

Broadband Spectroradiometer (300nm~11μm)

ATP9110

Features

- Maximum band range: 300 nm~11μm
- High sensitivity, the highest quantum efficiency of the detector is 60%, and the near-infrared sensitivity is 40% higher than that of traditional PDA detectors
- The measurement speed is fast, time for a single sampling less than 10 seconds
- Optical fiber probe measurement, light weight, flexible use
- Built-in anti-secondary diffraction coating and filter, high accuracy
- Dynamic dark current correction to reduce the influence of thermal noise
- Display the inclination angle of the probe, and the laser indicates the detection position, convenient for adjustment
- Portable, special carrying case, easy to carry
- PC software control mode

Application

- Geological research, prospecting
- Remote sensing measurement
- Crop monitoring
- Forest research, oceanographic research

Description

ATP9110 spectrometer (field spectroradiometer) is the latest product of Optosky company. Monitoring, forest research, oceanographic research and other fields of application.

High cost performance, fast and accurate measurement, simple operation, and easy to carry. It is equipped with a powerful software package. In addition to reflectance measurement, it can also be used for radiometry, photometry and colorimetric measurements.

Model	Description
ATP9110-17	300~1700nm
ATP9110-25	Standard resolution, 300~2500nm
ATP9110-25H	High resolution, 300~2500nm
ATP9110-50	300~5000nm ultra-broadband fieldspec
ATP9110-110	300nm~11μm ultra-broadband fieldspec
ATP9110TP	With 7 inch touch screen
ATP9110Plus	With light intensity compensation
ATP9110Pro	With spectral compensation





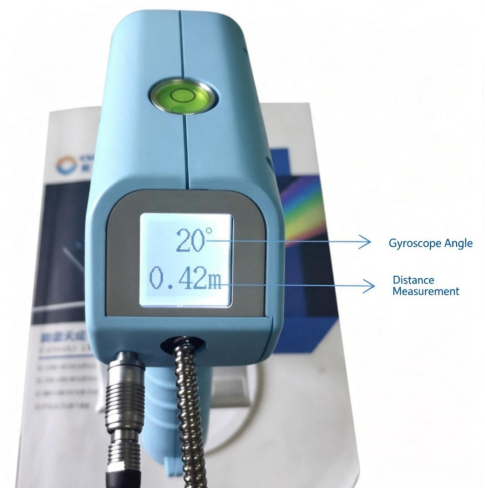
Fig 1 ATP9110 Series Appearance



Fig 2 ATP9110TP Series Appearance



Fig 3 ATP9110Plus/Pro Series Appearance



Product data information is current as of publication data. Products conform to specifications per the terms of Optosky Standard warranty.

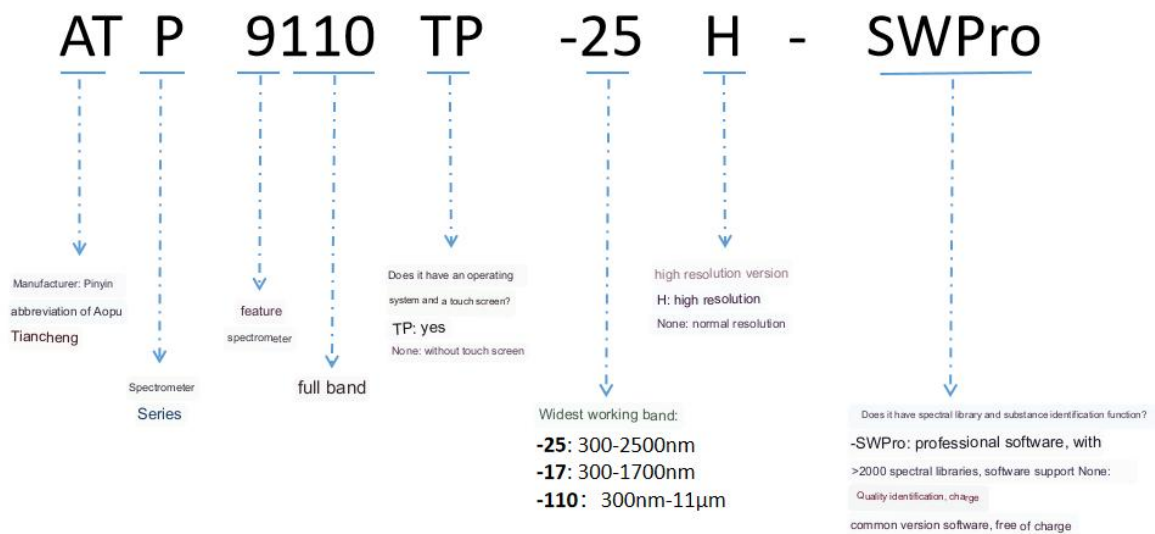
Copyright © Optosky(Xiamen) Photonics Inc. 2015
1503 Bld. A04, 3rd Software Park, Jimei, Xiamen,
361005, China
Tel: +86-592-6102588



