

Specialized photobiology spectroradiometer from 380 to 780 nm



PORTABLE MEASUREMENTS

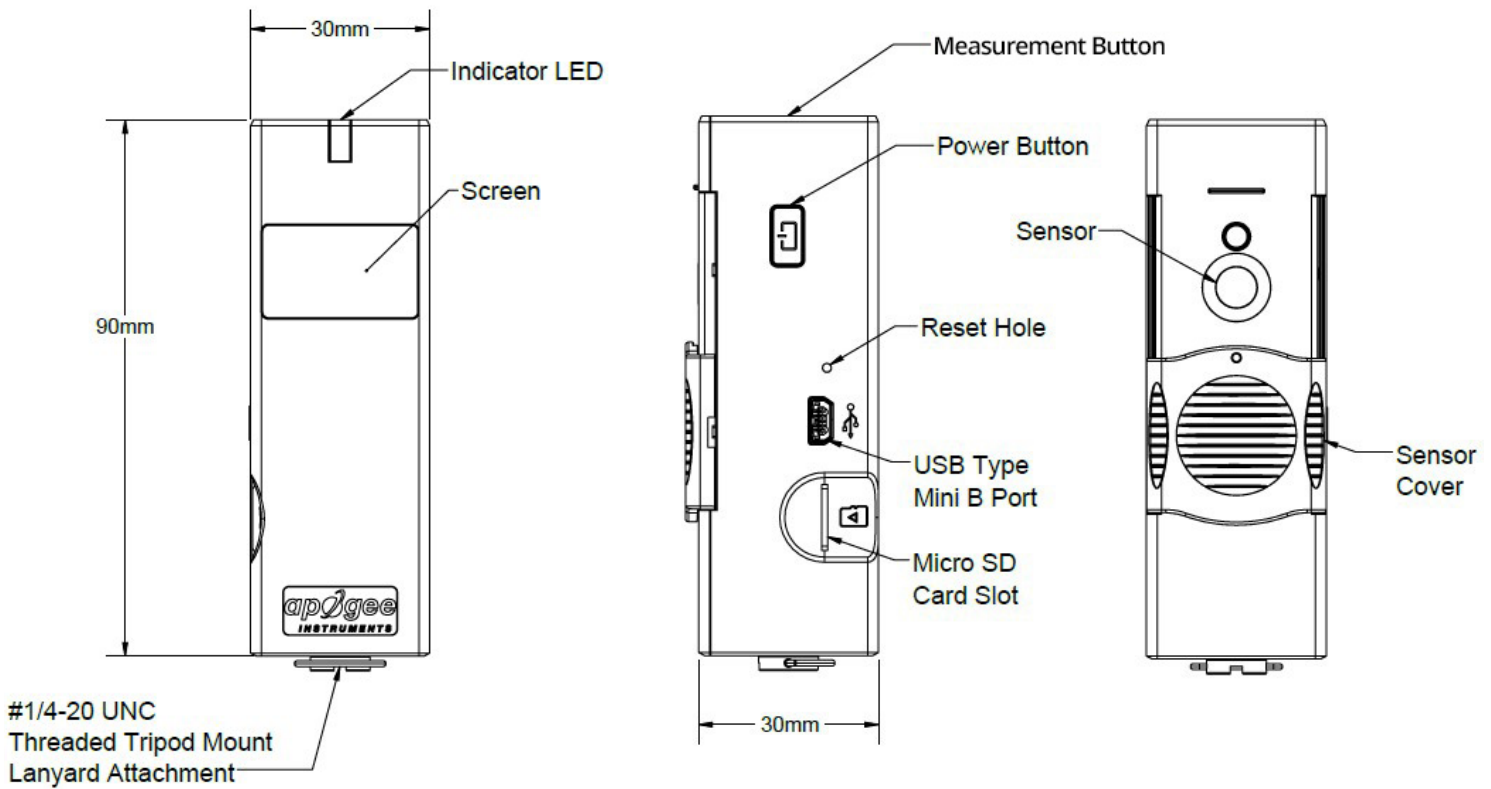
The MS-100 is small and lightweight, with a rugged housing and minimal moving parts. The spectroradiometer is self-powered to take measurements anywhere, and the unit can store measurements for downloading to a PC later.

MEASUREMENT MODES

- PPFD
- ePPFD
- YPFD
- TPFD
- PFD-UV
- PFD-B
- PFD-G
- PFD-R
- PFD-FR
- FR F
- PPE
- iPPE
- CFI
- CRI
- CCT
- Lux
- R F-R R
- Foot candle
- LambdaP
- LambdaD
- CIE 1931 x & y
- CIE 1976 u' & v'

Product Specifications

MS-100		
Wavelength Sensitivity	380 to 780 nm	
Wavelength Data Increment	1 nm	
Spectral Bandwidth	Approximately 12 nm (half bandwidth)	
Wavelength Reproducibility	± 1 nm	
Measurement Range	PPFD: 0.1 to 3,500 $\mu\text{mol m}^{-2} \text{s}^{-1}$; Lux: 5 to 190,000 lx	
Illuminance Accuracy	± 5 %	
Color Accuracy	Illuminant A @ 2,856 K at 20,000 lx	
Color Repeatability		± 0.0025 in CIE 1931 x, y
CCT Accuracy		± 0.0005 in CIE 1931 x, y
CRI Accuracy @ Ra	± 1.5 %	
Stray Light	-25 dB max	
Integration Time Range	6 to 1,000 ms	
Operating Temperature	0 to 35 °C, relative humidity 70 % or less without condensation	
Storage Temperature	-10 to 40 °C, relative humidity 70 % or less without condensation	
Operation Mode	Standalone Mode/Bluetooth Mode/USB Mode (PC Connection)	
Measurement Modes	PPFD, ePPFD, YPFD, TPFD, PFD-UV, PFD-B, PFD-G, PFD-R, PFD-FR, FR F, PPE, iPPE, CFI, CRI, CCT, Lux, fc, R F-R R, λ_p , λ_d , CIE 1931 x & y, CIE 1976 u' & v', Spectrum graphics	
Display	0.96" 128x64 mono OLED	
Maximum Files	1.2 million files @ 8 GB Micro-SD card (Excel)	
Battery Operation Time	Approximately 3 hours / fully charged	
Battery Operation Power	USB Power; 700 mAh/3.7 V Rechargeable Li-ion battery; Micro Card (SD 2.0, SDHC/up to 32 G)	
Data Interface	Mini USB port (USB 2.0); Bluetooth 3.0 and 4.0 compatible with iOS and Android	
Software	Apogee InSight (available for PC, iOS, and Android)	



Features

TYPICAL APPLICATIONS

- Measurement of spectral output from radiation sources used for growing in greenhouses, growth chambers, etc.
- Measurement of solar spectra with changing atmospheric conditions
- Measurement of spectral reflectance on stationary (e.g., agricultural or ecological weather stations and flux towers), and mobile (e.g., plant phenotyping) platforms

COMPLETE PACKAGE

The InSight package includes a carrying case, MS-100, a protective case, a quickstart guide, mini-USB cable, power adapter, Modbus communication board, neck strap screw, and neck strap. The Apogee InSight software is available at www.apogeeinstruments.com/downloads/.

Apogee InSight Software

Connect your spectroradiometer to your PC to view your measurements with the custom Apogee InSight software. The software displays the spectrum of the light source and your live data can be saved as a data file suitable for work in other programs, such as Excel. The Apogee InSight software is also available as an iOS or Android app.

www.apogeeinstruments.com/downloads/.

