



# UV/VIS SPECTROPHOTOMETER

version  
2005

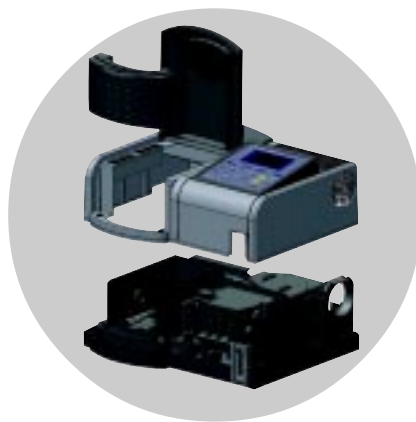
PG INSTRUMENTS LIMITED



# UV-VIS

## Spectrophotometer

- LOW STRAY LIGHT
- EXCELLENT STABILITY
- EASILY UPDATED
- MANY APPLICATIONS
- LOW COST HIGH QUALITY
- SMALL FOOTPRINT
- USER FRIENDLY SOFTWARE



**T60**

**UV-VIS Spectrophotometer**



PG INSTRUMENTS LIMITED has developed its latest Spectrophotometer, the T60, based on advanced technology. The advanced modular design ensures outstanding performance combined with quality and an excellent specification.

The T60 provides the functionality of an advanced instrument, at an affordable price. The superior flexibility, high level of automation and user friendly software, backed up with excellent service makes the system the "Professionals" Choice.



## Low stray light

Stray light below 0.05%



The advanced optical system ensures very low stray light

High Quality of reliable analytical results

Stray light is controlled by a very low noise electronic circuit



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**UV-VIS Spectrophotometer**

# Excellent stability

Superior material makes it stable and durable

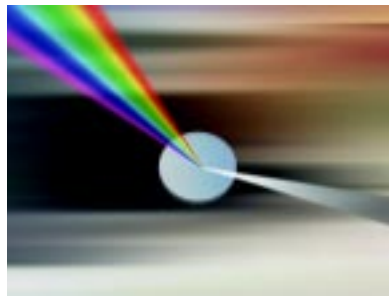


A micro-step motor positions the grating very precisely. This motor is free from maintenance.

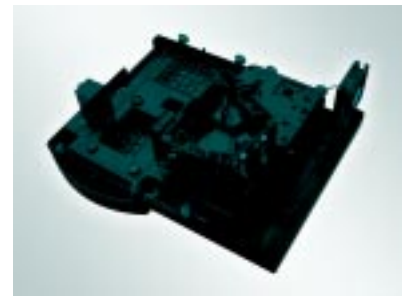


Deuterium and Tungsten lamps are used as the light source.

Optical components ensure accurate  
spectral data



The monochromator is totally sealed and the optical surfaces are protected with a silicon dioxide membrane.



The Spectrophotometer shell is made from an environmentally friendly non corrosive material.



# Hardware and Software easily updated

Pre-programmed application cards to perform analysis such as DNA/Protein, photometric, kinetics etc can be easily inserted by the user.



The cell compartment is easily opened to allow other accessories to be used.



System is easily interfaced to a PC via a standard RS232 interface.



Can be easily interfaced to many different printers.



The user can easily receive program updates from the PG Instruments internet site.

**T60**

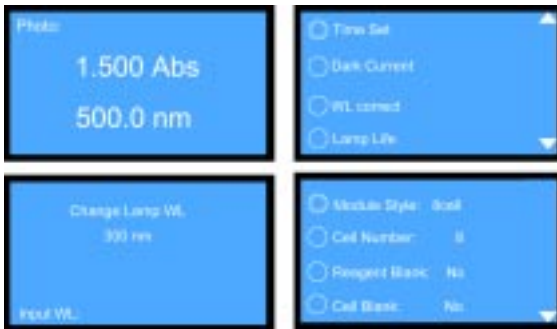
**UV-VIS Spectrophotometer**

## User friendly design

Offers ease of use and simple maintenance

### FULL AUTOMATION

Automatic wavelength positioning, lamp change over, wavelength calibration, motorised sample changer etc.



### FAST SCAN

The speed of the wavelength drive is up to 7000nm/min and the speed of the wavelength scan is up to 2500nm/min.



### Built in Cell Holder Storage

The cell holder on one side of the sample compartment allows for easy access.



### Cleanable Dust Filter

The Dust Filter ensures the internal parts of the instrument remain contamination free.



### Automatic Lamp Usage detection system

The user allows to check the lamp usage information. For example, if the tungsten lamp has operated for 201 hours and the deuterium lamp for 197 hours, it will display as following.