Fig 4 ATP9110 Field Application Scenarios of ATP9110

1. Selection Guide and Naming Rules

Models	Description
ATP9110-17	300~1700nm
ATP9110-25	Standard resolution, 300~2500nm
ATP9110-25H	High resolution, 300~2500nm
ATP9110-50	300~5000nm ultra-broadband fieldspec
ATP9110-110	300nm~11μm ultra-broadband fieldspec
ATP9110TP	With 7 inch touch screen
ATP9110Plus	With light intensity compensation
ATP9110Pro	With spectral compensation



For example:

ATP9110-25H-SWPro: 300-2500nm, high resolution, professional software, no touch screen

ATP9110TP-25-SWPro: 300-2500nm band, standard resolution, professional software, touch screen and operating system

2. Parameter

Optical Parameters					
Model	ATP9110-17	ATP9110-25	ATP9110-25H	ATP9110-50	ATP9110-110
Spectral Range	300~1700nm	300~2500nm		0.3~5μm	0.3~11μm
Spectral Resolution	1.2~2.7nm @756nm 3~5nm @1550nm	1.2~2.7nm @756nm 7~12nm @1550nm	1.2~2.7nm @756nm 3~5nm @1550nm 5~8nm @2100nm	1.2~2.7nm @756nm 7~12nm @1550nm 30nm @2.5~5μm	1.2~2.7nm @756nm 7~12nm @1550nm 30nm @2.5~5μm 50nm @5.5~11μm
Spectral Channels	2560	2560	3072	/	
Detector	Linear Array Sensor + InGaAs Sensor	Linear Array Sensor + InGaAs Sensor	Linear Array Sensor + InGaAs Sensor + InGaAs Sensor	Linear Array Sensor + Pyroelectric Sensor	
Wavelength Repeatability	±0.1nm@VIS, ±0.5nm@SWIR, ±3nm@MWIR				
Wavelength Accuracy	±0.5nm@VIS, ±1.1nm@SWIR, ±5nm@MWIR				
Input	1.5m Fiber Bundle (FOV 25°), Optional front lens to change FOV, Fiber length optional				
FOV	Narrow FOV lenses, 1°/8°/15°/25° optional				
Indicator Laser Wavelength	650nm				
Indicator Laser Power	5mW				
Maximum Irradiance	VNIR 2× Solar, SWIR 10× Solar				
SNR	300~1000nm:>800, 1000~2500nm:>16000				
Spectral Sampling Interval	0.5nm				
Spectral Averaging Times	Up to 100,000 times				

Electrical Parameters					
Integration Time	1ms~10s				
Data Output	USB 2.0				
Location	Built-in GPS				
Sensors	Gyroscope, Temperature & Humidity Sensor, Altitude & Pressure Sensor				
Power Supply	External lithium battery pack, optional external 12V/car power supply				
Battery Life	>3H (outdoor operation), battery replaceable				
Storage Temperature	-20°C~+65°C				
Operating Temperature	-20~50°C				
Operating Humidity	< 90%RH (non-condensing)				
Physical Parameters					
Waterproof Level	IP54				
Dimensions(mm)	290×290×141	290×290×141m	350×300×170m	350×300×170	350×300×170
Weight	5.1 Kg	5.1Kg	6.5Kg	6.5 Kg	6.5 Kg

