

High Performance NIR Spectrometer

ATP8610

Features

- Maximum Operating Spectral Range: 900–1700 nm or 1350–2150 nm
- Dispersion Method: MEMS-based scanning spectrometry
- Cooled InGaAs Detector
Spectral Resolution: Depends on the width of the entrance slit
- Power Supply: DC 5V
- ADC Bit Depth: 16-bit
- Optical Input: SMA905 fiber interface or free-space input
Data Output Interface: USB 2.0 and UART

Application

- Agriculture: Fruits, tobacco, grains, feed, cannabis, tea, soil, etc.
- Food: Oils, alcohol, condiments, beverages, dairy, honey, meat, milk powder.
- Biopharmaceuticals: Drug quality, raw materials, herbal medicine, nutrients, antibiotics.
- Materials: Plastics, rubber, fibers, coatings, films, adhesives, building materials.
- Petrochemicals: Gasoline, diesel, lubricants, naphtha, heavy oil, coal gangue, glass, ceramics.
- Cosmetics: Perfume and mask authentication, quality testing, source and batch analysis.

Description

ATP8610 miniature short-wave infrared fiber optic spectrometer has small structural size. It adopts micro-electromechanical scanning optical path and low-noise InGaAs detector, which can scan quickly and position accurately. In addition, Optosky has specially customized the ultra-low noise processing circuit for ATP8610, which is an excellent level in the industry.

ATP8610 can receive SMA905 fiber input light or free space light, and output the measured spectral data through USB 2.0 or UART port.

ATP8610 only needs a 5V DC power supply, or direct USB power supply, which is very convenient for integration.

Model	Feature
ATP8610	Wavelength range: 900–1700nm
ATP8610-22	Wavelength range: 1350–2150nm

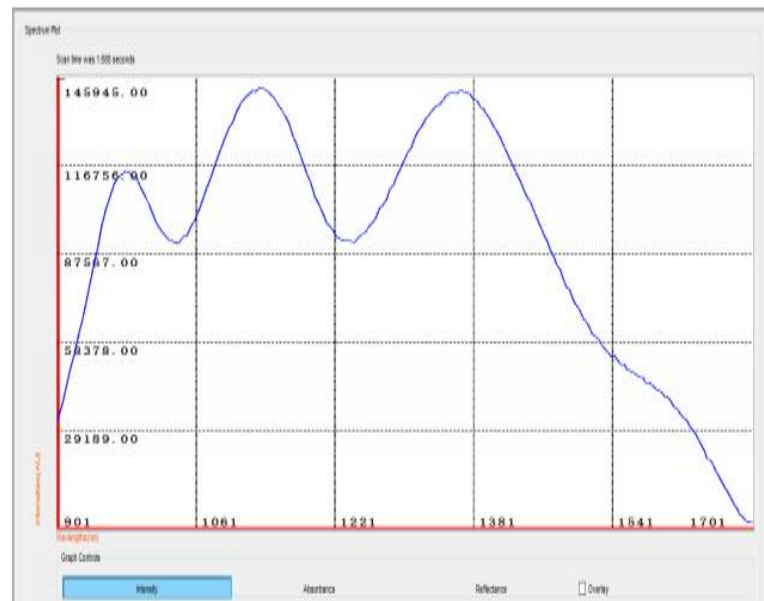


Figure 1: ATP8610

1 Performance

	ATP8610	ATP8610-22
Detector		
Type	High-performance linear array InGaAs CCD	
Optical parameters		
Wavelength range	900-1700nm	1350-2150nm
Resolution	9 ~ 12 nm	12-14 nm
Accuracy	±1 nm	±1 nm
SNR	6000:1	
Slit	1.8 x 0.025 mm	1.8 x 0.025 mm
Optical path	MEMS Scanning Spectroscopy	
Incident light interface	SMA905 Fiber Interface, Free Space	
Electrical parameters		
Data output interface	USB and UART	
ADC	16 bits	16 bits
Power	5VDC	
Working current	<0.6A	<1.6 A
Storage temperature	-20℃	to +70℃
Operating temperature	-10℃	to +50℃
Physical parameters		
Size	84×77×36 mm	80×70×38mm
Weight	137g	171 g

2. Main Performance Test Report



3. Physical Product Image



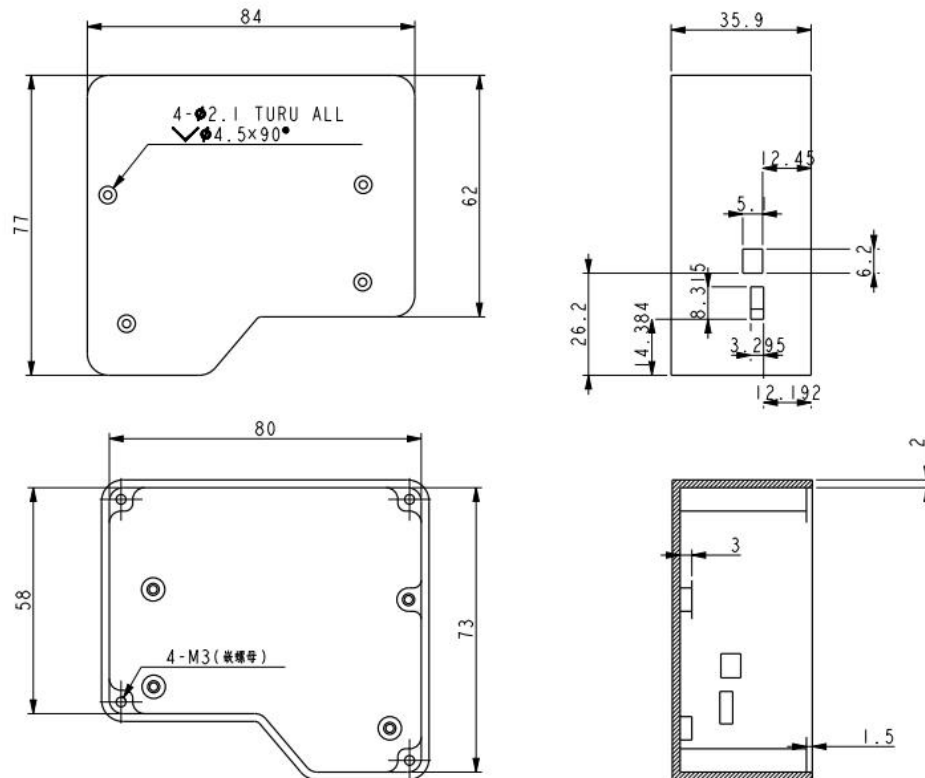


Figure 3: ATP8610 Physical Object and Dimensional Diagram

4. Accessories

Standard Accessories	
1	USB Data Cable
Optional Accessories	
1	Near-infrared Fiber Patch Cord
2	Adjustable Optical Attenuator
3	Standard Diffuse Reflectance Whiteboard
4	Integrating Sphere Holder for Transmittance/Reflectance Measurement
5	Fiber Optic Collimator
6	Cosine Corrector

5. Application Scenarios and Measured Data