### Simple Maintenance

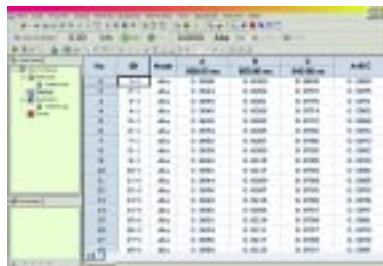
The retaining mechanism at the bottom and the back of the instrument make maintenance a simple process.



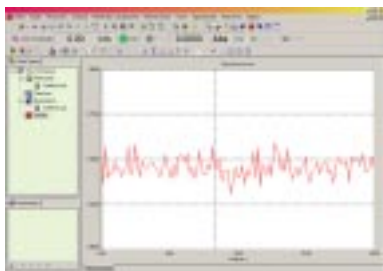
# Analysis with Spec UV Software

Powerful Functions with user friendly operation

## Four regular functions



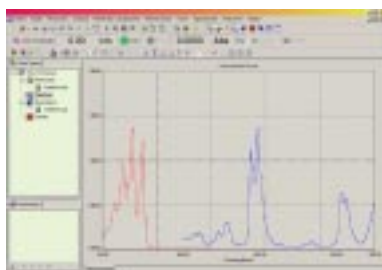
Photometric measurement



Kinetics measurement



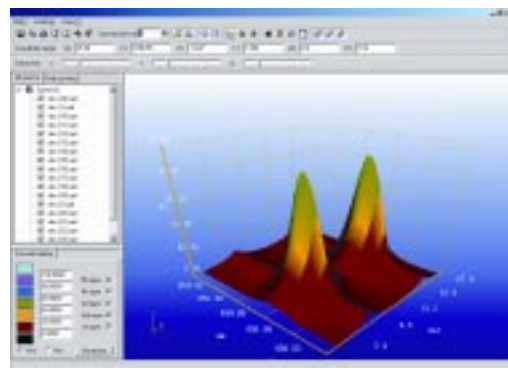
Quantitative measurement



Spectrum scan

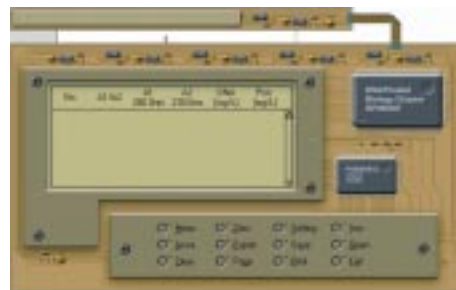
## 3D Presentation

- 3D Presentation by combining multiple spectrum
- Spectra can be fully and easily manipulated
- Peak Picking
- Graphics printout



## DNA/Protein Analysis

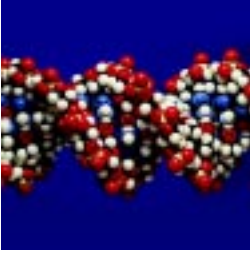
- Measurement of absorbance ratios at 260nm and 230nm, at 260nm and 280nm, and at custom defined wavelengths
- Background correction using absorbance at 320nm (Optional)
- Absorbance ratio calculation for user selected wavelengths
- Concentration calculation using arbitrary factors when selecting custom defined wavelengths



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## Software packages for various industries



### Gene analysis

- DNA/Protein analysis software package



### Drug analysis

- Pharmacopoeia software package



### Pesticide analysis

- Pesticide residues software package



### Foods analysis

- Foods analysis software package



### Environmental analysis

- Environmental analysis with environmental software package

## Log Record

- Automatically records each operator's usage
- Reliable database format to save the log
- The administrator can sort the log records and perform many other useful tasks

## Binary File Save

- Binary format to save measurement data
- Binary format improve the data secrecy
- Save the disk space

## Multi-User Management

- Allows the administrator to create users and groups with different privileges
- Access control by user ID and password

## Quality Control

- Monitor the data according to the user's setup
- The system will take corrective measures if the data is out of range

## Software Conforming to GLP

- Multi-user management
- Log record
- Quality control
- Printout record

## Data Printout

- Share data with other software
- The results can be saved in
- Microsoft Word
- Microsoft Excel
- Text

## Printout Records

- Printout measurement results
- Personal settings for the report format
- Print preview