3. Dimensions Drawing

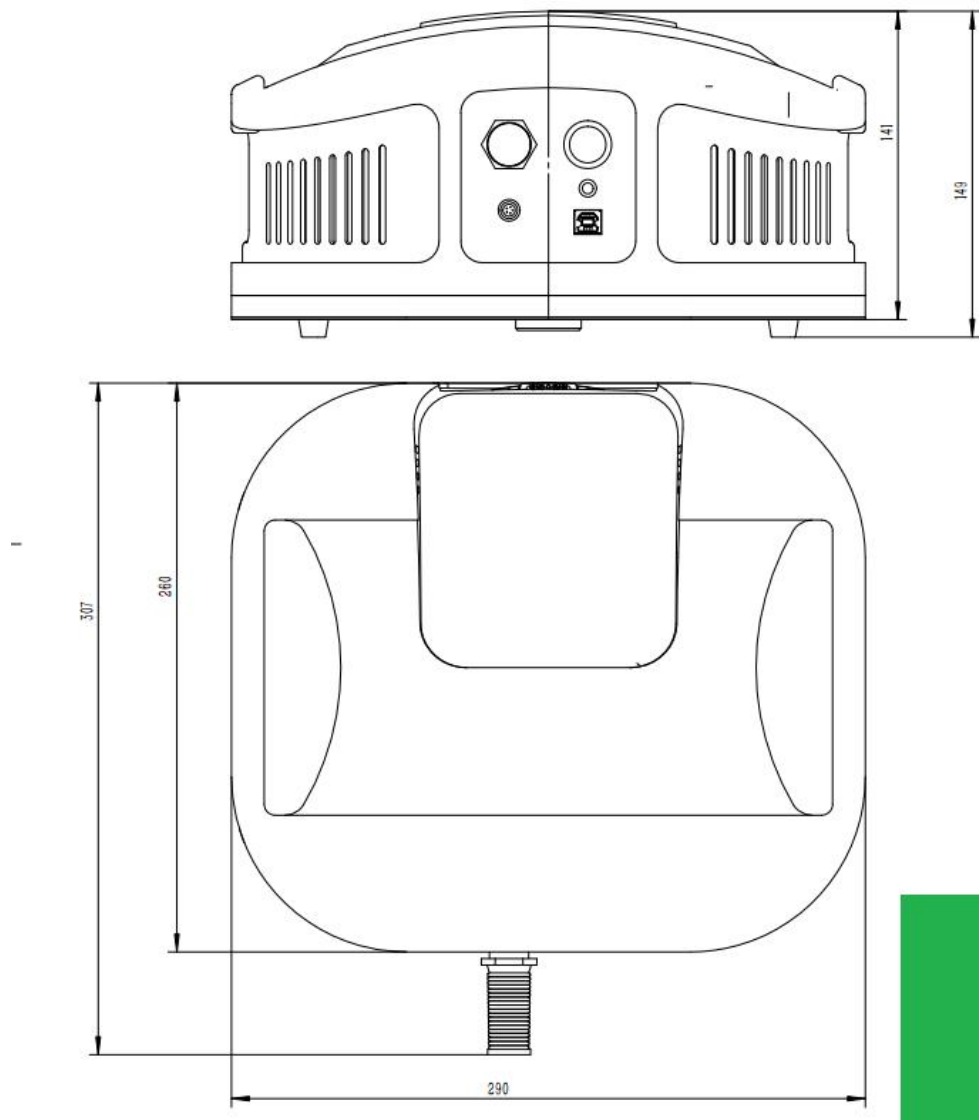


Fig 5 Dimensions of ATP9110

4. Measured Spectrum

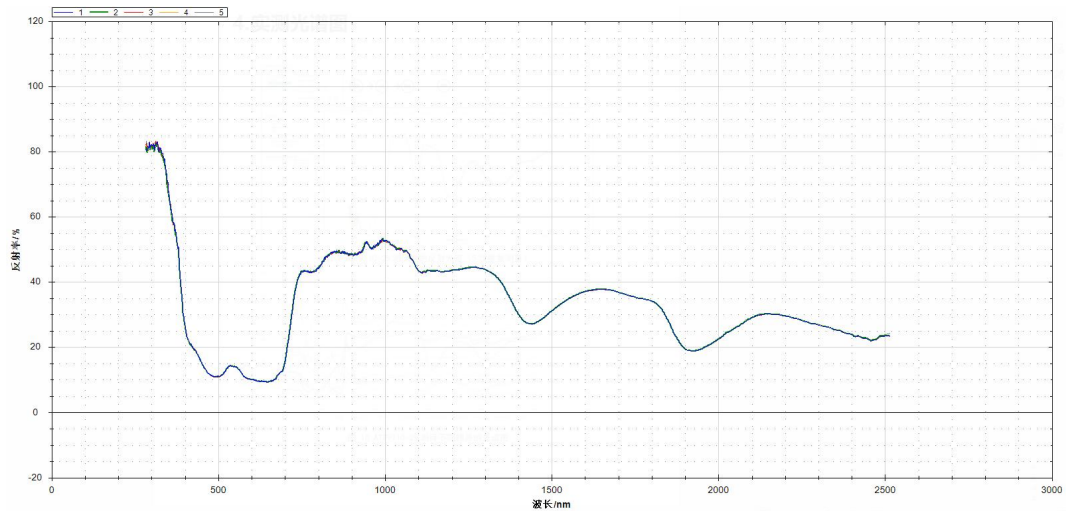


Figure 6 ATP9110-25 Measure Reflectance of Green Leaf (5 Repeated Measurements)

