HYPERSPECTRAL DEVICES

SUN-INDUCED CHLOROPHYLL FLUORESCENCE

FLOX

FLOX
THE FLUORESCENCE BOX

Long term measurements of Red and Far-red Sun Induced chlorophyll Fluorescence

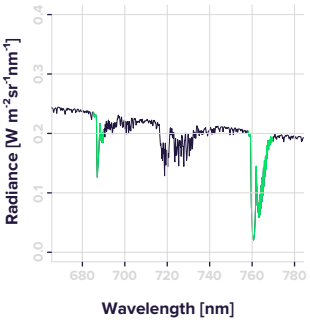
FLEX like specification

Quick measurement cycle

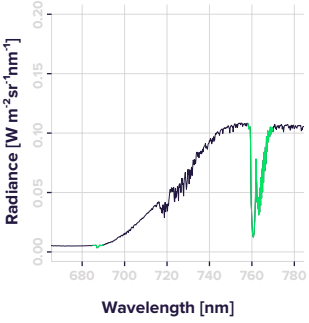
Fully automated measurement protocol

Low power consumption

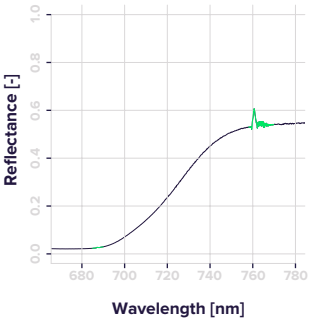
Incoming radaince



Reflected radiance



Reflectance



FLOX SPECIFICATION

OPTIC	Spec1	Spec2
Wavelength range	~ 650–800 nm;	~ 400–950 mn
Spectral Sampling Interval (SSI)	~ 0.17 nm	~ 0.65 nm
Spectral resolution (FWHM)	~ 0.3 nm	~ 1.5 nm
Signal to Noise Ratio (SNR)	~ 1000	~ 250
Field Of View (FOV)	Dual FOV. Upwelling radiance ~25°. Downwelling radiance 180°	

OPERATIONAL

Signal Optimization	Automatic adaption to varying light conditions
Dark current	Accurate dark current determination at each measurement cycle
Manual acquisition	Interface software for manual measurement and calibration
Automatic acquisition	Fully autonomous measurement mode for unattended data acquisition
Quick measurements	20 seconds under bright sunshine 60 seconds in overcast condition
Stability	Reference system stability check and uncertainty estimates
Simultaneous metadata	Spectrometer temperature, Outside temperature, GPS position, GPS time
Data Display	Live assessment of the systems status
Data storage	SD card up to 32 GB (12 months of measurements)
Case	Robust and Waterproof housing based on the 1510 Pelicase
Dimension	Small form factor (50 × 30 × 20 cm)
Power supply	12 Volt. From battery or solar panels
Power consumption	Average consumption of 60 Watt. (20/100 Watt, cooling on/off)
Energy saver	Day/night switch for energy saving
Interfaces	RS232 via cable and wireless

OPTIONAL

Dust Protection	Additional dust protection for Cosine Receptors
Fiber optics	Flexible length of fiber optics according to user needs
Power supply	Solar panel and battery
Communication	Addon for LAN/WLAN/Mobile Network Remote access

THE COMPANY

JB Hyperspectral Devices is a start-up company founded in 2016 and based in Düsseldorf , Germany.
Our core competence is the design and production of an advanced and unique hyperspectral field instrument for the passive measure of Sun Induced chlorophyll Fluorescence (SIF) using atmospheric absorption lines.

The measure of this signal allows fully non-invasive insights in the photosynthetic apparatus of living plants and is the base for upscaling efforts.
Accompanying this, we provide services for the adaptation of the instruments for specific demands such as permanent installation in remote site or offer data processing service for various kinds of hyperspectral data.

CONTACT

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