

## FT-IR SPECTROMETER

## ATP8900Plus-PH

### Features

- High sensitivity optical system, Use Cube-corner Michelson interferometer combined with patented fixing mirror alignment technology
- High stability modular partition design, offering higher ability of deformation resistance and less sensitive to vibrations and thermal variations
- Intelligent multi-sealed moisture-proof design, Multiple sealed interferometers, large-capacity desiccant cartridge with visible window and easy replacement structure
- Innovated integration electronic system
- Good anti-electromagnetic interference capability
- High intensity IR source assembly, adopts a reflex sphere design to obtain even and stable IR radiation.

### Application

- Identification of raw ingredients in the pharmaceutical industry.
- Identification of industrial materials (rubber, plastics, fibers, etc.)
- Functional group detection
- Characteristic group detection

### Description

ATP8900Plus-PH FT-IR SPECTROMETER is a product with high quality, low-cost and advanced technology. It has major breakthroughs in appearance, software, communication methods, high-precision A/D and product functions.

It is based on the Microsoft Windows operating system, can be in a full range of 32 and 64 bit Windows system (Windows XP, Windows 7, Windows 8, Windows 8.1 and Windows 10, etc.). The purpose of the design is to make the collection and analysis functions of infrared spectrum to be easy to learn, easy to use, flexible and efficient.

The product has a real-time instrument status diagnosis function, real-time monitoring of the instrument's working status, performance indicators and communication status, to ensure that the instrument is always in a stable working state.

At the same time, the product has a variety of detector options: in addition to the constant room temperature pyroelectric detector, it can also be equipped with a temperature-stable pyroelectric detector and a semiconductor cooling MCT detector to meet the need of different customers.



## 1. Parameter

ATP8900Plus-PH		
Interferometer	Cube-corner Michelson interferometer	
Beam splitter	Multilayer Ge coated KBr	
Detector	High sensitivity pyroelectric module (standard)	Temperature stabilized module, MCT detector (optional)
IR Source	High intensity, long lifetime, air-cooled IR source	
Wavenumber Range	7800cm <sup>-1</sup> ~350cm <sup>-1</sup>	
Resolution	0.85 cm <sup>-1</sup>	
Signal to noise ratio	Better than 20,000:1 (RMS value, at 2100cm <sup>-1</sup> ~ 2000cm <sup>-1</sup> or 2100cm <sup>-1</sup> ~ 2200cm <sup>-1</sup> , resolution: 4cm <sup>-1</sup> , detector: pyroelectric, 1 minute data collection)	
Wavenumber Accuracy	±0.01 cm <sup>-1</sup>	
Scanning Speed	Microprocessor control, different scanning speed selectable.	
Software	MainFT0S Suite software workstation, compatible to all version Windows OS	Various specialized functional software modules (optional)
Communication	Ethernet interface & WIFI wireless communication	
Data Output	Standard data format, report generation and output	
Status Diagnosis	Power on self-check, real-time temperature and humidity monitoring and reminders	
Certification		FDA 21 CFR Part11 compliance, IQ/OQ/PQ (Optional)
Environment Conditions	Temperature: 10°C~ 30°C, humidity: less than 60%	
Power Supply	AC220V±22V, 50Hz±1Hz	AC110V (optional)
Dimensions & Weight	490×420×240 mm, 23.2kg	
Accessories	Transmission sample holder (Standard)	Optional accessories such as gas cell, liquid cell, Defused/Specular Reflection, single/multi reflection ATR, etc.

## 2. Innovations

- **Real-time diagnosis of instrument status**

real-time monitoring of instrument working status, performance and communication status.

- **Multiples detector options**

Besides conventional normal temperature pyroelectric detectors, temperature-stabilized pyroelectric detectors and semiconductor refrigeration MCT detectors can also be selected to meet the needs of different customers.

- **“Wire + Wireless” multi-communication mode**

Adopting Ethernet and WIFI dual-mode communication to adapt the development trend of "Internet + testing" instruments. Building a basic platform for users to conduct interconnection testing, remote operation and maintenance, data cloud computing, etc.