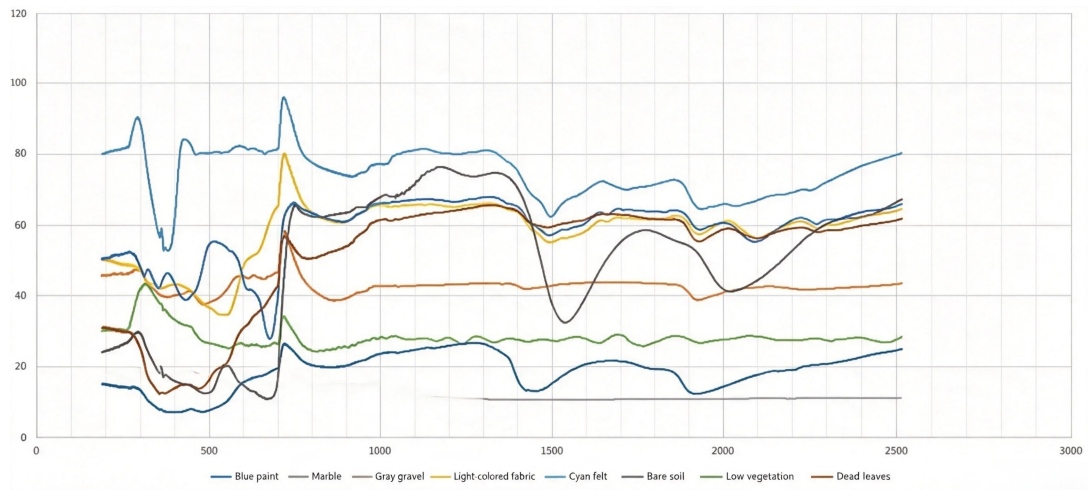


Figure 7 ATP9110-25 Measure Spectra of Different Materials

5. On-site Pictures of ATP9110



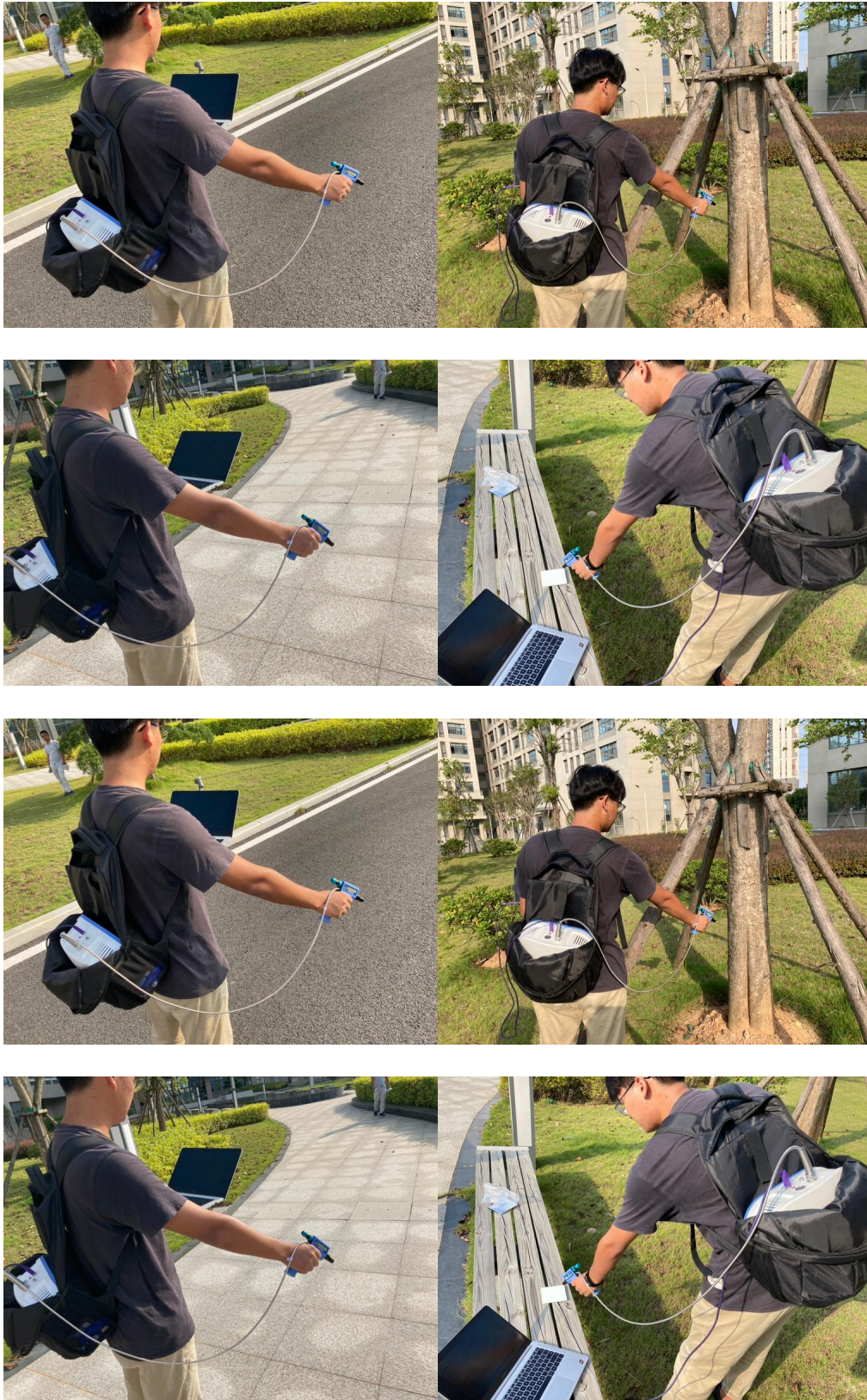


Figure 8 ATP9110 Outdoor Measurement

6. Accessories List

No.	Product	Description	Qty.
1	Battery Charger	12V, 5A	1
2	Lithium Battery	12V	2
3	USB Data Cable	1.5m	1
4	Pistol Grip Connecting Cable	1.5m	1
5	Metal Dust Cap	/	1
6	FOV Lens	25°	1
7	Reflectance Standard	95%	1
8	USB Flash Drive	64G	1
9	Cosine Lens	/	1

