



ATR9000 MIR ATR Spectrometer

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ATR9000

Description

ATR9000 (Old Model: ATP8200) is developed by Optosky (Attenuated Total Reflection, ATR), built-in MEMS Infrared Source, it employs Pyroelectric linear array sensor, in the ZnSe high performance material window measure ATR spectrum. Optosky exclusively designs Ultra-low noise CCD signal processing circuit, results in reducing sensor noise, improving SNR (2 times higher SNR than competitors). Higher measuring reliability ensures results can not change with ambient temperature.

ATR9000 fit to measure samples in powder, fluid, easy-to-operate, it takes just few steps to complete measurement.

Models	Detector	Spectral Range
ATR9000-5	256pixels	2.5-5 μm
ATR9000-11	256pixels	5.5-11 μm

Feature:

- Spectral Range: 2.5-5 μm (4000-2000 cm^{-1})
- or 5.5-11 μm (1818-909 cm^{-1})
- MIR (Attenuated Total Reflection, ATR) spectrometer
- Detector: Linear Pyroelectric linear array sensor(ZnSe)
- ATR window material: ZnSe
- Detector pixels: 256pixels
- Ultra-low noise CCD signal processing circuit
- Built-in MEMS electrical Infrared Source
- Measure Time: 30s (Typical)
- 16 bit, 500 KHz ADC
- Data output port: USB2.0
- Power Supply: 12V DC

Application:

- Food Safety
- Dye Analysis
- Material ID
- Anti-counterfeiting
- Oil Material Analysis
- Drugs, Chemicals, Combustible & Explosives Analysis



1 Performance Parameters

Detector	
Type	Pyroelectric linear array sensor (ZnSe)
Spectral range	0.1-100 μm
Effective pixels	256 pixels
Pixel size	50 μm x 417.5 μm or 60 μm x 500 μm
Dynamic range	75 dB
Scan rate	10-1000 Hz
Optical Parameters	
Spectral Range	2.5-5 μm (4000-2000 cm^{-1}) or 5.5-11 μm (1818-909 cm^{-1})
ATR Window Materials	ZnSe
Optical Resolution	20 nm
SNR	>300:1
Dynamic Range	75 dB
Working Temp.	-10 - 45 $^{\circ}\text{C}$
Working Humidity	< 90%RH No condensing
Optical Parameters	
Optical Design	Linear Variable Filter, LVF
Source Type	Built-in MEMS Electric adjustable Infrared Source
Source Life Span	>5000hrs
Electrical Parameters	
Measure Time	30 second (Typical)
Data Output	USB 2.0
ADC bit depth	16 bit
Power Supply	12 VDC
Working Current	<1 A
Storage Temp.	-20 $^{\circ}\text{C}$ to +70 $^{\circ}\text{C}$
Operating Temp.	-10 - 45 $^{\circ}\text{C}$
Physical Parameters	
Size	195×128×50 mm ³
Weight	1.32 kg