

Microspectrophotometer

ATP9310

Feature:

- Microscopic samples or microscopic areas of large samples at μm level
- Reflectance, fluorescence, Raman scattering and polarization
- High resolution & High stable spectrophotometer
- Built in high sensitivity deep cooled CCD
- High stable light source
- Spinning disk microscope platform
- Infinity plan objective lens
- New generation integrated structure with high stable and user-friendly operation
- Modular design, multi-functions combination, versatility
- Extendable to add on modular of fluorescence, Raman spectrometer
- Free advanced software

Application:

- Scientific Research Lab, University
- Forensic Identification, Documentation
Check Judicial identification, criminal investigation
- Biological samples analysis: Hospital and Biochemical lab, Microscopic evidences analysis, Trace evidence, Evident documentation, Forensic chemistry
- Semiconductor, OLED, thin film thick, MEMS equipment, surface plasmon resonance
- New materials research

Description:

UV-VIS-NIR Microspectrophotometer, or Microscope spectrophotometer combines advantages of microscope and spectrophotometer in order to measure spectra and colorimetry analysis of microscopic samples or microscopic areas of larger samples. It can measure the reflectance, transmission, fluorescence and other emission spectra, Raman scattering, and polarization.

ATP9310 series is self-developed microspectrophotometer by Optosky brand. Its built-in high stable light source, high resolution spectrometer, and it goes through objectives to microscopic samples on microscope platform, the reflective light signal transfers through objectives to spectrometer for analysis, the obtained reflectance, absorbance, and colorimetric values of different microscopic areas of samples. It can also add on functions of fluorescence spectroscopy and Raman spectroscopy.

Scientific-grade deep cooled CCD with high reliability, high resolution color imaging system, the advanced operation system and free software for easy to operate. It connects to computer by USB for excellent lab experience.

Models	Max. Range
ATP9310-3-11	300-1100 nm
ATP9310-2-10	200-1000 nm
ATP9310-9-17	900-1700 nm
ATP9310-3-17	300-1700 nm
ATP9310-3-25	300-2500 nm
ATP9310-9-25	900-2500 nm