7. Series of Optosky Field Spectroradiometers

FieldSpec WL Range

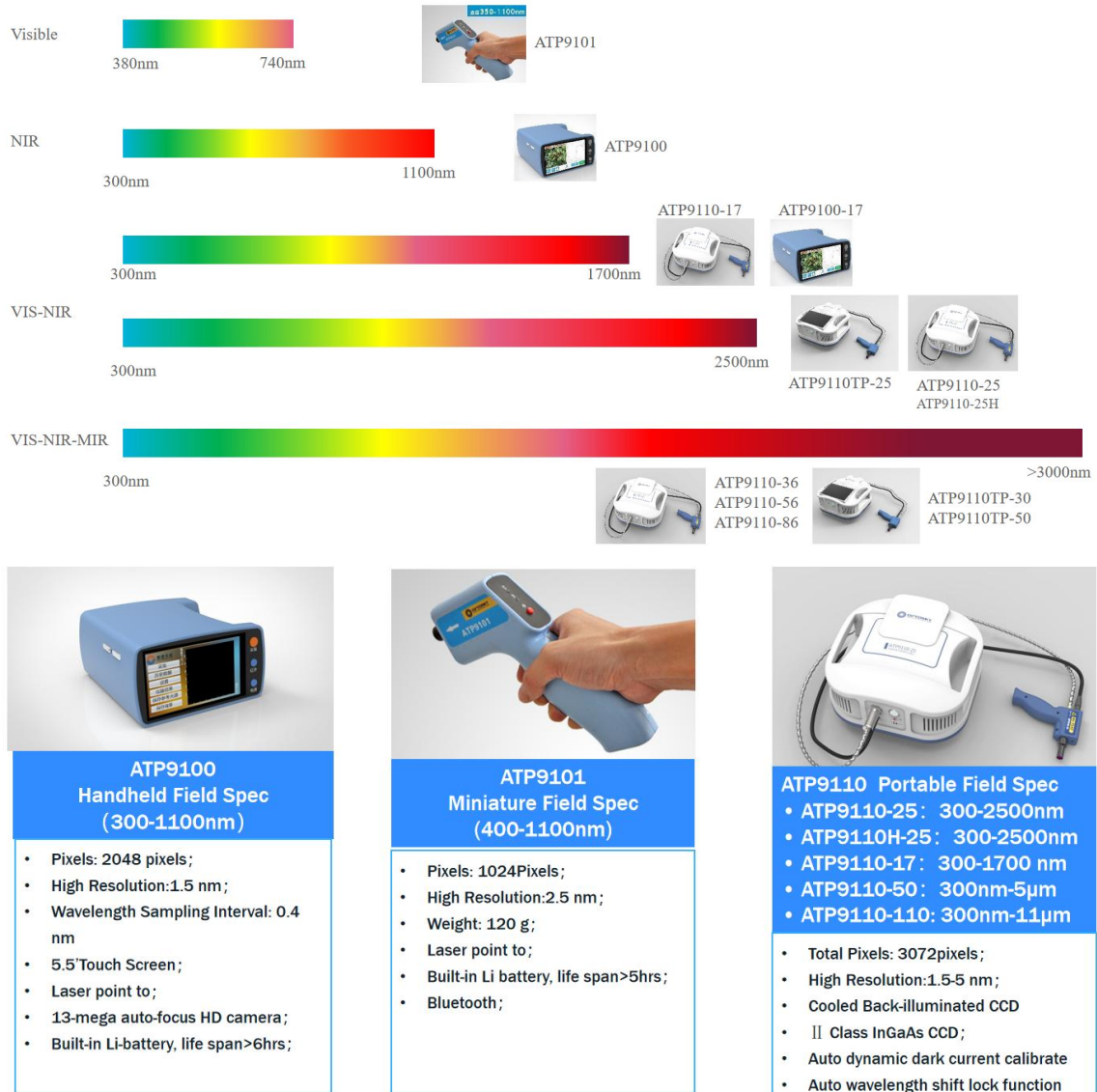


Fig 13 Series of Field Spectroradiometers Produced by Optosky

8. OptoSky—Company Profile

OptoSky was founded in 2015 with group headquarters in Xiamen, a picturesque coastal city. It is a national-level key "Little Giant" enterprise featuring specialization, refinement, differentiation and innovation, dedicated to the R&D, production and sales of high-end spectral analysis instruments. The enterprise was initiated by Dr. Liu Hongfei, an international specialist in spectral instruments, who is an academican of the Russian Academy of Natural Sciences, leading talent of the National Ten-Thousand Talents Program, beneficiary of the Ministry of Science and Technology Innovation Talent