

# QUIMICOMPANY

EQUIPOS E INSUMOS PARA LABORATORIO

**MAPADA**  
MAPADA INSTRUMENTS

## SINGLE BEAM UV/VIS SPECTROPHOTOMETER WITH SOFTWARE MAX. 1100nm

REF: P4 PC



P4 PC is a basic model of P Series. As an economical single beam spectrophotometer, it provides several basic functions, including photometry test, quantitation test, file management, system management and performance verification. Easy to operate with color LCD touch screen. Suitable for education, biology, pharmacy, food, environmental protection and other areas.

### Features



#### Fashion Design

- Simple;
- elegant;
- Aluminum Base.



#### Anticorrosive holder

- Easy;
- Accurate;
- Anticorrosive.



#### Leaky Hole

- Protect instrument.



#### Lamp Room

- Change lamp easy.



#### USB Interface

- USB A: Printer;
- USB B: Save data.



#### Color Screen

- Friendly interface;
- Build-in Method.



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1. Using the 1200 l / mm holographic grating with low stray light, the optimized optical path design ensures the high accuracy of the instrument.
2. The new wavelength driving mechanism has greatly improved the wavelength accuracy and repeatability, and effectively reduced the noise.
3. All aluminum die casting base and all moulded shell, make the instrument more sturdy and durable.
4. High resolution TFT color LCD touch screen provides excellent display effect and simple operation.
5. Self-calibration system while switching on and preheating countdown.
6. Support USB memory to upgrade firmware directly.
7. It can connect computers through USB, control instrument by software and can enrich and expand applications by software.
8. It also supports USB universal printer and serial micro printer based on PCL3 GUI protocol.
9. Wide sample room, suitable for 5~100 mm sample holder and other accessories.
10. Added Spectrum Scanning function, it's the first time in the same level instrument.
11. Automatic move wavelength to set position, automatic zero correction.
12. It can connect to the printer and output the measurement results directly.

### Basic Function Instruction - Product Features



#### Photometry Test

A / T one key conversion;

Results can be recorded, edited, deleted, saved and printed.



#### Spectrum Scanning

The scanning speed is optional (low, medium, high).

The scanning interval is optional (0.1, 0.2, 0.5, 1, 2, 5, 10nm);

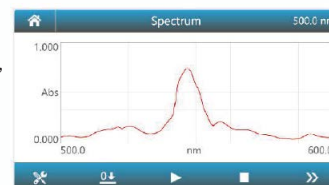
A / T display mode can be switched;

Automatically find the peak;

Point by point ( peak ) view;

Coordinate adaptable and modifiable;

Curves and data can be deleted, saved and printed



#### Quantitation Test



Single and dual wavelength method ( dual wavelength difference, dual wavelength ratio ) to measure samples

3 methods to establish standard curve (input equation coefficient, measure 2 ~ 10 standard samples or input standard sample absorbance and concentration )

3 kinds of fitting methods ( linear zero, linear, two order )

Standard curve can be saved and invoked

Built-in 19 concentration units and custom input

The measurement results can be recorded, edited, deleted, saved, and printed



#### File Management

| File management       |        |                | < 1 / 3 > |
|-----------------------|--------|----------------|-----------|
|                       | Name   | Date           |           |
| Photometry            | PHY001 | 15/01/01 12:00 | ⊙         |
| Quantitation - Result | PHY002 | 15/01/01 11:03 | ⊙         |
| Quantitation - Method | PHY003 | 14/12/27 10:25 | ⊙         |
|                       | PHY004 | 14/12/27 10:14 | ⊙         |
| Spectrum              | PHY005 | 14/12/20 15:27 | ⊙         |

Files can be deleted, renamed, batch import / export, converted to .txt and .csv format.

