

# Aerosol Photometer ZR-6012

## Precision Measurement Instruments for HEPA Filter Testing



## Introduction

In a world where precision, reliability, and compliance are non-negotiable, the Junray ZR-6012 Aerosol Photometer stands at the forefront of testing innovation. Engineered with cutting-edge sensing technology and intelligent data processing, the ZR-6012 delivers rapid, highly accurate aerosol measurements that professionals can trust in the most demanding environments. Whether validating HEPA filter integrity or ensuring cleanroom performance, this advanced instrument combines exceptional sensitivity with intuitive operation, empowering your team to achieve uncompromising standards with confidence and efficiency.

## Features

- 0.0001 to 700 ug/l (700mg/m<sup>3</sup>) ultra-wide measurement range
- Highly accurate results with precision flow control ( $\pm 2.5\%$ )
- Fully 21 CFR Part 11 compliant
- Multi-level user management and built-in audit trail
- Large 5-inch color touch screen display
- Built-in lithium-ion battery for complete portability
- Audible, visual and tactile alarms, avoid missing leaks
- 100,000 group internal data logging & easy data exporting
- Built-in thermal printer with auto-print functionality
- Advanced self-check & diagnostics built-in
- Compact, lightweight, portable, rugged & easy to use
- HEPA filtered exhaust & many other key features

## Applications

- Cleanroom HEPA filter testing
- Bio safety cabinet & fume hood testing
- Pharmaceutical manufacturing facilities
- Electronics and semiconductor production
- HEPA filter and filter materials production
- Isolator and other controlled environments
- Aerosol research & education
- Testing negative air pressure units (NPU's)
- DOP testing H class vacuum cleaners

## Reference standards

- ISO 14644-3:2021
- EU GMP
- EN 12469:2000
- NSF/ANSI 49-2024
- IEST RP-CC034
- AS 1807:2021
- IEC 60335-2-69:2021
- JJF 1800-2020 & others

## Packing List

ZR-6012 aerosol photometer  
 Carrying case  
 Power cord  
 Conductive silicone rubber tubing  
 Handheld filter scanning probe  
 Calibration certificate  
 Other accessories



# Aerosol Photometer ZR-6012

## Benefits

### Data security, traceability and completeness

- Supports three level user management with authority control. The built-in audit trail capability provides complete data security and traceability.
- Users can enter the filter name and filter number, automatically recorded, convenient for tracing tested filter.
- Adjustable time constant helps avoid false alarms.
- Adjustable printing interval, with all data time and date stamped and saved automatically.
- Latest generation features, data logging & printing, operator name and filter number saving, leak percentage with time stamping, total scan time maximum leakage, pass / fail results & more.



### Powerful and intelligent

- Highly accurate sensor technology developed by Junray
- Powerful software with field-based firmware updating available
- Precision flow control with impressive  $\pm 2.5\%$  flow rate accuracy
- Capable of measurements up to 700ug/L (700mg/m<sup>3</sup>)



### Rugged design and easy to maintain

- Built-in HEPA filters for the intake and exhaust, protects the sensor from unwanted pollutants
- Auto self-check on start-up and error detection reporting
- Auto self-cleaning & built-in auto zero capability
- Firmware can be upgraded via USB-A port in the field

### Friendly for in-situ application



Compact carrying case with universal wheels, easy to transport.



Built-in rechargeable lithium-ion battery provides up to 4 hours sampling. Built-in thermal printer can save and print traceable data in real time.



The synchronized photometer and filter scanning probe ensures easy control when scanning filters with all the information at your fingertips.



May be operated both vertically and horizontally to suit different industry applications.

