

# Pandora 1S

## Pandora 1Spectrometer

It is now possible for simultaneous hyper-spectral observations from 280NM to 530NM of direct sun, moon, and scattered sky-light with the advanced technology of SciGlob's Pandora 1Spectrometer system. In addition, the system's versatility allows it to be packaged in a field deployable or 5U Rack Mount enclosure, making it perfect for a field or lab setting.



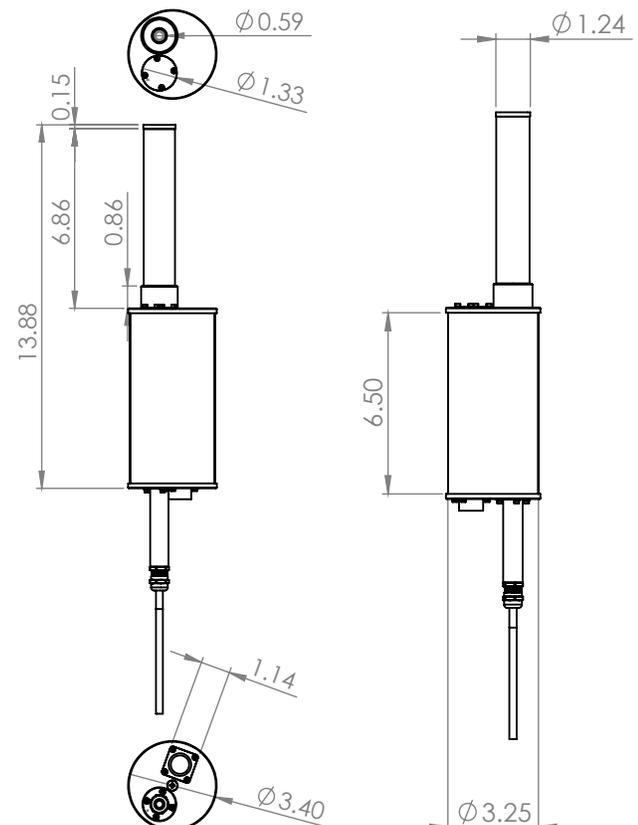
Capitalizing on today's low-cost, miniaturized, fiber-fed hyper-spectral spectrometers, the Pandora 1S Instrument increases any research station's atmospheric remote sensing capabilities. This precise, modular, and versatile measurement system can measure total columns and profile information of trace gases such as nitrogen dioxide, ozone, formaldehyde, and others.

Mounted on a microprocessor-controlled azimuth, elevation tracker, the Pandora 1S can point anywhere in the sky. Complimentary control software allows automated measurements, remote monitoring, and data transfers over the Internet. As a result, it is field deployable without requiring extensive support facilities.

## Specifications

Measurement Principle	Fiber fed, temperature controlled Czerny-Turner spectrometer 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	110VAC, 50/60Hz, <3A 220VAC, 50/60Hz, <2A
Operating Temperature Range	<0°C to +50°C
Spectral Range	270nm - 530nm
Spectral Resolution	0.6nm
Communication	Ethernet
Remote Computer Access	Yes

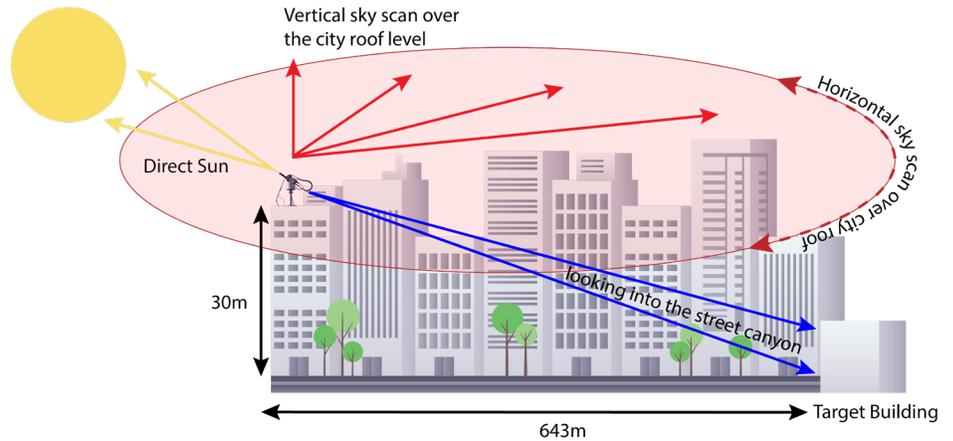
## 1S Assembly



We now offer two configurations for the single spectrometer Pandora 1S system: Field Deployable and 5U Rack Mount. The housing of the Field Deployable system is a weather-proof, thermally stabilized case capable of enduring typical outdoor mid-latitude environments. In addition, SciGlob can customize the casing to suit your needs for the more extreme climates.

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 coupled to the Pandora 1S 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