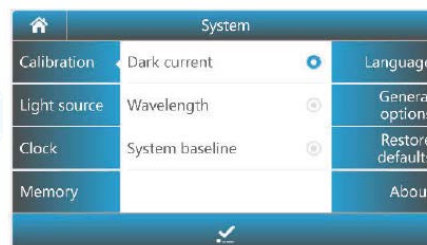
## SINGLE BEAM UV/VIS SPECTROPHOTOMETER WITH SOFTWARE MAX. 1100nm

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### System Utility

1. System calibration (dark current, wavelength, system baseline)
  2. Light source management (light source switch, timing)
  3. Clock management
  4. Memory management (storage status display, formatting)
  5. Multi language ( can be switched )
- Wavelength accuracy; Photometric precision
  - Hetero astigmatic light; Wavelength accuracy
  - Photometric precision; Hetero astigmatic light; Noise; Noise
  - 6. General settings ( sound display sample rack and other settings ) .



### Performance Verification

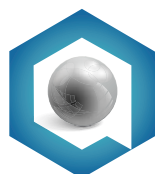
- Wavelength Accuracy;
- Photometric Accuracy;
- Stray light;
- Noisy;
- Dark noisy;
- Stability;
- Spectralbandwidth

### Packing List.

| Part. No. | SN | Description          | Qty   |
|-----------|----|----------------------|-------|
| P1        | 1  | Instrument           | 1 set |
|           | 2  | User's manual        | 1 pc  |
|           | 3  | Cuvette quartz, 10mm | 1 pcs |
|           | 4  | Cuvette Glass, 10mm  | 1 pcs |
|           | 5  | Fuse                 | 1 pc  |
|           | 6  | Power cable          | 1 pc  |
|           | 7  | Dust cover           | 1 pc  |
|           | 8  | EasyUV               | 1pc   |
|           | 9  | EasyUV Manual        | 1pc   |
|           | 10 | Dongle               | 1pc   |
|           | 11 | USB cable            | 1pc   |

### Packing Detail

|                    |                                |
|--------------------|--------------------------------|
| Product dimensions | 456 (W) x 360 (D) x 185 (H) mm |
| Carton dimensions  | 560 (W) x 500 (D) x 360 (H) mm |
| Net Weight         | 10.7 Kg                        |
| Gross weight       | 13.7 Kg                        |



## SINGLE BEAM UV/VIS SPECTROPHOTOMETER WITH SOFTWARE MAX. 1100nm

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### Software Introduction (optional)

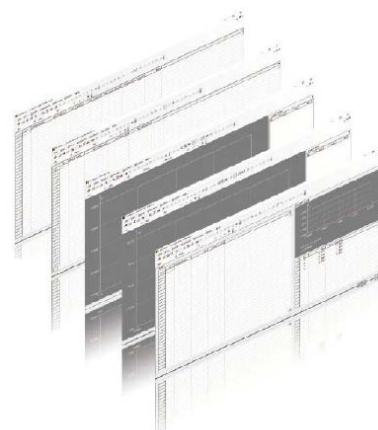
EasyUV 1.0 is an application software based on Windows operating system.

#### Software Function :

1. Photometric measurement;
2. Quantitative measurement;
3. Kinetics measurement;
4. Multi wavelength measurement;
6. DNA / protein measurement.

Through the USB interface, the user can connect with the P series UV / Vis spectrophotometer very convenient.

At the same time, the application range, data analysis and file management function of P series instruments are greatly expanded, so that your analysis and measurement work becomes more relaxed and efficient.



### Characteristics:

1. Photometric measurement: one key switch A / T / E;
2. Quantitative measurement: establish standard curve;
3. File management: data preservation, editable file name;
4. Performance verification: verifiable performance specifications;
5. System application: Multilingual operating system;
6. Dismountable lamp room cover, can change lamp easily;
7. Data can be export from the U disk with CSV and TXT format
8. Support general printer with A4 paper printing;
9. The front battle of the sample room can be dismantled freely;
10. Special leak hole in the sample room;
11. Antirust treatment cell holder



**10-100 mm Automatic 5-cell Holder**  
Cat.No.:1220000100

Can test 5 sample at the same time,  
light path from 10-100mm adjustable.



**5° Reflectance Accessory**  
Cat.No.:1102900940

Can test solid or surface reflectance.



**Micro Cell Holder**  
Cat.No.:1102900240

Special measuring accessories for  
measuring ≤ 200ul capacity.



**10mm Water-Jacked 4-cell holder**  
Cat.No.:1102900610

Test Sample at suitable temperature.



**Solid sample 2-position holder**  
Cat.No.:1102900450

Test solid film or glass.