- **Large sample room**

With the large sample chamber design, besides the conventional liquid pool, ATR and other commercially available conventional accessories, it can also be equipped with special accessories such as thermal red combination, microscope, etc. At the same time, it also reserves space for users to choose new accessories



## 3. Company Profile

Optosky company is a first-class spectroscopy solution provider, with the headquarter locates in the 7 th floor of the research institute of the Chinese Academic of Science at an area of 2500 square meter in Xiamen city where successfully held the international 9 th BRICK summit in 2017.The subsidiary company locates in Wuhu city with an area of 2035 square meters.

The company founder Dr.Hongfei,Liu graduated Docter degree from the Chinese Academic of Science and postdoctoral degree from Xiamen University, by integrating both of top Universities' spectroscopy technology background into Optosky company aiming at developing the leading spectroscopy equipment in the world.

The company bases on unique technologies of Optomechatronics, Spectroscopy Analysis, Process Weak Optical and Electrical Signals, Cloud Computing, and have been developed wide products line of the competitive Raman spectroscopy instruments, 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 direction, 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 different industry companies, as well as manyinnovative intellectual properties, software copyright, qualification certification, and winner awardsover hundred numbers.

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. The company in charge of drafting national industry standard of VNIR and SWNIR Field Spectroradiometer, and six national standard drafters, including China National

Standard Drafter for Hazmat detector based on Raman spectroscopy, China National Standard Drafter for Buoy-type Monitor eco-environment, China National Standard Drafter for water quality monitor in the unmanned boat, China National Standards drafter for online water quality monitor by spectroscopy, China National Standard Drafter for UV-absorbent measure fabrics.

The company has over 70 IPs and over 20 innovative patents.