# Aerosol Photometer ZR-6012

## Calibration

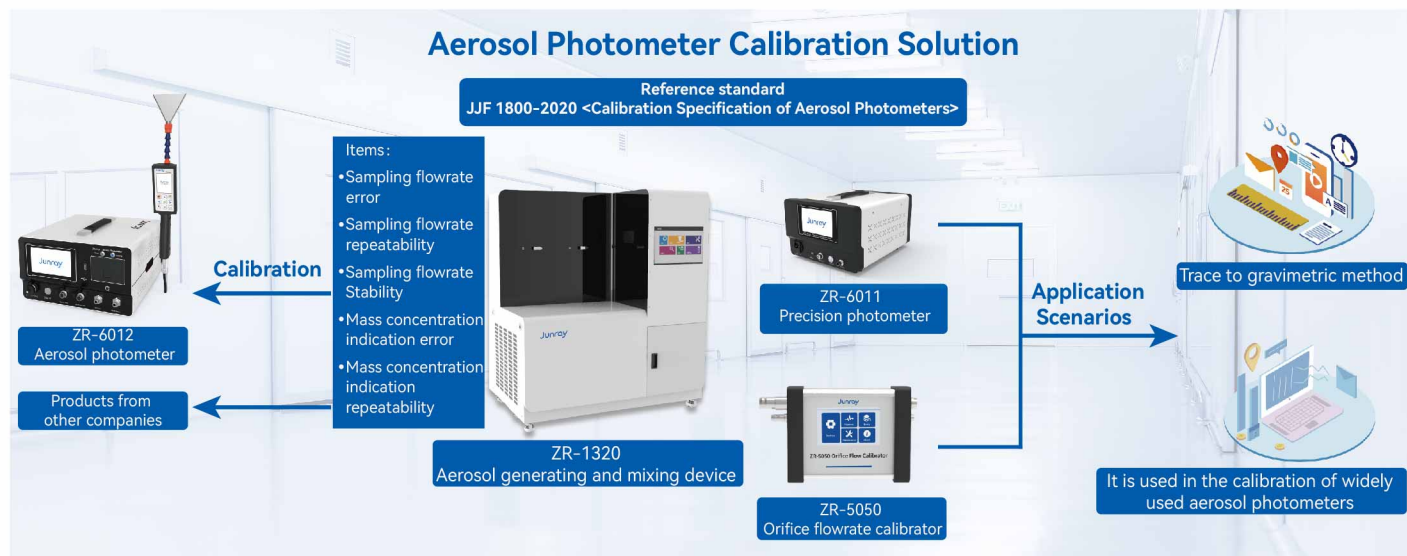
**Leading the world in aerosol photometer calibration**  
**The ultimate measurement tools from Junray**

In 2020, the world's first calibration specification for aerosol photometers was introduced (JJF 1800-2020) by the State Administration for Market Regulation in China. This was officially implemented in the same year and all aerosol photometer related products now have to refer to it.



- Sample flow error
- Sample flow repeatability
- Sample flow stability
- Mass concentration indication error

To meet the demand from global calibration laboratories and metrology institutes, Junray developed a highly specialized calibration system to ensure full compliance with this new standard. All measurement values are precise and traceable.



For many years, Junray has continued to expand their global photometer sales & calibration network. Today, Junray has more than 22 calibration laboratories established throughout the world. These ISO 17025 accredited laboratories are all factory trained and certified by Junray and are capable of issuing ILAC calibration certificates on behalf of Junray.



**NATA**  
**Certificate**



## Service

With vast experience designing and manufacturing state-of-the-art measurement instruments over many years, Junray has extensive industry, product and application knowledge. Our global calibration and distribution network is the finest of its type in the world and is finely tuned to support the wide range of measurement technologies our company manufacturers.

As an ISO 9001 quality accredited manufacturer, we are intimately familiar with every component inside our measurement instruments and we are fully committed to provide the best customer support and turnaround times in the event our customers ever need us.

# Aerosol Photometer ZR-6012

## Specifications

Parameters	Range
Sampling flow	28.3L/min, ±2.5%
Range	0.0001- 700 µg/L (700mg/m <sup>3</sup> )
Leakage rate range	0.0001% - 100%
Precision	1% of the value in the range of 0.01% to 100%
Repeatability	0.5% of the value in the range of 0.01% to 100%
Zero	Automatically establish zero point before each test and self-clean after each test
Data storage capability	100,000 groups
Data output	Built-in thermal printer, USB-A port
Alarm	Beep, flashing, display, probe vibration
Aerosol agent	PAO, DOP and other aerosol types
Environmental sensor	Temperature, humidity, atmospheric pressure
Exhaust	HEPA filtered
Noise	< 65dB(A)
Battery	4 hours working
Power	AC110-240V, 50/60Hz
Power consumption	< 150W
Dimension	(L300×W330×H184)mm
Weight	8.9 kg (host), 15kg (with all accessories)
Working conditions	10 to 35 deg C (5% to 100% RH (non-condensing))
Storage conditions	-10 to 40 deg C (5% to 85% RH (non-condensing))

## Optional Aerosol Generators



### ZR-1300A Aerosol Generator

Built-in compressor, sufficient aerosol output, plug-and-play operation.



### ZR-1302 Aerosol Generator

Additional nozzles provide increased aerosol output, no mains power supply needed, requires external compressor.



## Scientific & Environmental Monitoring Technologies



**Australia Wide**

Phone: 1300 025 780

### Contact Details

Phone: + 61 3 9124 9886

Email: [sales@alphascientific.com.au](mailto:sales@alphascientific.com.au)

Website: [www.alphascientific.com.au](http://www.alphascientific.com.au)