1. Working Principle

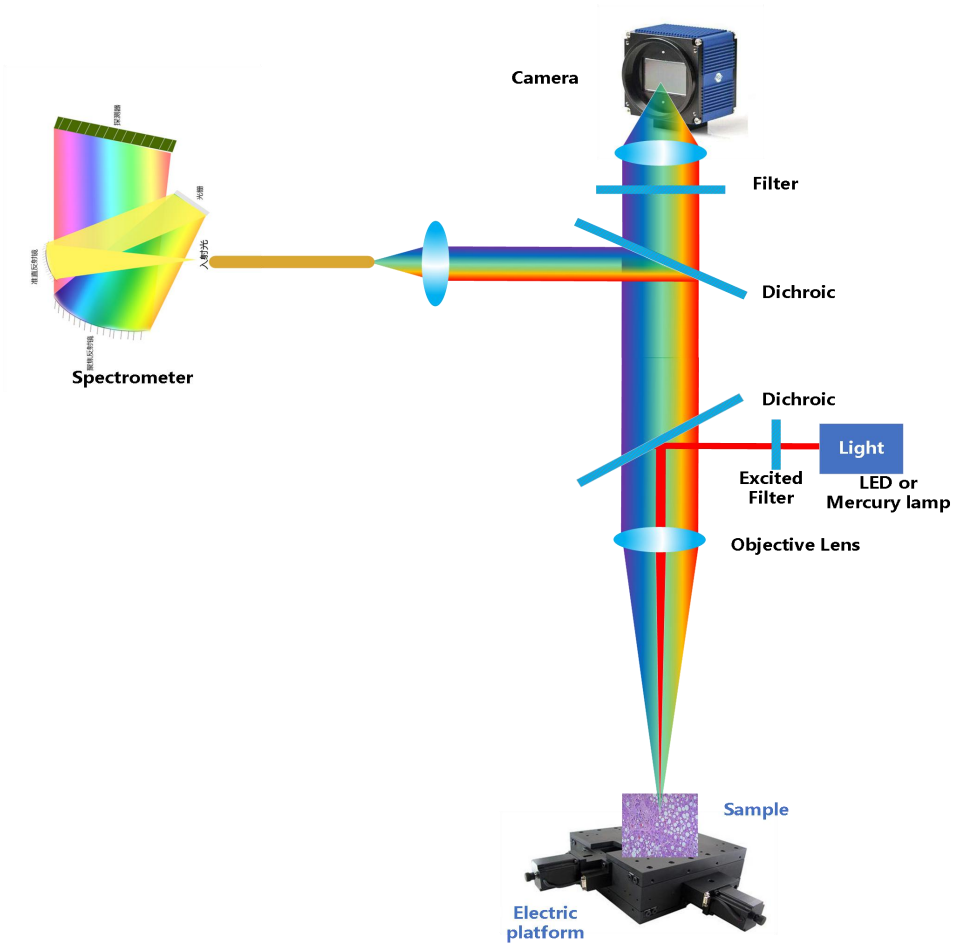


Figure 1 Microspectrophotometer Working Principle

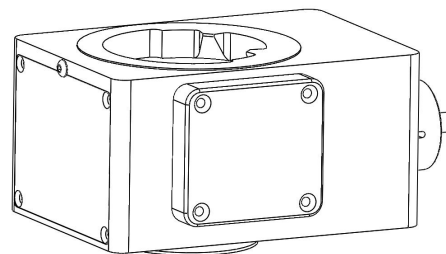
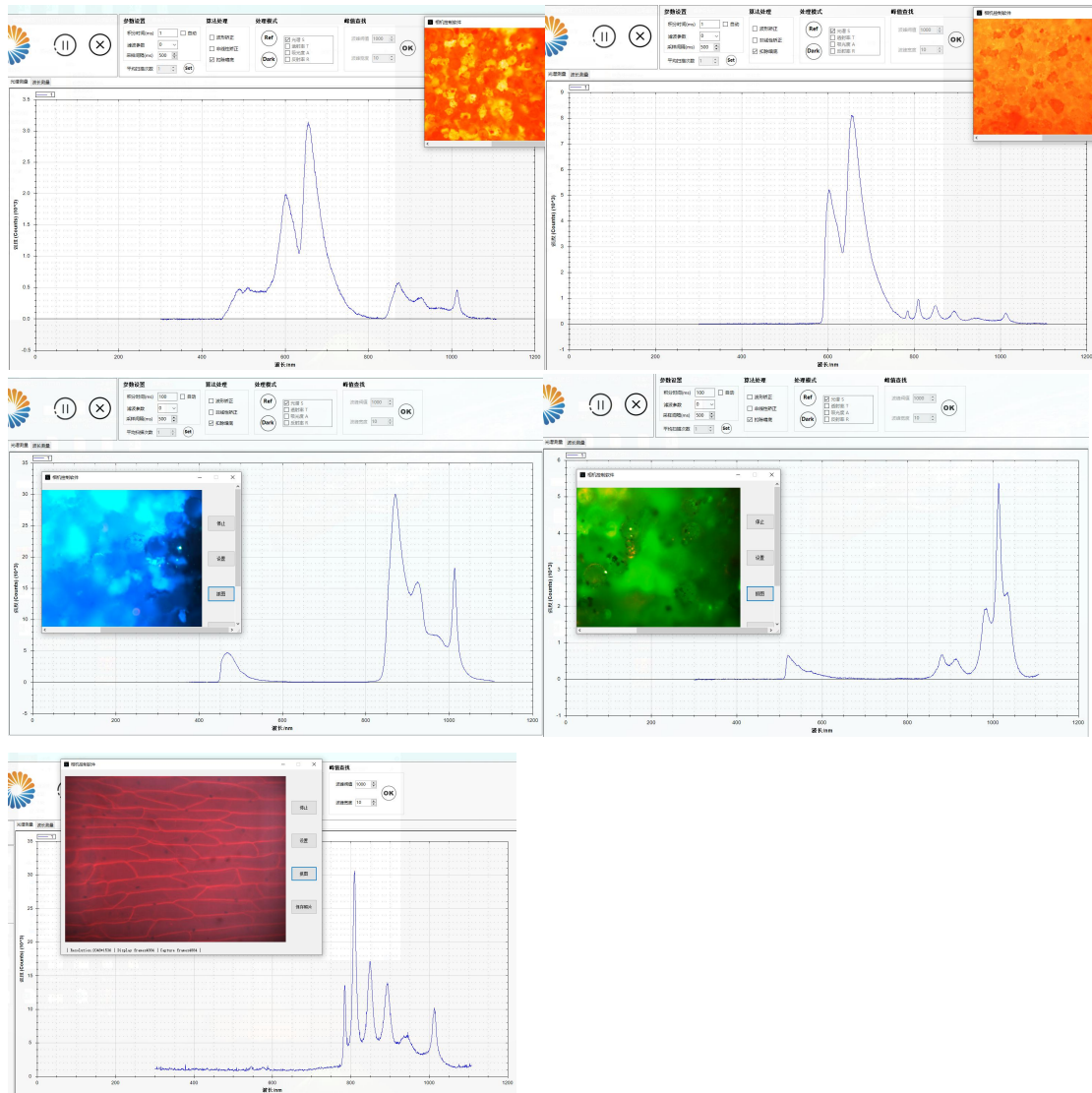


