SciGlob
Instruments and Scientific Services

Global Science for Global Solutions

Pandora 2S



Pandora 2Spectrometer

Simultaneous hyper-spectral observations from 270NM to 900NM of direct sun, moon, and scatter sky light are now possible with the SciGlob Pandora 2Spectrometer System. The adaptable nature of the system allows for it to be packaged in a field deployable or 5U rack mount enclosure, making it perfect for a field or lab setting.

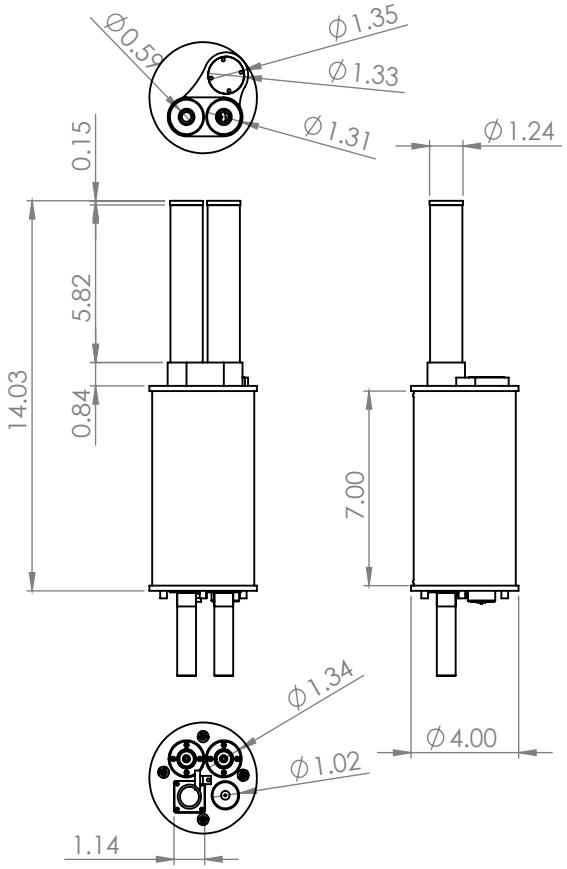
Capitalizing on today's low-cost, miniaturized, fiber-fed hyper-spectral spectrometers, the Pandora 2S Instrument increases the atmospheric remote sensing capabilities of any research station. This precise, modular, and versatile measurement system is capable of measuring total columns and profile information of trace gases such as nitrogen dioxide, ozone, formaldehyde, and others.

Mounted on a microprocessor controlled azimuth, elevation tracker, the Pandora 2S is capable of pointing anywhere in the sky. Complimentary control software allows automated measurements and remote monitoring and data transfers over the Internet. Field deployable without requiring large support facilities.

Specifications

Measurement Principle	Fiber fed, temperature controlled Czerny-Turner spectrometers providing simultaneous observations at all wavelengths
Trace gases	Ozone, Sulfur Dioxide, Nitrogen Dioxide, Formaldehyde, Water Vapor, and others
Tracking Resolution	0.01°
Detector	2048 pixel CCD or CMOS
Operating Software	Windows based Python
Power Requirements	115VAC, 50/60Hz, <3A 220VAC, 50/60Hz, <2A
Operating Temperature Range	<0°C to +50°C
Spectral Range	270 - 530nm and 400 - 900nm
Spectral Resolution	0.6nm/UV and 1.1nm/VIS
Communication	Ethernet
Remote Computer Access	Yes

2S Assembly

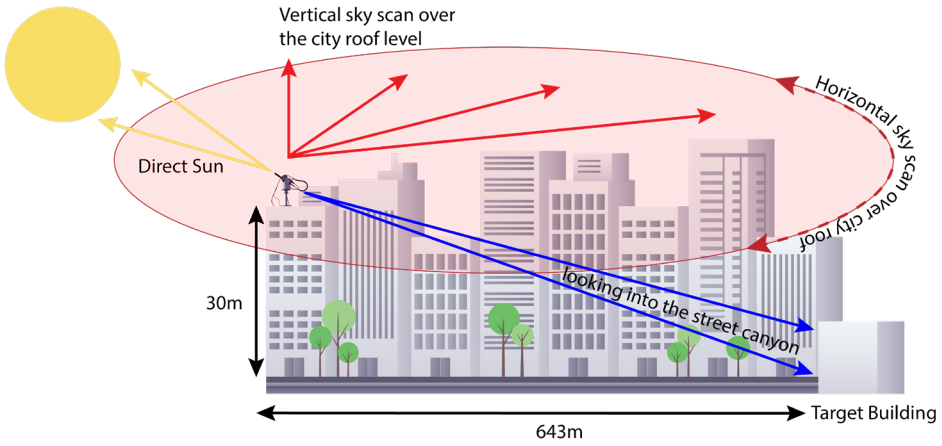


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We now offer two configurations for the single spectrometer Pandora 2S system: Field Deployable and 5U Rack Mount. The Field Deployable system is housed in a weather-proof, thermally stabilized case capable of being enduring typical outdoor mid latitude environments.

The 5U Rack Mount configuration fits in a standard 48cm (19”) computer server rack for those situations where the system is housed in a trailer or lab. The Rack Mount is thermally stabilized with easy to open access panels for maintenance. Both systems provide the same quality optical performance and remote access capabilities when coupled to the Pandora 2S Head Sensor and Sun Tracker.

Application Diagram



Configuration Specifications





	Field Deployable	5U Rack Mount
Standard Fiber Length	10m or 15m	10m or 15m
Remote Access	RJ-45 cable, WiFi	RJ-45 cable, WiFi
Weight	23.7 kg (60 lbs)	13.6 kg (30 lbs)
Dimensions	70.9 cm x 56.6 cm x 38.4 cm (27.9 in x 22.3 in x 15.1 in)	48.3 cm x 55.9 cm x 22.2 cm (19 in x 22 in x 8.75)
Power Requirements	110/220 VAC, 50/60 Hz, 2A/3A	110/220 VAC, 50/60 Hz, 2A/3A
Temperature Range	0°C to +50°C	0°C to +50°C

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