online data processing.
- Equipped with three-color breathing light to visually indicate instrument status.

Applications

- Research of scientific research institutes
- Biological science
- Medical analysis
- Agricultural and food inspection
- Environmental science
- Water quality analysis
- Metallurgical industry

Parameter

UV3000 is a brand-new instrument carefully developed by Optosky. It adopts an optimized optical path design to ensure accurate test results. The dual-beam detection system enables the instrument to achieve high precision and high reliability simultaneously. Equipped with a USB data output port, the UV3000 can connect to a computer for convenient data processing.

Featuring an innovative indicator light design, the UV3000 UV-Vis spectrophotometer delivers enhanced intelligence. Different light colors represent distinct operating states, allowing users to directly check the instrument status and proceed with subsequent operations effortlessly.

The fully Chinese software of UV3000 has a concise, elegant and user-friendly interface. It supports spectrum scan, photometric measurement, time scan, kinetic measurement, data transmission, saving and printing. The UV3000 is equipped with a large sample chamber, which can accommodate large accessories and integrating sphere accessories for spectrum and diffuse reflection tests. A wide range of optional accessories enables flexible expansion to meet diverse application requirements.



1. Selection Guide

Table 1 UV3000 Product Selection Table

Model	Light Source	Detector	Characteristics
UV3000C	Deuterium-halogen combined lamp	Photocell	● High measurement accuracy ● High cost performance
UV3000D	Deuterium-halogen combined lamp	Photomultiplier tube	● High measurement accuracy ● Ultra-wide dynamic range

2. Performance Parameters

Table 2 UV3000 Performance Parameters

Model	UV3000C	UV3000D
Wavelength Range	190-1100nm	190-900nm
Optical System	Double-beam	
Number of sample cell channels	6 channels, auto-switching	
Wavelength Accuracy	±1nm	
Wavelength Repeatability	≤0.2nm	
Spectral Bandwidth	1.0/2.0nmadjustable	
Photometric Repeatability	0.001Abs(0-0.5Abs)，0.002Abs(0.5-1Abs)，±0.15%T	
Photometric Accuracy	0.002Abs(0-0.5Abs)，0.004Abs(0.5-1Abs)，±0.3%T	
Stray Light	≤0.03%	
Measurement Mode	Transmittance, Absorbance, Energy	
Wavelength Adjustment	Automatic adjustment	
Photometric Range	-4~4A	

Baseline Flatness	≤0.002Abs	
Light Source	Deuterium-halogen combined lamp	Deuterium-halogen combined lamp
Detector	Photocell	Photomultiplier tube
Noise	0.001Abs	±0.0005Abs
Baseline Drift	0.001Abs/h（500nm)	
Data Output	USB interface	
Specifications	455 × 286 × 225mm，20kg	
Power Supply and Power Consumption	AC220V，100W	

3. Product photo



Figure 1 Appearance of UV3000 Double-beam UV-Vis Spectrophotometer

4. Accessories

Table 2 Standard and Optional Accessories of UV3000

Standard Accessories	
1	USB data cable
2	USB flash drive (with dedicated PC software)
3	Charging adapter, 24V/9.3A
4	10mm quartz cuvette
5	Accessories (including packing list, user manual and certificate of conformity)

Optional Accessories	
1	Dual-beam 100mm long sample cell holder accessory (for cuvettes with 5~100mm optical path)
2	Dual-beam triple 100mm long sample cell accessory (for cuvettes with 5~100mm optical path)
3	60mm integrating sphere accessory
4	Variable-angle solid sample holder (angle adjustable arbitrarily within ±48°)
5	Dual-beam test tube holder accessory
6	Micro sample cell accessory
7	Relative specular reflection accessory
8	Thermostatic sample cell accessory

Common Test Solutions and Accessories



FJ40004

Long Optical Path Holder Accessory

It significantly improves detection sensitivity by increasing the optical path length (typically 50 mm, 100 mm or longer), especially for the analysis of low-concentration samples or weakly absorbing substances.



FJ40005

Integrating Sphere (for Spectrophotometer)

It can be used to measure diffuse reflectance spectral characteristics of flat solid and powder sample surfaces, as well as transmittance spectral characteristics of solid samples such as lenses and films. The integrating sphere enables analysis of chromaticity, color difference, whiteness and other indicators.



FJ40007

Relative Specular Reflection Accessory

It is specially used to measure the absolute reflectance or specular reflection spectrum of mirror surface materials (such as metal coatings, optical lenses and polished crystals).



FJ40008

Variable-Angle Solid-Sample Holder Accessory

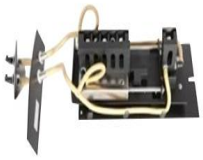
A device for adjusting the angle between incident light and the sample, used to study the angular dependence of material optical properties (e.g. variations of reflectance, transmittance and absorptivity with incident angle).



FJ40009

Test-tube Holder Accessory

The test-tube holder accessory is used to hold test tubes, enabling direct measurement of spectral characteristics of liquids with test tubes as containers.



FJ40010

Thermostatic Sample-Cell Accessory

Used together with a thermostatic water bath and water pump, the thermostatic sample-cell holder accessory enables sample measurement at specified temperatures. It is mainly applied for investigating temperature-dependent reactions such as enzyme kinetics, protein denaturation and photocatalytic reactions.



FJ40011

Micro-Sample Cell Accessory

The dual-beam micro-sample cell accessory features an adjustable micro-cell mount whose position in the optical path can be adjusted. It greatly reduces sample consumption while guaranteeing detection sensitivity.