Figure 2 Epi-microscopic spectrum intermediate (left) and spectrum collection intermediate (right)

2. Parameter

Parameters	Specifications
Spectral Method	Reflectance spectrum of different areas on the surface of a substance
Spectral Range	300-1100nm, 200-1000nm, 300-1700nm, 300-2500nm, 900-1700nm, 900-2500nm (optional)
Resolution	1 - 8 nm
Optical Design	f/4 cross asymmetric C-T optical path
Spectral Detector	2048 pixel detector (CMOS or deep-cooling InGaAs)
Integration Time	1ms-10min
SNR	Visible band: >450:1 SWIR band: >1000:1
Dynamic Range	Visible band: 2000: 1 SWIR band: 5000:1
Light Source	High stability halogen light source, pulse xenon light source
Optical System	Infinity chromatic aberration correction optical system
Magnification Range	40X~1600X
Infinity plan achromatic objective lens	Standard configuration: 20X; optional configuration: 40X, 100X, 4X, 10X;
Converter	Inward tilt type internal positioning five-hole converter
Focus Method	Manual focus method
Microscope Platform	Steel wire drive stage (X-axis not protruded)
Camera Device	Equipped with a digital camera system such as 5 million pixels for bright-field photography
Moving Range	50 X 50 mm
Maximum stroke	50 mm
Dimensions	290 X 210 X 220 mm
Weight	9.3 kg
Function	Visual real-time spectrum measurement

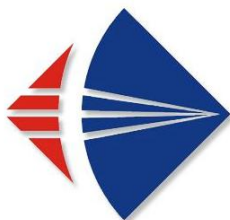
3. Performance Test



4. Attachments

Order	Goods	Numbers	Optional
1	Microscope photometer host	1 set	Standard
2	Objective lens	1 set	Standard
3	Standard calibration whiteboard	1 pcs	Standard
4	12V power adapter	1 pcs	Standard
5	High-performance shielded USB cable	1 pcs	Standard
6	30% gray board	1 pcs	Optional
7	50%gray board	1 pcs	Optional
8	High and low temperature variable temperature test bench, which can carry out tests in the range of -80℃ to 450℃	1 set	Optional

5. Some users (in no particular order):



6. Company Profile

Optosky company has been providing first-class spectroscopy solution with 20 year, with the headquarter covers a area of 2500 square meter with 50 engineers in Xiamen city where held the international 9th BRICK summit in 2017. Another R&D research centers locates in Wuhu city with 30 engineers covering an area of 2035 square meters.

The company founder & CEO Dr.Hongfei,Liu received Doctor degree in Chinese Academic of Science and postdoctoral degree in Xiamen University, by cooperating with two top Universities' spectroscopy technology to integrate into Optosky company aiming at developing global leading spectroscopy solution provider.

The company technology bases on Optomechatronics, Spectroscopy Analysis, Process Weak Optical and Electrical Signals, Cloud Computing, and have been developed wide products line of Raman spectroscopy products, micro spectrometer, hyperspectral imager, field spectroradiometer, fluorescence spectroscopy, LIBS etc. Driven by advanced technologies and products, Optosky brand has been well-known to customers all over the world.

Optosky company base on technology innovation, market-driven innovation, customer first, provides first-class products and services, and one-stop solutions to many fortune 500 companies in many industries. The company received praise from leading industrial companies, as well as many innovative intellectual properties, software copyright, qualification certification, and winner awards over hundred numbers.The company has received over 26 IPs, 35 innovative patents, and 32 copy rights.