Promotion Program, Class A talent under Xiamen Double Hundred Talent Program, PhD holder from Shanghai Institute of Technical Physics, Chinese Academy of Sciences and postdoctoral fellow of Xiamen University. The company devotes itself to developing globally advanced spectral analysis instruments and aims to be a top-tier international supplier of spectral instruments, evolving into a domestic pacesetter in the spectral instrument sector.

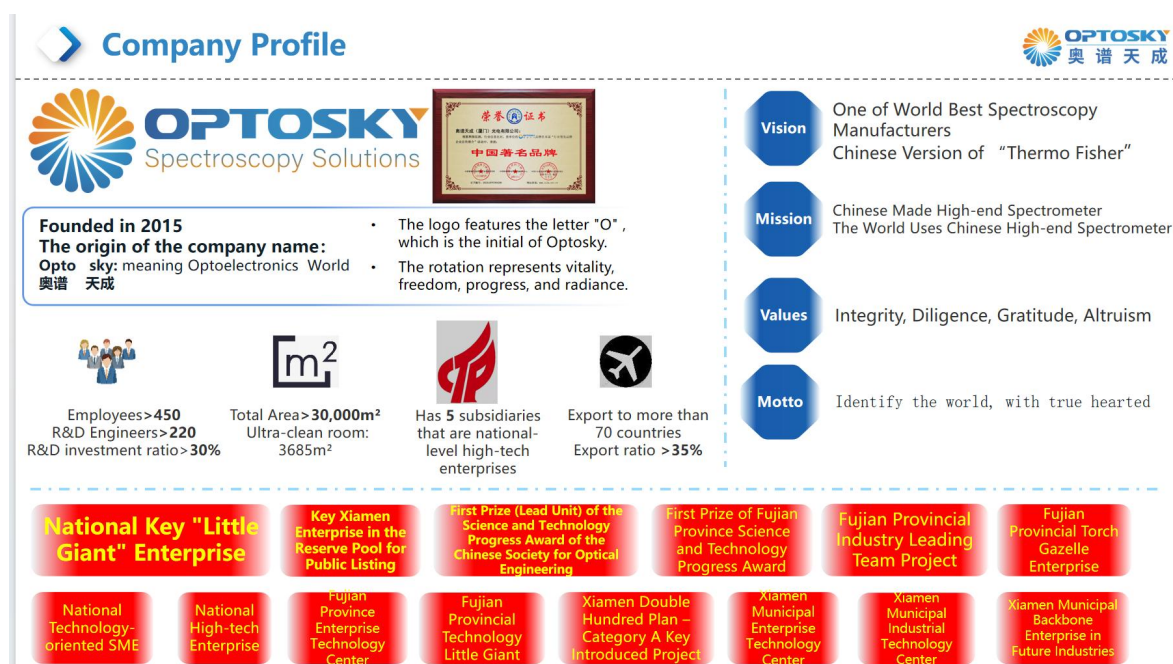


Figure 35 Group Profile

Founder——Dr. Hongfei Liu



Ph.D Hongfei Liu University Professor

- Russian fellower
- 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 remote sensing
 - 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
 - Coherent Corp.** 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