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



Figure 1 Optosky (Xiamen) Photonics Inc. Company Headquarter

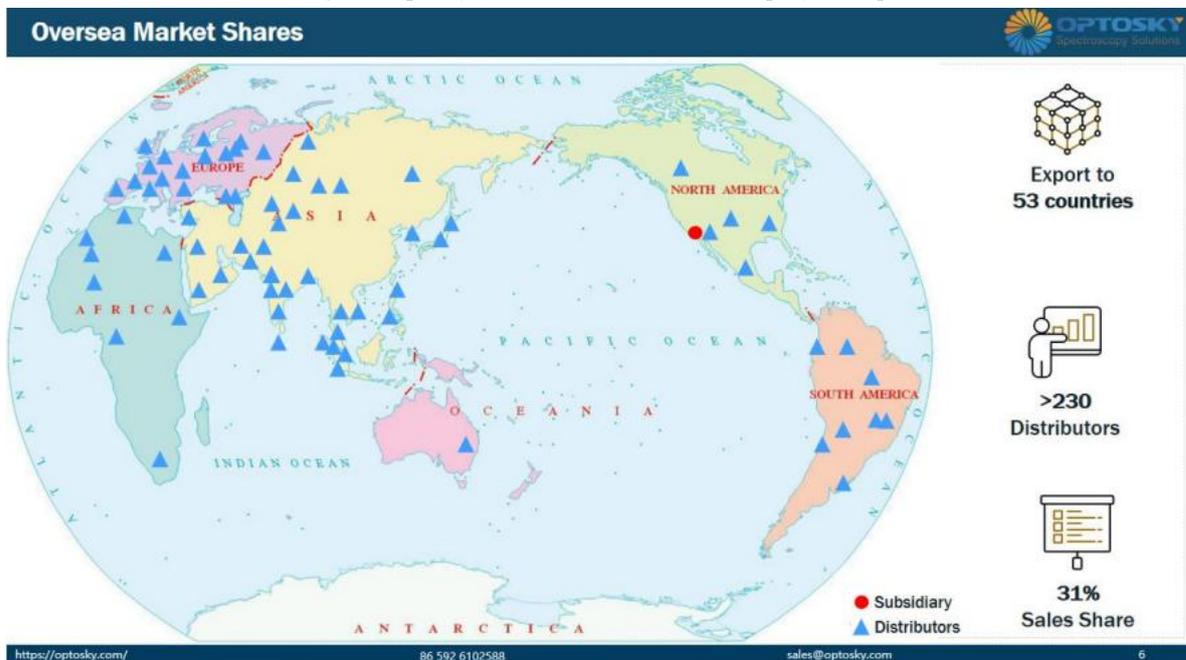


Figure 2 Overseas Market Shares

**Optosky Chair and Draft National Standards Lists:**

**Chair Drafter**  
National Industry Standard Of VNIR & SWNIR Field Spectroradiometer

**GB**  
China National Standard Drafter for Buoy-type Monitor eco-environment

**GB**  
China National Standard Drafter for water quality monitor in unmanned boat

**GB**  
China National Standard Drafter for Raman spectrometer

**GB**  
China National Standard Drafter for Hazmat detector based on Raman spectroscopy

**GB**  
China National Standards drafter for online water quality monitor by spectroscopy

**GB**  
China National Standard Drafter for UV-absorbent measure fabrics

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Figure 3 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 4 Qualification

## Informationization & Industrilization Fusion Management System

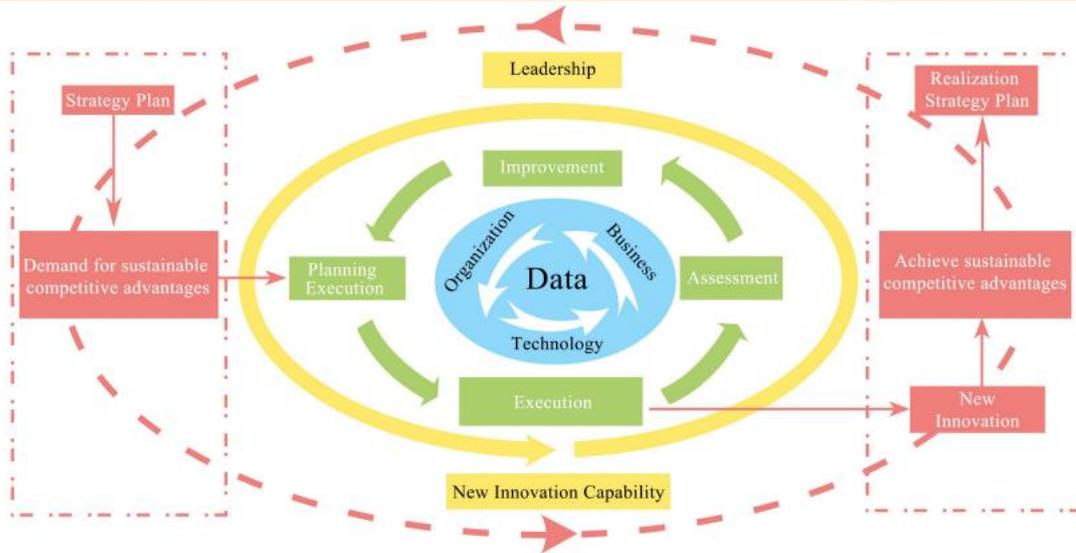


Figure 5 GB/T 23001\_Informationization & Industrilization Fusion Management System

**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 intrument, 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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Figure 6 Optosky's Co-founder\_Dr. Hongfei Liu