# Specifications

	UV-Visible	Visible
Optical system	The split beam monitoring ratio system	The split beam monitoring ratio system
Wavelength range	190~1100nm	325~1100nm
Wavelength accuracy	± 1nm	± 2nm
Wavelength reproducibility	≤ 0.2nm	≤ 0.4nm
Spectral bandwidth	2nm	2nm
Stray light	≤ 0.05%T	≤ 0.1%T
Photometric range	-0.3~3Abs	-0.3~3A
Photometric accuracy	± 0.002Abs(0~0.5A) ± 0.004Abs(0.5~1A) ± 0.3%T(0~100%T)	± 0.002A (0~0.5A) ± 0.004A (0.5~1A) ± 0.3%T(0~100%T)
Photometric reproducibility	≤ 0.001A(0~0.5A) ≤ 0.002A(0.5~1A) ≤ 0.15%T(0~100%T)	≤ 0.001A (0~0.5A) ≤ 0.002A (0.5~1A) ≤ 0.15%T(0~100%T)
Baseline flatness	± 0.002A (200~1000nm)	± 0.002A (325~1000nm)
Noise	± 0.001A (500nm,p-p), half an hour warm-up	± 0.001A (500nm,p-p), half an hour warm-up
Baseline stability	≤ 0.001A/h (500nm,0Abs), 2hr warm-up	≤ 0.002A/h (500nm,0Abs), 2hr warm-up

Performance	Photometric measurement	Photometric measurement
	Program card(DNA/Protein analysis, Quantitative measurement, Photometric measurement, Multi-wavelength analysis)	Quantitative measurement
	Life check for Tungsten-Halogen lamp and Deuterium lamp	
	Auto 8-cell changer	
	Backlight digital LCD	LCD digital display
	Mini-printer, HP Deskjet printer and laserjet printer, via parallel port	Mini-printer, HP Deskjet printer and laserjet printer, via parallel port
	PC interface via RS232 link	PC interface via RS232 link

Standard configuration	Spectrophotometer main unit	1 set
	Conformity certificate	1 pc
	Quartz cell	1 pair
	Quantitative prog. card	1 pc
	tool kit	1 set
	Fuse (2A)	2 pcs
	Power cord	1 pc
	Instruction manual	1 pc
	Packing list	1 pc

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## Optional accessories

Auto 8-cell changer  
 "DNA/Protein analysis" program card  
 "Photometric measurement" program card  
 "Multi-wavelength analysis" program card  
 Auto long pathlength 5-cell changer  
 Spec UV software

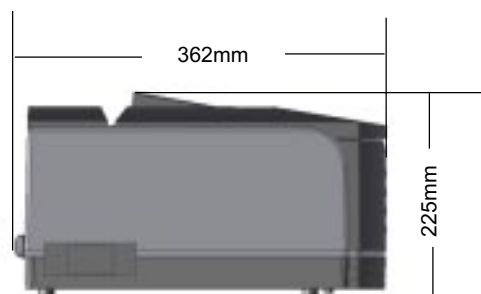
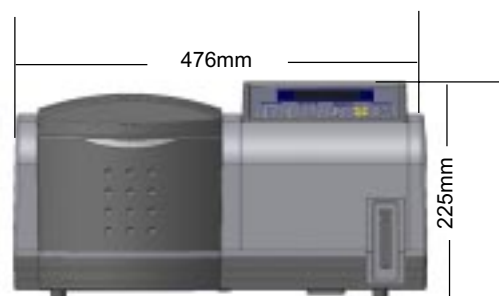
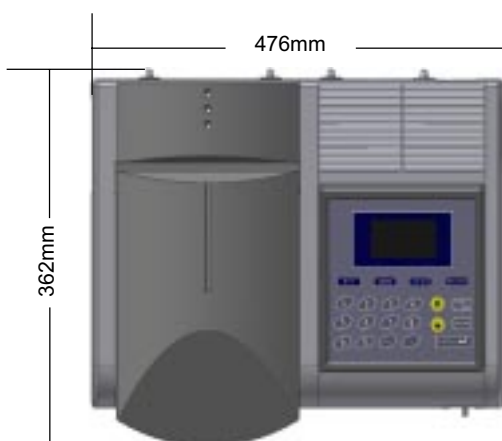


Program card



Auto 8-cell changer

## Dimensions



Width × Depth × Height = 476(mm) × 362(mm) × 225(mm)  
 Weight = 11 kg



PG INSTRUMENTS LIMITED  
2nd. FLOOR, 145 - 157 ST JOHN STREET,  
LONDON EC1V 4PY  
TEL: 0044 845 310 8384  
FAX: 0044 870 762 3212  
E-MAIL: [sales@pginstruments.com](mailto:sales@pginstruments.com)  
[www.pginstruments.com](http://www.pginstruments.com)

PG INSTRUMENTS LIMITED  
POWERPOINT BUSINESS CENTRE  
122 HIGH STREET, EARL SHILTON  
LEICS LE9 7LQ  
TEL: 0044 1455 844443  
FAX: 0044 1455 851384  
E-MAIL: [support@pginstruments.com](mailto:support@pginstruments.com)