Figure 36 Dr. Liu Hongfei, co-founder of Optosky

OptoSky Group owns five national high-tech enterprises. It has established multiple R&D and manufacturing bases across China in Xiamen, Changsha, Wuhan, Chengdu, Xuzhou, Wuhu and other cities. The total global office space exceeds 30,000 square meters, and the company employs more than 450 staff members, including over 220 seasoned R&D engineers. The company has filed and obtained more than 500 intellectual property rights, among which over 100 are invention patents including two US invention patents. Currently, it undertakes more than 20 national, provincial and municipal research projects such as a major industrialization special project sponsored by the State Oceanic Administration with total funding of 30 million RMB. Meanwhile, OptoSky presides over and participates in formulating over 20 national, industrial and association standards. Standards led by the company: Near-infrared Terrestrial Object Spectrometer, Rapid Water Quality Detector Using Spectroscopy, Technical Specification for Multispectral Imaging in Smart Agriculture, Handheld Fruit Quality Detector, Technical Requirements for Medical Near-infrared Spectrometer, Portable Rapid Water Quality Detector Using Spectroscopy, etc. Standards participated in formulation: Technical Specification for Raman Spectrometer, Hazardous Chemical Detector Based on Raman Spectroscopy, Online Rapid Water Quality Detection System Using Spectroscopy, Technical Specification for Ecological Environment

Monitoring System Based on Mobile or Fixed Buoys, Determination of Benzophenone Ultraviolet Absorbers in Textiles, Determination of Antifungal Performance of Textiles Part 1: Fluorescence Method, Plant Phenotype Chlorophyll Fluorescence Imaging Analysis Equipment, Technical Requirements for Plant Monitoring Using UAV Hyperspectral Remote Sensing, etc. OptoSky keeps guiding the formulation of spectral technical standards and industrial upgrading.

Our Offices



Optosky Technology Park (Xiamen North Station) – Under Construction



Xiamen Headquarters Base (Approx. 3,000 m², Self-owned Property)



Changsha Head office (>10,000 m²)



Wuhan R&D Center (>2,000 m²)



Taizhou Manufacturing Base (>4,000 m²)



Xuzhou R&D Center (>2,000 m²)



Chengdu R&D Center (>1,300 m²)

Figure 37 Optosky National R&D Center/Smart Manufacturing Base

主持和参与制定的多个国家标准



Figure 38: Leading and participating in multiple national standards

Relying on its exclusive technologies including opto-mechatronics integration, spectral analysis, weak photoelectric signal processing and cloud computing, OptoSky has built a full-spectrum product portfolio with Raman spectrometers as flagship products, covering fiber spectrometers, hyperspectral imagers, field spectroradiometers, infrared spectrometers, fluorescence spectrometers, spectrophotometers and LIBS instruments. These products are widely adopted in scientific research, semiconductor, new energy, biomedicine, chemical pharmacy, public security, smart agriculture, military industry and other fields, ranking among the world's top tier in both product performance and brand influence. Its products are sold to more than 70 countries and regions worldwide. OptoSky is the top Chinese optical instrument brand in Russia, among the top three high-end optical instrument brands in the Middle East, and one of the fastest-growing Chinese brands in Europe and America. The company has realized domestic substitution and export breakthroughs for high-end spectral instruments.

Product Lines

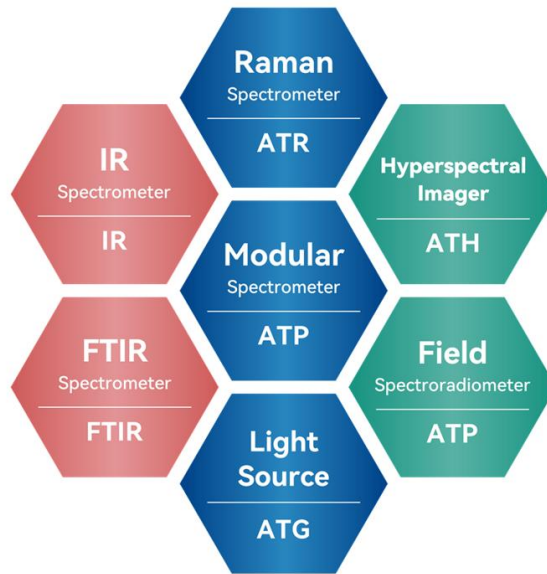


Figure 39: Main Product Series and Application Areas

OptoSky bases its development on technology, follows market demands and prioritizes customers, delivering outstanding solutions and high-quality products and services for numerous industries. Widely recognized by governments at all levels and the industry, the company has acquired more than 300 innovation patents, software copyrights, qualification certifications and domestic and international honors in total.

The enterprise holds multiple accreditations and honors including National Key Specialized, Sophisticated, Unique and Innovative Little Giant Enterprise, Key Pre-listing Enterprise of Xiamen, Leading Industrial Talent Team of Fujian Province, Xiamen Industrial Technology Center, Fujian Gazelle Enterprise, Class A key introduction project of Xiamen Double Hundred Talent Program and National High-tech Enterprise. It has also been awarded Xiamen Specialized, Sophisticated, Unique and Innovative Enterprise, Xiamen High-tech, High-growth and High-value Key Enterprise and Xiamen High-tech Enterprise.

