

MID-IR Spectrometer

ATP8200

Features:

- Spectral range: 2.5-5 μm ($4000\text{-}2000\text{ cm}^{-1}$)
Or 5.5-11 μm ($1818\text{-}909\text{ cm}^{-1}$)
- Detector: Pyroelectric linear array sensor (ZnSe)
- Detector pixels: 128pixels or 256pixels
- Ultra-low noise CCD signal processing circuit
- embedded MEMS, electrical modulated IR light source
- Measuring time: 30s (classical)
- 18 bit, 500 KHz ADC
- Data output via USB2.0
- Li battery life: 4 hrs
- Power supply: 110V/220V

Application:

- Food safety
- Dye analysis
- Material identification
- Anti-counterfeiting authentication

Description:

ATP8200 MID-IR spectrometer developed by Optosky, and it employs Pyroelectric linear array sensor, linear variable filter(LVF), custom-made 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.

ATP8200 employs 4-hrs built-in high capacity battery life, which is convenient to take and field operation.

P/N	Detector pixels	Spectral range
ATP8200-1-5	128pixels	2.5-5 μm
ATP8200-1-11	128 pixels	5.5-11 μm
ATP8200-2-5	256 pixels	2.5-5 μm
ATP8200-2-11	256 pixels	5.5-11 μm



Product data inform publication data. Products conform to specifications per the terms of Optosky Standard warranty.

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1. Performance parameters:

Detector	
Type	Pyroelectric linear array sensor (ZnSe)
Spectral range	0.1-100 μm
Effective pixels	128 or 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	
Wavelength range	2.5-5 μm (4000-2000 cm^{-1}) 或 5.5-11 μm (1818-909 cm^{-1})
Optical resolution	72 nm
SNR	>300:1
Dynamic range	75 dB
Operating temperature	-10 - 45 $^{\circ}\text{C}$
Operating humidity	< 90%RH 无结露
Optical path	
Optical design	Linear Variable Filter, LVF
Light source type	embedded MEMS, electrical modulated IR light source
Light source life	>5000 hrs
Optical parameters	
Measure time	30 second (classical)
Data output	USB 2.0
ADC bit depth	18 bit
Power supply	110V/220V
Operating currency	<0.5 A
Storage temperature	-20 $^{\circ}\text{C}$ to +70 $^{\circ}\text{C}$
Operating temperature	-10 - 45 $^{\circ}\text{C}$
Physical parameters	
Size	165×98×50 mm ³
Weight	0.92 kg