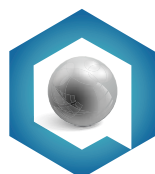
**Automatic 8-cell Holder**  
Cat.No.:1102900310

Test 8 samples at same time,  
can improve work efficiency.

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### Technical specifications

| Parameters     |                          | Description                                                                                                                                                                                                                                            |
|----------------|--------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Optical System |                          | Single Beam, Littrow/holographic grating 1200lines/mm                                                                                                                                                                                                  |
| Light Source   |                          | Tungsten Lamp, Deuterium Lamp                                                                                                                                                                                                                          |
| Detector       |                          | Silicon Photodiode                                                                                                                                                                                                                                     |
| Bandwidth      |                          | 2 nm                                                                                                                                                                                                                                                   |
| Wavelength     | Range                    | 190 – 1100nm                                                                                                                                                                                                                                           |
|                | Accuracy                 | ±0.5nm                                                                                                                                                                                                                                                 |
|                | Repeatability            | ±0.2nm                                                                                                                                                                                                                                                 |
|                | Display                  | 0.1nm                                                                                                                                                                                                                                                  |
|                | Gyratation speed         | 10000nm/min                                                                                                                                                                                                                                            |
|                | Scan speed               | 4200 nm/min                                                                                                                                                                                                                                            |
| Photometric    | Range                    | 0.301 – 3A,0 – 200%T,0 – 9999.9C                                                                                                                                                                                                                       |
|                | Accuracy                 | ±0.003A @ 0.5A,±0.006A @1A,±0.5%T @ 0 - 100%T                                                                                                                                                                                                          |
|                | Repeatability            | ±0.0015A @ 0.5A,±0.003A @1A,±0.2%T @ 0 - 100%T                                                                                                                                                                                                         |
|                | Noisy                    | ≤0.0005A @ 0A,≤0.001A @ 1A ≤0.002A @ 2A(500nm)                                                                                                                                                                                                         |
|                | Stability                | ≤0.002A/hr(500nm,2 hours after warming up)                                                                                                                                                                                                             |
| Stray Light    |                          | ≤0.05%T                                                                                                                                                                                                                                                |
| Baseline       |                          | ±0.002A                                                                                                                                                                                                                                                |
| Memory         |                          | 236KB(Built-in), Unlimited(USB memory stick)                                                                                                                                                                                                           |
| Display        |                          | 5 inches color screen(480x272)                                                                                                                                                                                                                         |
| Keypad         |                          | Resistive touch screen                                                                                                                                                                                                                                 |
| Printer        |                          | Serial printer, USB printer (in line with HP PCL3 GUI printing language)<br>Serial port (printing), USB-A (storage and printing), USB-B (online)                                                                                                       |
| Port           |                          | Serial port (printing), USB-A (storage and printing), USB-B (online)                                                                                                                                                                                   |
| Holder         | Standard                 | 10mm 4-cell holder                                                                                                                                                                                                                                     |
|                | Optional                 | 10 – 50mm 4-cell holder,10 – 100mm 4-cell holder,10mm 8-cell Automatic Holder,10 – 100mm 5-cell Automatic Holder, Micro Cell Holder,Peltier/Sipper System,Reflectance Accessories,Solid Sample Holder,Water-Jacked 1 or 4-cell holder,Test Tube Holder |
| Function       | Photometric              | Yes                                                                                                                                                                                                                                                    |
|                | Quantitation             | Yes                                                                                                                                                                                                                                                    |
|                | Spectrum                 | Yes                                                                                                                                                                                                                                                    |
|                | File Management          | Yes                                                                                                                                                                                                                                                    |
|                | System Management        | Yes                                                                                                                                                                                                                                                    |
|                | Performance Verification | Yes                                                                                                                                                                                                                                                    |
| Language       |                          | 6 language(English, German, French, Spanish, Portuguese, simplified Chinese)                                                                                                                                                                           |
| Power          |                          | 110V/60Hz, 120W                                                                                                                                                                                                                                        |
| Dimensions     |                          | 456 (W) ×360 (D) ×185(H)mm                                                                                                                                                                                                                             |
| Weight         |                          | 10.7Kg                                                                                                                                                                                                                                                 |