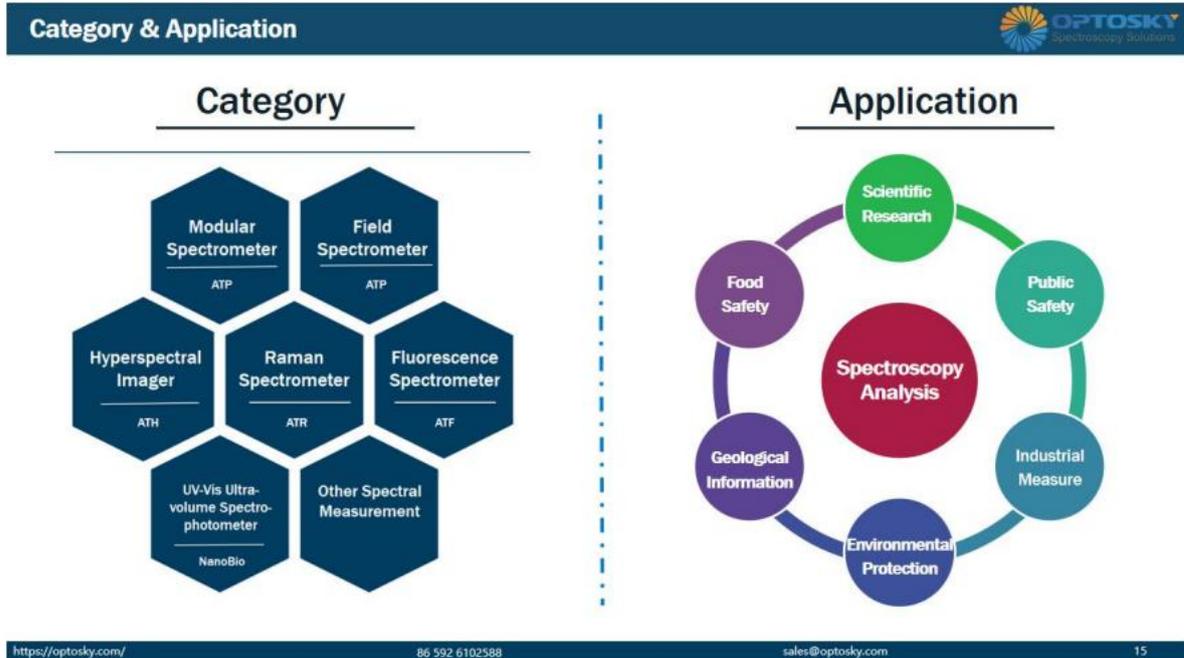


Figure 7 Category & Application

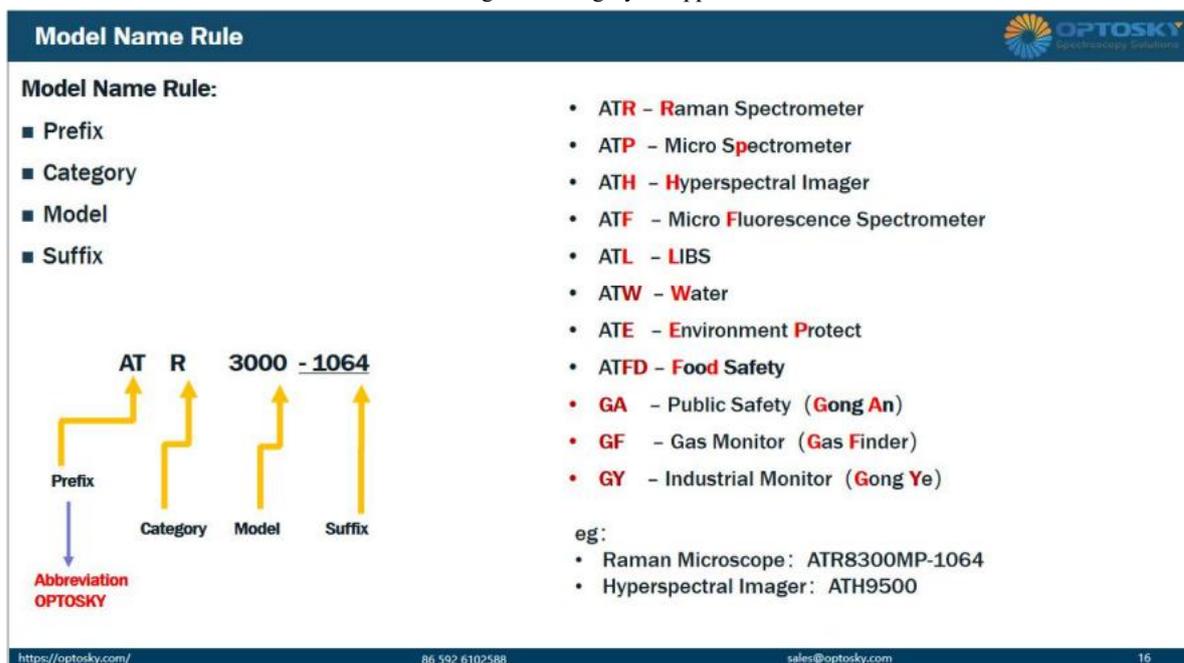


Figure 8 Model Name Rule