Optosky receives top class A introduced the high-tech company to international Xiamen city, the national high-tech and new innovative technology company award. The founder Dr.Hongfei Liu receives the innovation talent award by the ministry of science and technology.

The company is currently conducting the exclusive project of major industrialization national oceanic administration with a total fund of five million US dollars. Optosky company in charge of drafting 7 Chinese National Standards (GB) , including VNIR and SWNIR Field Spectroradiometer, Hazmat detector based on Raman spectroscopy, Buoy-type Monitor eco-environment, water quality monitor in the unmanned vessel, online water quality monitor by spectroscopy, UV-absorbent measure fabrics etc.

Optosky company received ISO9001:2015 certification, CE certification, Police Administration Certification, FDA approval compliant, IQOQPQ compliant.



Figure 1 Optosky (Xiamen) Photonics Inc. Company Headquarter

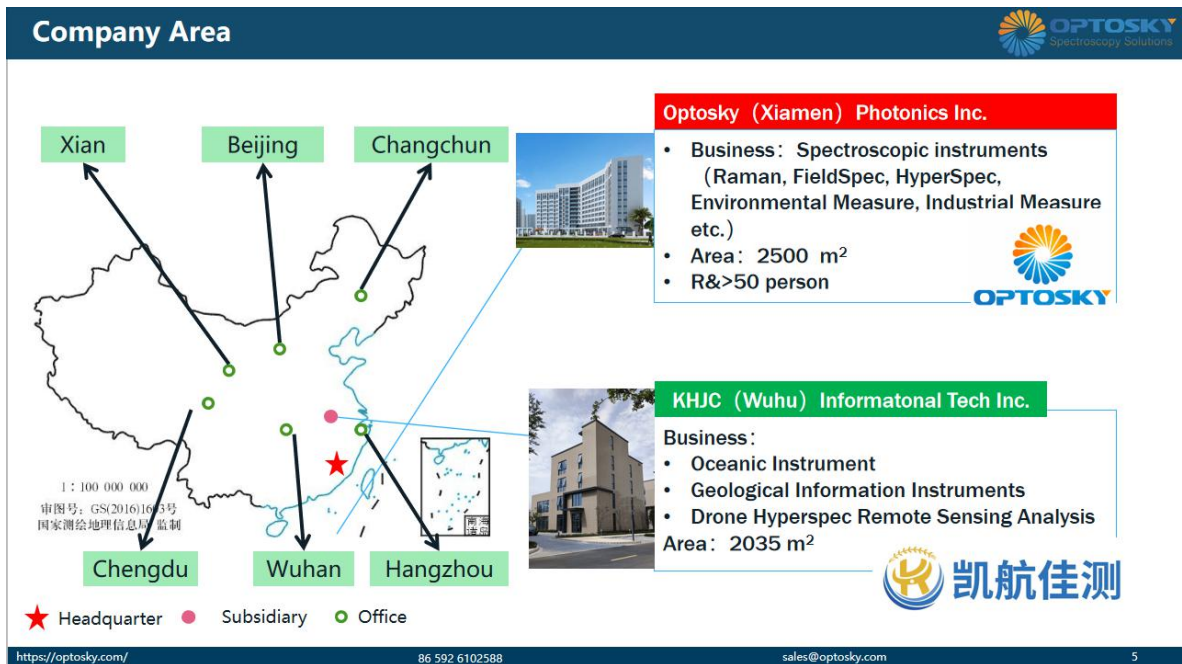


Figure 2 Optosky Company Area

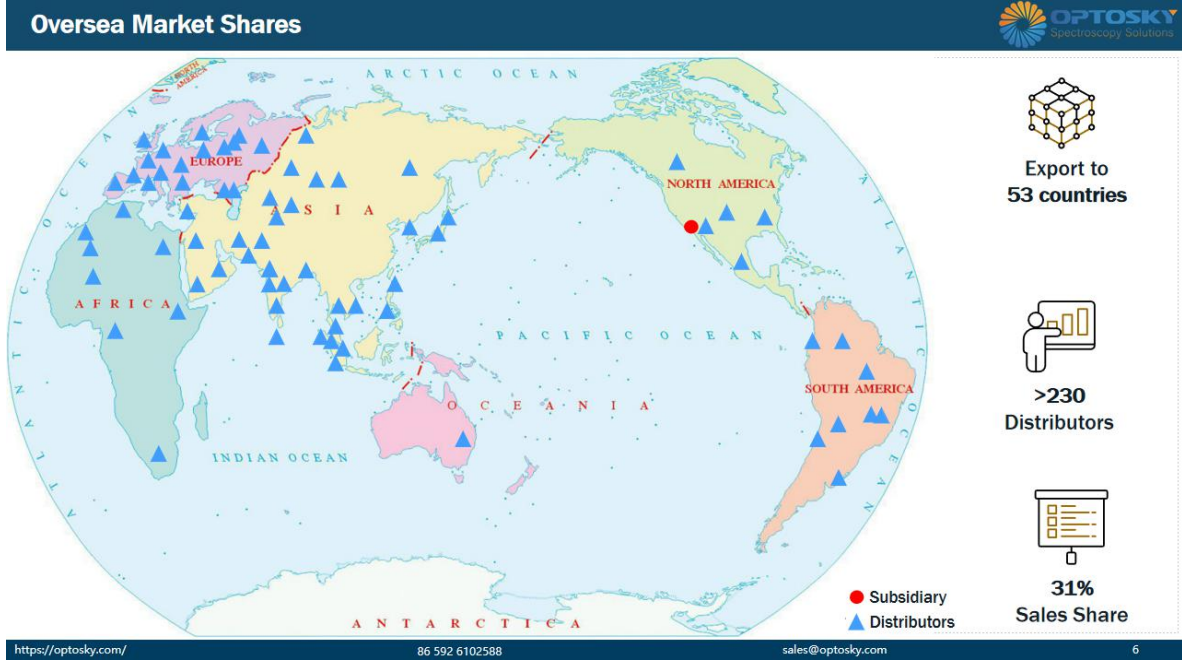


Figure 3 Oversea Market Shares



Figure 4 Optosky Chair and Draft National Standards Lists.

Qualification



 ISO9001:2005	 GB/T 23001 Informationization & Innovation	 CE, RoHS, LVD 17 models	 Police Approval 11 models
 GB/T 29490 IP implementation	 5 Innovative patents	 35 patents new utility design	 32 Software copyright

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Figure 5 Qualification

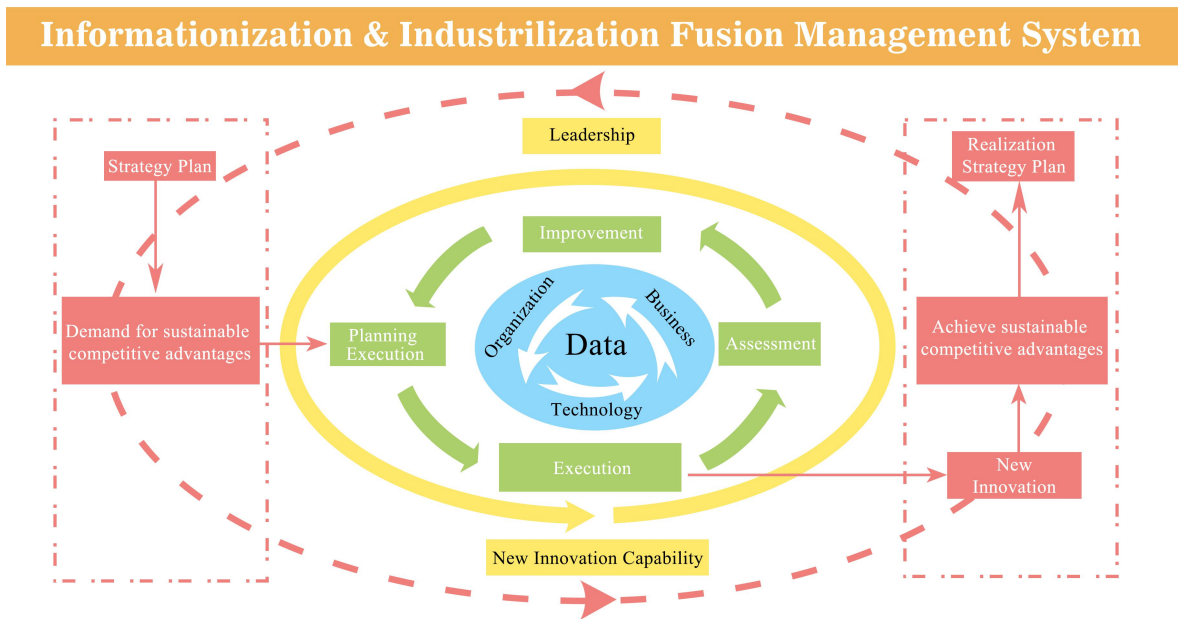


Figure 6 GB/T 23001_ Informationization & Industrilization Fusion Management System