Partial Honors Obtained by OptoSky:

- August 2025: Won the first prize in the final of the New Generation Information Technology Industry Group, Sichuan Division, the 14th China Innovation and Entrepreneurship Competition 2025
- July 2025: Approved as a Postdoctoral Innovation and Entrepreneurship Practice Base
- July 2025: Listed as a national-level key Specialized, Sophisticated, Unique and Innovative Little Giant enterprise
- March 2025: Approved for the Changsha Expert Workstation
- September 2024: Selected as a national-level Specialized, Sophisticated, Unique and Innovative Little Giant enterprise
- June 2023: Named a key pre-listing enterprise of Xiamen
- May 2023: Included in the Leading Industrial Talent Team Program of Fujian Province
- 2023: Accredited as Xiamen Industrial Technology Center
- 2022: Dr. Liu Hongfei elected an academician of the Russian Academy of Natural Sciences

- 2022: Recognized as a Fujian Torch Gazelle Enterprise
- 2022: Certified as a Fujian technology-based small and medium-sized enterprise
- December 2021: Its Raman spectrometer won the Second Prize of Fujian Provincial Science and Technology Progress Award
- 2021: Dr. Liu Hongfei selected for the National Ten-Thousand Talents Program organized by the Central Organization Department 2021: OptoSky awarded Fujian Provincial Science and Technology Little Giant Enterprise
- 2020: Dr. Liu Hongfei included in the Innovation Talent Promotion Program of the Ministry of Science and Technology
- 2020: Led the formulation of the national industrial standard Visible and Near-Infrared Field Spectroradiometer
- 2020: Dr. Liu Hongfei certified as Class B high-level talent of Fujian Province 2019: Certified as a national high-tech enterprise
- 2019: Honored the Independent Innovation Gold Medal issued by China Instrument and Control Society
- 2019: Recognized as a Specialized, Sophisticated, Unique and Innovative micro and small enterprise in Xiamen
- 2018: Won Excellent Enterprise Award in the National Final of the 7th China Innovation and Entrepreneurship Competition
- 2018: Received the second prize in Xiamen Division, the 4th China Innovation and Entrepreneurship Competition
- 2018: Won Silver Award in Fujian Division and Bronze Award in National Final of the 5th World New Materials Innovation and Entrepreneurship Competition
- 2016: Included in Class A key high-level talent introduction project (highest tier), the 8th Xiamen Double Hundred Talent Program
- Listed on Strait Equity Exchange Market, Stock Code: 865147
- Certified compliant with ISO9001:2015 Quality Management System

- Participated in formulating national standards Raman Spectrometer and Hazardous Chemical Detector Based on Raman Spectroscopy Technology
- Undertaken the major marine economic collaborative innovation project Research, Development and Industrialization of Marine Three-Dimensional Monitoring Sensors and Systems sponsored by State Oceanic Administration with total funding of RMB 30 million
- Established strategic partnership with School of Electronic Science and Engineering, Xiamen University since 2017
- Served as undergraduate internship base and joint postgraduate training institution of Xiamen University of Technology since 2016
- Served as undergraduate internship base and joint postgraduate training institution of Jimei University since 2017
- Member unit of Fujian Young Entrepreneurs Association; director unit of Xiamen Young Entrepreneurs Association
- Implementation entity for industry-university-research cooperation projects of Xiamen
- Member unit of Xiamen Emergency Association

9. Contact Us

Company Name: Optosky (Xiamen) Optoelectronics Co., Ltd.

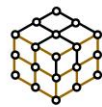
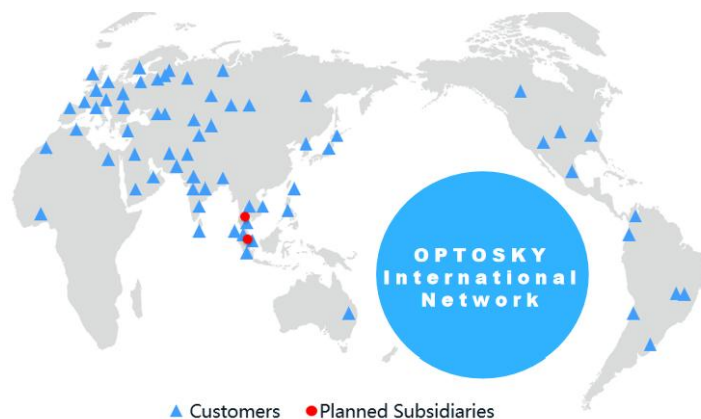
Address: 5th Floor, Building F02, Phase III of Xiamen Software Park, Jimei District, Xiamen

Phone: 4008-508-928, 0592-6102588

Web site: www.optosky.com

mail: sales@optosky.com

China market and Global Distributors



Exported to
>70 countries



>260
Distributors



36%
share

=====The Essence of Exploration • Dedication to Authenticity=====

=====End of Article=====