Co-Founder—Dr. Hongfei Liu



Postdoctoral Hongfei Liu

- Selected "Innovative Talent" by Science and Technology ministry
- Top Class A Talent by Xiamen City
- CCTV Science & Technology Interview
- Fortune 500 experience in Agilent, II-VI

Honors

- Selected by science & technology ministry as "Innovation Talent"
- CCTV Science & Technology Interview
- Top Class A Talent credited by Xiamen City
- **Innovation Hero**

Education

- PhD • Chinese Science of Academic • Prof. Gui-Lin Chen, Originator in spectroscopy
- Postdoctoral • Xiamen University • Prof. Zhong-Qun Tian guided by the SERS founder M.Fleischmann

Career

- Engineer → R&D Manager → GM
- **Agilent**, Leader of instrument, Fortune 500 company, Job: engineer
- II- VI Incorporated (Nasdaq: IIVI) leader in optical & electrical industries, Job: GM of Instrumentation and Automation

Academic

- University graduate tutor
- obtain more than 60 IPs, more than 10 Innovation patents;
- Publish more than 20 papers, 2 recorded SCI, 8 recorded EI



Selected "Innovative Talent" by Science and Technology ministry



Top Class A Talent by Xiamen City



Founder & Tutors

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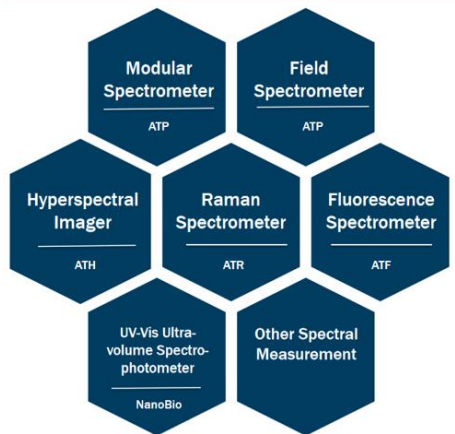
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Figure 7 Optosky's Co-founder_Dr. Hongfei Liu

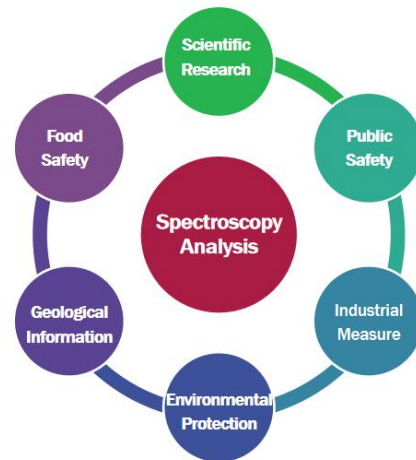
Category & Application



Category



Application




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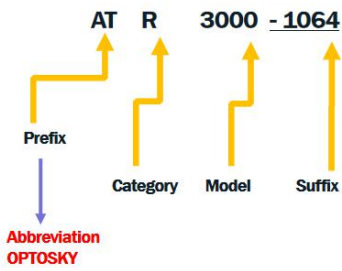
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Figure 8 Category & Application

Model Name Rule


Model Name Rule:

- Prefix
- Category
- Model
- Suffix



- **ATR** - Raman Spectrometer
- **ATP** - Micro Spectrometer
- **ATH** - Hyperspectral Imager
- **ATF** - Micro Fluorescence Spectrometer
- **ATL** - LIBS
- **ATW** - Water
- **ATE** - Environment Protect
- **ATFD** - Food Safety
- **GA** - Public Safety (Gong An)
- **GF** - Gas Monitor (Gas Finder)
- **GY** - Industrial Monitor (Gong Ye)

eg:

- Raman Microscope: ATR8300MP-1064
- Hyperspectral Imager: ATH9500

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Figure 9 Model Name Rule